

DARE TO WEAR: AN EXPLORATION OF THE ATTITUDES AND HABITS OF
THE CONSUMER IN REGARDS TO GARMENT CARE AND ITS RELATIONSHIP
AND EFFECT ON THE ENVIRONMENT

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Abstract

Just about every consumer has a favorite pair of jeans they love to wear everywhere they go. This may be the pair that have been worn so often they have holes in the pockets where someone might carry their keys, wallet or cell phone. Or, they may be the old pair of jeans that are so comfortable that it does not matter that they still have a ketchup stain on the front from two years before. Most people who love their jeans this much have had many experiences with those jeans and might think they know them inside and out. But what does the consumer really know or need to know about those dirty old jeans they love so much. With all of the different styles of jeans in stores today, there is no shortage of options for consumers in their quest for their next pair of favorite jeans: skinny jeans, loose fit, stonewashed, the list goes on and on. So what options do consumers have or know about for their jeans post-purchase? In recent years, many consumers have become intrigued with the idea of "going green" by recycling, buying organic and so on. While these are all good habits to practice, being aware of laundering habits is another important issue to take into consideration.

Introduction

Recent studies made by popular textile companies have revealed that approximately 45% of the water consumption in the life cycle of a pair of jeans happens in the hands of the consumer (post-production, post-shipping, post-purchase)(*Recycling & Consumer Care*). As this may come as a surprise, it could also be portrayed as an opportunity. The denim textile industry is one of the largest industries in the fashion industry, as well as in the world. In 2007, the global denim market was estimated at a staggering 51.6 billion dollars and is projected to become over 56 billion dollars by 2014.

Along with the large amount of money produced by denim each year, 2.7 billion meters of denim are produced every year around the world, and its most basic element, cotton, is a water intensive crop that is a large supplier for the denim industry (*World Denim Market*). Because of its size, the denim industry heavily influences the amount of water consumed in not only the textile industry, but also throughout the world. While the textile industry should be held accountable for their actions, what is almost equally important are the habits and actions of the consumers who are buying, wearing and caring for the denim. On average, consumers wash 2.6 loads of laundry per week (*Water Calculator Methodology*). When considering that the average washing machine uses 41 gallons per load, it is easy to see how the water usage for laundering clothes can add up (*"What Can You Do?"*).

Unfortunately, it is much more difficult to hold the consumer accountable for water consumption than it is with a large corporation such as Levi Strauss & Co. In spite of this, the need for the consumer to limit water consumption (in regards to laundering) is equally important to the need for limits on water consumption by big business in the instance of apparel products.

Literature Review

So what is the importance of water and energy conservation, why is being “green” so popular today and what is all this talk about sustainability? Well, if these are questions you might be asking yourself every time you turn on the radio or see a billboard that is promoting recycling, there is an answer for it (and a pretty simple one at that).

As human beings, we live in a world with limited resources. There are only so many trees on this earth, only so many coal reserves left and so on. Although energy and water are both renewable resources, they are being consumed faster than they can be produced or cycled through nature’s cleaning system (in the case of water). According to the Center for Strategic and International Studies (CSIS), “Across the planet, in developing and developed regions alike, poor governance and mismanagement of natural resources coupled with rising population growth, increasing urbanization, and economic development have led to a growing imbalance between water supply and demand. This imbalance is reaching crisis proportions in many regions” (*Addressing*, 2005). For this reason alone, it is necessary for human beings to become more conscious and self-aware of their

habits when it comes to water and energy consumption. This practice of awareness is more commonly known as being sustainable.

It isn't just consumers that need to be aware of their water and energy consumption. Levi Strauss & Co. is a worldwide leader in denim production, and as of late, they can also be considered as one of the leaders in the textile industry when it comes to research and development of sustainable practices. Within the past couple of years, Levi Strauss & Co. has developed a curiosity to determine what type of environmental impact their product is making. In their search to quantify their impact, Levi's conducted a life cycle assessment for a number of their products. Although the main goal of this project was to determine the environmental performance of Levi's products, the life cycle assessment had two main objectives: first, and most importantly, to promote sustainability; second, to be able to produce data that could be supported and proved correct scientifically.

Although not one of their main goals, another reason for Levi's taking on this project was so that they could share their results with other related groups in the industry such as designers and material suppliers. In doing this, Levi's had to ensure that their results would be easily understood by all parties involved and/or related to the project (such as the designers and suppliers). In their efforts to do so, Levi's broke the results down into categories such as Contribution to Climate Change, Energy Use, Water Consumption, and Waste Generated. This allows interested parties who are not scientists or experts in the field to be able to more easily understand the results of the study. By taking interest in the amount of waste produced and resources used, Levi Strauss & Co. is showing the initiative and

concern to becoming more sustainable while at the same time making themselves a model for other companies to follow after.

Marks & Spencer is another company, located in the United Kingdom, which can be applauded for their efforts to produce more sustainable products. While making similar attempts towards sustainability such as Levis Strauss & Co., Marks & Spencer offers a much larger variety of merchandise. Therefore, the scope of change and improvement reaches a greater number of products than does Levi's (which mainly focuses on denim and cotton production). In 2007, Marks & Spencer announced their company-wide desire for change and a more eco-friendly image which they decided to call "Plan A".

Three years later, the company produced a progress report of sorts, which detailed the improvements they had made towards reaching their goal. The report provides great feedback not only for Marks & Spencer, but also for other companies across the world desiring to achieve the same result of sustainability. Sir Stuart Rose, employee and Chairman of Marks & Spencer, attests to their progress in the report when he stated "We launched Plan A in January 2007 – 'committing to change 100 things over five years, because we've only got one world and time is running out'. Three years on, Plan A is making a real difference to the environment and for our customers, employees and people working in our supply chains." (*Plan A, 2010*).

Another group interested in the production and environmental impacts that the textile industry is creating is the Integrated Pollution Prevention and Control, also known as the IPPC. One of the main focuses of the IPPC is overseeing and determining the amount of waste and toxic emissions from the textile production

industry. Basically, “the IPPC Directive requires an integrated approach to the environmental protection of air, water and land, through the application of Best Available Techniques (BAT), establishing operating conditions and emission limit values in permits for installations” (*Journal, 2006*). The oversight of the IPPC, as well as similar organizations, is crucial to keeping textile manufacturers in check with their waste production as well as limiting their water and energy consumption.

An article, entitled “Can Jeans Save the Earth?”, was published in the AATCC (American Association of Textile Chemists & Colorists) Review in 2009. In this report, James Veenhoff, Governor at Amsterdam International Fashion week , suggests that “*The entire process of making jeans is pretty much environmentally friendly*” (*Thiry, 2009*). Maria Thiry, author of the article, disagrees and points out a number of different dangers to the environment besides the consumption of water and energy. Thiry points out that the dyeing process as well as the finishing process of denim production is also harmful for production.

With fashion constantly changing, manufacturers have a daunting task of trying to keep up with what is popular that month, week or even day. Chris Koeleman, lecturer at the Amsterdam Fashion Institute made the following comment about finishes for jeans: “ a substantial portion of the finishes and coatings applied to denim jeans have no functionality, and some of the aesthetic treatments are actually designed to reduce the garments functional life – and so are actually a useless consumption of energy, water pumice stones, chemicals and more waste ... just for fashion” (*Thiry, 2009*). So why do the manufacturers go through all of the waste, time and effort to produce jeans that are made with less quality and produce

more waste? The answer comes down to the basic principle of supply and demand. Simply put: if there were no demand for this product to be made, manufacturers would not supply it.

Purpose

The main purpose of this project is to explore the attitudes of the consumer in regards to garment care and its relationship to sustainability and effects on the environment. One of the hopeful results will be to provide information to the average consumer to help them with their options for laundering not only their denim, but their entire wardrobe as well. The consumer is a powerful force that can either be used to advance and help the good of the environment or unfortunately to be a great harm. Many times, the latter of these previous two options is unfortunate yet preventable. By conducting research such as this study, the consumer can become self-informed and become a positive force and make responsible decisions.

Methods

Part of the project included an interactive “experiment” in which a group of college students were asked to wear the same pair of jeans for one week without washing them. Along with wearing the jeans, students were asked to document their experiences in a journal. The participants of the project were given a set of guidelines to follow during the week of the experience. A few examples of guidelines included but were not limited to wearing a specific pair of jeans every day of that week, no washing of the jeans and committing to documenting their

experiences through resources like blogs, discussion boards, picture and video. The students asked to participate were a mixed group of different classifications, ages and majors/minors. The entire experience was documented on video and with photos, and was displayed as an informative art exhibit in the Honors Forum at Texas State University.

The second part of this project was based on more quantitative research to produce data that can be broken down into frequencies and be graphed and analyzed statistically. This data was produced using a survey of college students, about their laundering habits and their knowledge of the issues surrounding the textile industry and its relationship to sustainability (see Appendix 1). The survey was approved by the Institutional Review Board (IRB) at Texas State University.

Finally, I looked into what textile companies are doing now to become more sustainable. The content of this section includes, but will not be limited to: current and recent studies (along with results) provided by certain companies in the textile industry.

Results of the Experience

For the experience side of the project, a group of students at Texas State University were asked and agreed to participate in an “experiment” where each student wore one single pair of jeans for a week straight without washing them. The experience began on a Monday and ended the following Sunday. Students wore their jeans to work, school, to play and some even to church. Needless to say, each pair of jeans saw their fair share of dirt and filth. One pair of jeans even made it

through a rap concert and a few sand volleyball games over at Sewell Park on the Texas State University campus. In spite of everything we put the jeans and the participants through that week, both held up strong and finished the task. Throughout the week, students were asked to share pictures, video and comments about their experience. Many of these comments and photos are included in Appendix 3. A website was set up to document everything and each day, the participants were prompted with a new theme or something to think and talk about. Overall, the experience was a great success. For some of the participants wearing jeans multiple days or even weeks without washing them was nothing out of the ordinary. Personally, I like to give my jeans a quick look and smell to determine if they need to be laundered. According to this quote, a few other participants in the study felt the same way when they posted quotes like “Basically I got a 'so what?' Most of the people I know do not wash their jeans or any pants for that matter, after only wearing them once”. You might call this laziness or cheap, but for those of you who were or are college students, I am sure you can understand.

Not all participants in Dare to Wear shared this idea of laundering less. Here is a quote from one of the students stating their concern prior to the experience: “I think that if I wear them once or twice they're automatically dirty but in fact they are not. No laundering for at least once every 3 weeks for me is a challenge that I am willing to try. I have to change my way of thinking because in the end its not my jeans that stink its my thinking”. Again, another participant made another similar quote, “Today I felt like I was ready to wash my jeans. I don't know why, they didn't smell or fit bad but I just have the perception that they must be dirty by now “which

suggests that they launder their jeans often. As you can see, some of the participants noted that they were guilty of wearing jeans or clothes only once before washing them.

Some students cruised through the week without any problems or issues; while others used different coping mechanisms to deal with any issues that came up. One student said the following about how she was coping with the smell: "I have given them a spray of my fragrance mist when I put them on, just in case!" Another participant had this to say about how she was handling her concerns: "Since I would have chunked my jeans in the hamper today I am airing them out on the towel rack".

Even though some of these students had concerns and struggled with a few issues such as smell and fit, as you can see from the following quotes, many of them had changed their attitude by the end of the week: "I haven't noticed any difference with my jeans in how they fit or smell, so I'm definitely going to be wearing all my jeans longer before I wash them", "I am sold; wearing my jeans for more than twice doesn't always need laundering. I probably won't be wearing them every single day but I will wear them a few more times before tossing them into the hamper", and "At this point in my past, unsustainable life, I would have put the jeans in my dirty clothes pile, but I'm pressing on and wearing my sandy jeans". Surprisingly, they don't smell too bad". All of the above quotes show that prior to this experience, students had misconceptions and poor habits in regards to overconsumption and their laundering.

Along with being documented online, results of this portion of Dare to Wear were displayed in an exhibit downstairs in the foyer of the Honors Forum between

the dates of April 25, 2011 until May 5, 2011. The exhibit included quotes, pictures and information from the experiment as well as the actual jeans worn during the week by the participants (see Appendix 3). It was intended create interest and some awareness about the issue of overconsumption and waste while laundering.

Results of Survey

The second part of Dare to Wear as I stated earlier, was more research based. It was great having quotes from the students, in their own words, about how they were affected by the experience and how it had changed their way of thought. However, I also wanted to have some data that I could look at to help better understand the habits of the consumer. As mentioned previously this part of the project focuses a survey that I created which was given to students here at Texas State University.

The first set of questions in the survey were designed to measure the frequency of laundering and the characteristics of the loads of laundry they were doing (see Table 1). The results indicate that a slight majority of participants (51%) launder their clothing once a week, while 10% do laundry only once a month. A much larger majority (84%) wait until they have a full load of dirty clothes before laundering. Jeans are large and take up a lot of space in the washer, if people wear their jeans more often, they would not have full loads as often, reducing the amount of laundry they do if they are waiting for a full load.

Table 1

Laundrying Frequency and Load Characteristics

Items	<i>n</i>	%
On average, how often do you launder your clothes?		
Once a week	68	51
Once every few weeks	52	39
Once a month	14	10
Never	0	0
Do you wait until you have a full load of dirty clothes before laundering?		
Yes	84.3	84
No	21	16
Do you separate your clothes (by color, material, etc.) when laundering?		
Yes	111	83
No	23	17
What type of laundry detergent do you use?		
Powder	16	12
Liquid	109	81
Other	9	6.7
On average, how many loads of laundry do you do a week?		
None	4	3
Less than 1	31	23
1-3	88	66
4-5	10	7.5
More than 5	1	0.7

Most students reported doing 1-3 loads of laundry a week and almost all (83%) separate their clothes by color, indicating that if they do a dark and light load, they would have two loads. Again, removing jeans from the laundry by wearing them more often would cut down on the number of loads even for students who launder once a week if those students are separating out the dark clothing from the whites/lights.

Another question in the survey asked participants why they did their laundry (see Figure 1). As you can see on this particular graph, the top three reasons why consumers wash their clothes is dirtiness, fit and smell. In my opinion, laundering clothes because of issues such as dirtiness and smell are valid reasons.



Figure 1: Reason for Laundering

Being clean is considered the social norm in many parts of the health, which helps create a healthy lifestyle. Unfortunately, I think that laundering clothes because of the fit is a sad comment on the quality of our clothing. When taking into consideration the fact that jeans are losing their shape just after a few times being worn raises a red flag. One of the participants from the performance study had a similar train of thought when they said the following: "How many of us launder our jeans to restore their proper shape and size. That isn't a problem with other pants, really". So does this mean that the quality of the denim is poor? Are the denim

poorly made or designed? No matter what the answer may be, I do not feel that washing jeans should be a result of the fit.

Next, the survey asked about how the participants actually did their laundry and how they felt about water consumption and the environment. While a clear majority (69%) only machine wash their clothes, a third of students in the survey also use hand washing, which may or may not reduce water or energy consumption, depending on how it is done. For example, letting the water run and using hot water can be very wasteful but using a small amount of cold water can be a smart way to delay doing a full load. Only 4% of the students are hanging their clothing to dry, which is a bit disappointing given the efforts begun by honors students in an Honors Textiles class in the spring of 2009 to educate the campus about the importance of giving up the dryer. A movie was even produced by some of those students in another Honors class about line-drying to help spread the word. Without knowing how many students were line-drying before Spring 2009, it is hard to know if this number represents any increase in the behavior.

Table 2

Laundering Methods and Concerns

Items	<i>n</i>	%
Do you machine wash or hand wash your laundry?		
Machine Wash	93	69
Hand Wash	0	0
Both	41	31
Do you machine dry or hang dry your laundry?		
Machine Dry	62	46
Hang Dry	5	4
Both	67	50
How many gallons of water do you think are consumed in an average wash of clothes?		
5-15 gallons	40	30
16-26 gallons	62	46
26-35 gallons	23	17
more than 35 gallons	9	7
Do you consider water consumption/waste when laundering?		
No	66	49
Yes	68	51
What are your concerns about laundering and its relationship to the environment?		
Don't know	17	13
Don't care	4	3
Don't think about it	59	44
Concerned	50	37
Extremely concerned	4	3
I am concerned with environmental issues such as recycling, waste, over-consumption?		
Strongly Disagree	1	1
Disagree	5	4
Neutral	40	30
Agree	65	49
Strongly Agree	23	17

The students were also asked to estimate how many gallons of water are used during washing clothes. Most of the students guessed that between 16-26

gallons were consumed, which is an underestimate for top-loading washers of about 15-25 gallons. With this poor guess, it isn't surprising that only half of students think about water consumption when they are doing laundry. Still, half is pretty good. However, a majority of the students (60%) either didn't know, didn't care or didn't think about the relationship between the environment and their laundry. More students (66%) were either concerned or very concerned about environmental issues such as recycling, waste and over-consumption. This means that there is important work that needs to be done to educate concerned students about laundering and its relationship to the environment.

This question about general environmental concern was used to split participants into two groups. The first group, labeled 'Careless', was made from all the students who disagreed or strongly disagreed with the statement "I am concerned with environmental issues such as recycling, waste and over-consumption". The second group, labeled 'Concerned', were those who were neutral, agreed or strongly agreed with this statement. There were 46 Careless students and 88 Concerned students. These students were different in their habits of doing laundry (see Table 3). The students who were Concerned did their laundry less often than the Careless students, with 6% more doing laundry once a month and 15% fewer doing laundry once a week. A few more (5%) of the Concerned students did do more loads when they did laundry but on the other hand 12% also did less. This result is probably because I asked how many loads a week and some students chose "less than 1" to indicate that they did laundry less often, while others said "4-

5" thinking of the amount they did when they did it. These results are not conclusive but it looks like Concerned students are doing less laundry.

Table 3

<i>Laundering Frequency and Load Characteristics Based on Environmental Concern</i>				
Items	Careless (N=46)		Eco (N=88)	
	<i>n</i>	%	<i>n</i>	%
On average, how often do you launder your clothes?				
Once a week	28	61	40	46
Once every few weeks	15	33	37	42
Once a month	3	7	11	13
Never	0	0		
On average, how many loads of laundry do you do a week?				
None	1	2	3	3
Less than 1	7	15	24	27
1-3	35	76	53	60
4-5	2	4	8	9
More than 5	1	2	0	0

The Concerned students do not really use different laundering methods (see Table 4). More of them (10%) did estimate the amount of water to be at least 25 gallons. This ties into the idea that people who are concerned about the environment can more accurately estimate the environmental impact of various behaviors. The Concerned students were much more likely to consider water consumption when doing laundry. While only 22% of the Careless consider water, 66% of the Concerned consider water when doing laundry. Comparing the two groups when it comes to thinking about environmental issues and laundry shows that while 11% said they didn't know about laundry and environmental issues, none

of them said they didn't care and a majority (55%) were either concerned or extremely concerned about environmental issues and laundering. The Careless didn't know, didn't care and none of them were extremely concerned.

Table 4

Laundry Methods and Concerns Based on Environmental Concern

Items	Careless (N=46)		Eco (N=88)	
	<i>n</i>	%	<i>n</i>	%
Do you machine wash or hand wash your laundry?				
Machine Wash	35	76	58	66
Hand Wash	0	0	0	0
Both	11	24	30	34
Do you machine dry or hang dry your laundry?				
Machine Dry	23	50	39	44
Hang Dry	1	2	4	5
Both	22	48	45	51
How many gallons of water do you think are consumed in an average wash of clothes?				
5-15 gallons	16	35	24	27
16-26 gallons	22	48	40	46
26-35 gallons	6	13	17	19
more than 35 gallons	2	4	7	8
Do you consider water consumption/waste when laundering?				
No	36	78	30	34
Yes	10	22	58	66
Do you machine wash or hand wash your laundry?				
Machine Wash	35	76	58	66
Hand Wash	0	0	0	0
Both	11	24	30	34
Do you machine dry or hang dry your laundry?				
Machine Dry	23	50	39	44
Hang Dry	1	2	4	5
Both	22	48	45	51
What are your concerns about laundering and its relationship to the environment?				
Don't know	7	15	10	11
Don't care	4	9	0	0
Don't think about it	29	63	30	34
Concerned	6	13	44	50
Extremely concerned	0	0	4	5

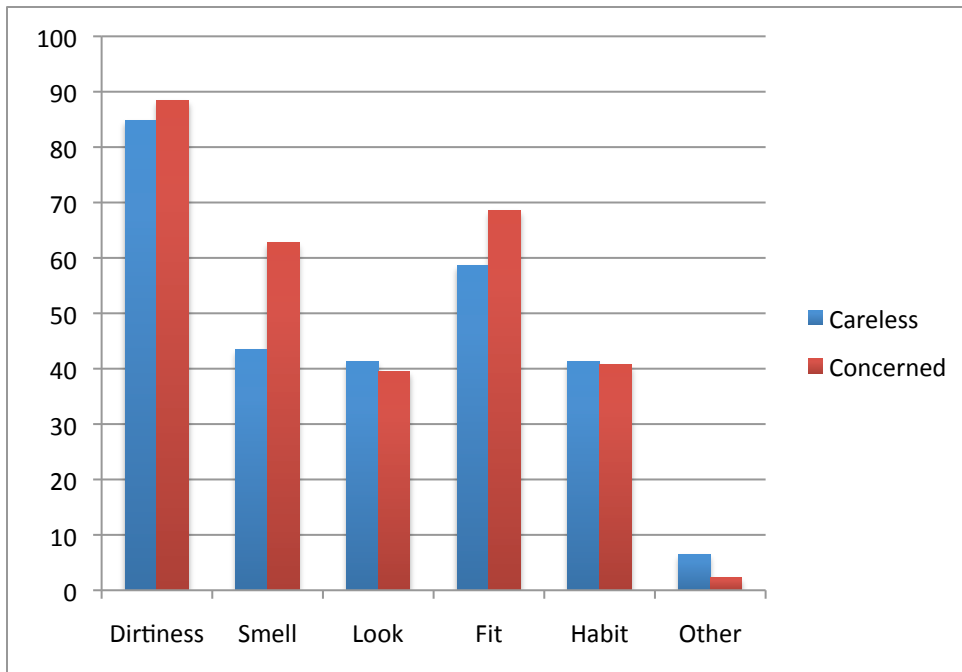


Figure 2: Comparison of Reasons for Laundering

Looking at Figure 2, you can see that the participants who considered themselves more Concerned with the environment were less likely to launder because of Fit issues and much less likely to launder because of smell than the Careless group. This makes sense if you think that Concerned students are waiting to launder, which is when smell would be a problem.

Finally, the survey asked about where students did laundry and who did the laundry where they lived. These results didn't show that much of interest to the project but were good to know, just in case people would say that students always get their laundry done by their parents. In fact, this is not true. Most of the students who took the survey live in off-campus housing and most of them do their laundry by themselves. Not many students share laundering with others, which is something else that could be considered to make sure loads of laundry are full.

Conclusion

So what is being done right now to address this issue? Well, as previously mentioned, while it is important for the consumer to do its part, big business should also be held accountable for their actions. An example of things that could be done on this issue is the careful scrutiny that Levi Strauss & Co. applied to their business to determine what type of environmental impact their product is making. In their search to find answers, Levi's conducted a life cycle assessment for a number of their products. The main goal of this effort was to determine the environmental performance of Levi's products. The life cycle assessment had two main objectives: first, and most importantly, to promote sustainability; second, to be able to produce data that could be supported and proved correct scientifically.

One of the secondary reasons for Levi's taking on this project was so that they could share their results with other related groups in the industry such as designers and material suppliers. By doing this, Levi's had to ensure that all parties involved and/or related to the project would easily understand their results. In their efforts to do so, Levi's broke the results down into categories such as Contribution to Climate Change, Energy Use, Water Consumption, and Waste Generated. By doing this, all interested parties (regardless of their expertise in the textile industry) were able to more easily understand the results of the study.

In their research, Levi's determined that too much water was being wasted in the process of creating their jeans. As a result, they began researching new methods of denim production that were more environmentally friendly while keeping the

style and quality of their product. What they came up with was what they call “Water<Less Jeans”. Their new line of eco jeans uses a significantly less amount of water compared to previous styles. As you can see in the posters above, the numbers speak for themselves. Following in their footsteps, other companies such as UK-based Marks & Spencer are also taking the initiative to implement new eco standards in their companies as well.

Get Informed

What about the consumer? As a next step, the most important thing that any consumer can do is to get educated about their actions and the results of those actions create. Going back to the tables and charts that were split between those considering themselves concerned with environmental issues and those who were less concerned, the results show that the participants more concerned guessed more correctly. Even though neither group guessed very well, at least the concerned group was able to be more accurate across the board. For issues like sustainability, reduce, reuse, recycle, and others like it, being more correct and more informed is the first step to changing lifestyles and attitudes. The change has to start somewhere and without being informed, consumers cannot possibly know what they are wrong about or doing incorrectly. One of the participants’ quotes summarizes this point when she said “I haven’t noticed any difference with my jeans in how they fit or smell, so I’m definitely going to be wearing all my jeans longer before I wash them. I really liked the article (one of the participants) found – When to Wash It - because in the past I just threw things in my laundry basket whenever I

though they were dirty or hadn't been washed recently. I think that just shows that laundry is more about the perception of clothes being dirty instead of them actually needing to be washed. Not washing clothes as often is something really easy to do that saves time, money, and is good for the environment". In this quote, the participant used the word 'perception'. According to this quote, she felt that the perception people had about laundering clothes to often was incorrect. By informing consumers about proper habits, the quote suggests that not only with the environment benefit, but so will the consumer by saving them money.

Get Involved

Many times it is easy to recognize and point out what is wrong with the world and other people. It is easy to sit at home and discuss how poorly the government is handling the economy or how important it is to pull troops out of the Middle East. What is not easy is to get out and do something about the things that need to be changed. Pointing the finger at groups, individuals, or governments has never gotten a thing done to make a change or improve society. The people that make changes are the ones seen on television and out in the streets protesting and supporting causes they feel worthy.

There are a ton of great activities to get involved in all around the world and even locally in your community. Organizations are always looking for volunteers to help out with great causes. Although going to donate clothes at Goodwill once a year or sending in money to the cancer society are great things to do and support great causes, it is also important to get involved in other ways. Taking on the Hundred

Things challenge (where consumers reduce the amount of things they own to only 100 items) or having an experience like the “experiment” discussed earlier in this thesis are examples of how people can actively participate in something similar to ‘Service Learning’. Each person that gets involved makes a difference, which is what this earth needs to survive.

Test your limits

As seen in some of the quotes from the experience where the students wore their jeans for a week without washing them, some of the students felt somewhat uncomfortable with the thought of wearing those jeans for an extended period of time without washing them. Looking back at one of the participants’ quotes at the beginning of the week: “Mentally, I think that if I wear them once or twice they're automatically dirty”. However, towards the end of the week, it is clear that the perception and mindset of this student had changed greatly: “Really, the only reason I can see to launder my jeans at this point would be to fulfill the social stigma that they're dirty after being worn. As things stand, though, I have no problem wearing them again tomorrow”. Just by looking at this one quote, it is easy to see how pushing the boundaries and testing your limits as a consumer can alter and improve your mindset and habits regarding important issues such as the one at hand: overconsumption.

In conclusion, it is necessary to change the overconsumption of water and energy in regards to the laundering habits of the consumer. It would be unfortunate

for the earth's demise to be caused by its most intelligent inhabitants, humans. As the most evolved species on this amazing planet, we should be the ones conserving and prolonging the life of earth's resources. Instead, we have become the problem. As previously stated, if issues such as overconsumption are not addressed, the earth will eventually cease to exist as we know it. This would be a great travesty of epic proportion. With this in mind, it is more than important for something to change, it is necessary. By practicing sustainable habits, getting involved, getting informed and testing the limits of what is considered normal (or dirty in regards to garment care), there is still a chance to preserve this fragile and amazing planet known as earth.

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Appendix 1

Survey

Participation in this study is completely voluntary and all results/responses will be kept anonymous. You have the right to refuse taking or to quit taking this survey at any time you may choose. Any questions or concerns should be directed to Jon Lindsey (jl1525@txstate.edu) or Dr. Gwendolyn Hustvedt (gwhust@txstate.edu).

I have read and understood the above consent and wish to continue my participation in this study/survey: a) Yes b) No

On average, how often do you launder your clothes?

- a) Once a week
- b) Once every few weeks
- c) Once a month
- d) Never

On average, how many loads of laundry do you do a week?

- a) None
- b) Less than 1
- c) 1-3
- d) 4-5
- e) More than 5

What is the reason for washing your clothes? (choose all that apply)

- a) Dirtiness
- b) Smell
- c) Look
- d) Fit
- e) Habit
- f) Other _____

How many pair of jeans do you own?

- a) None
- b) 1-2
- c) 2-3
- d) 4 or more

Do you wait until you have a full load of dirty clothes before laundering?

- a) Yes
- b) No

How many gallons of water do you think are consumed in an average wash of clothes?

- a) 5-15 gallons
- b) 16-25 gallons
- c) 26-35 gallons
- d) more than 35 gallons

Do you consider water consumption/waste when laundering?

- a) Yes
- b) No

Do you separate your clothes (by color, material, etc.) when laundering?

- a) Yes
- b) No

What are your concerns about laundering and its relationship to the environment?

- a) Don't know
- b) Don't care
- c) Don't think about it
- d) Concerned
- e) Extremely concerned

I am concerned with environmental issues such as recycling, waste, over-consumption?

- a) Strongly Disagree
- b) Disagree
- c) Neutral
- d) Agree
- e) Strongly Agree

Do you machine wash or hand wash your laundry?

- a) Machine wash
- b) Hand wash
- c) Other _____

Do you machine dry or hang dry your laundry?

- a) Machine dry
- b) Hang dry

c) Other _____

What are your living accommodations?

- a) Dorm
- b) On-campus Apartment
- c) Off-campus Apartment
- d) House

Who typically does your laundry?

- a) You
- b) Parents
- c) Girlfriend/Boyfriend/Friend
- d) Maid/Housekeeper
- e) Other _____

What are your laundering options? (choose all that apply)

- a) Washateria/Laundromat
- b) At home
- c) At a friends house
- d) Parents house
- e) Other _____

Do you share laundering chores with anyone else?

- a) Yes
- b) No

Do you wash your clothes with other peoples clothes?

- a) Yes
- b) No

What type of laundry detergent do you use?

- a) Powder
- b) Liquid
- c) Other _____

Who normally does the laundry where you live?

- a) You

- b) Spouse/partner
- c) Parent
- d) Roommate
- e) Other _____

Appendix 2

IRB Approval



Institutional Review Board

Request For Exemption

Certificate of Approval

Applicant: Jon Lindsey Request Number : EXP2010K8392

Date of Approval: 08/30/10

A handwritten signature in black ink, appearing to read "M. Blundell".

Assistant Vice President for Research
and Federal Relations

A handwritten signature in black ink, appearing to read "Jon Lindsey".

Chair, Institutional Review Board

Appendix 3

Activity and Exhibition

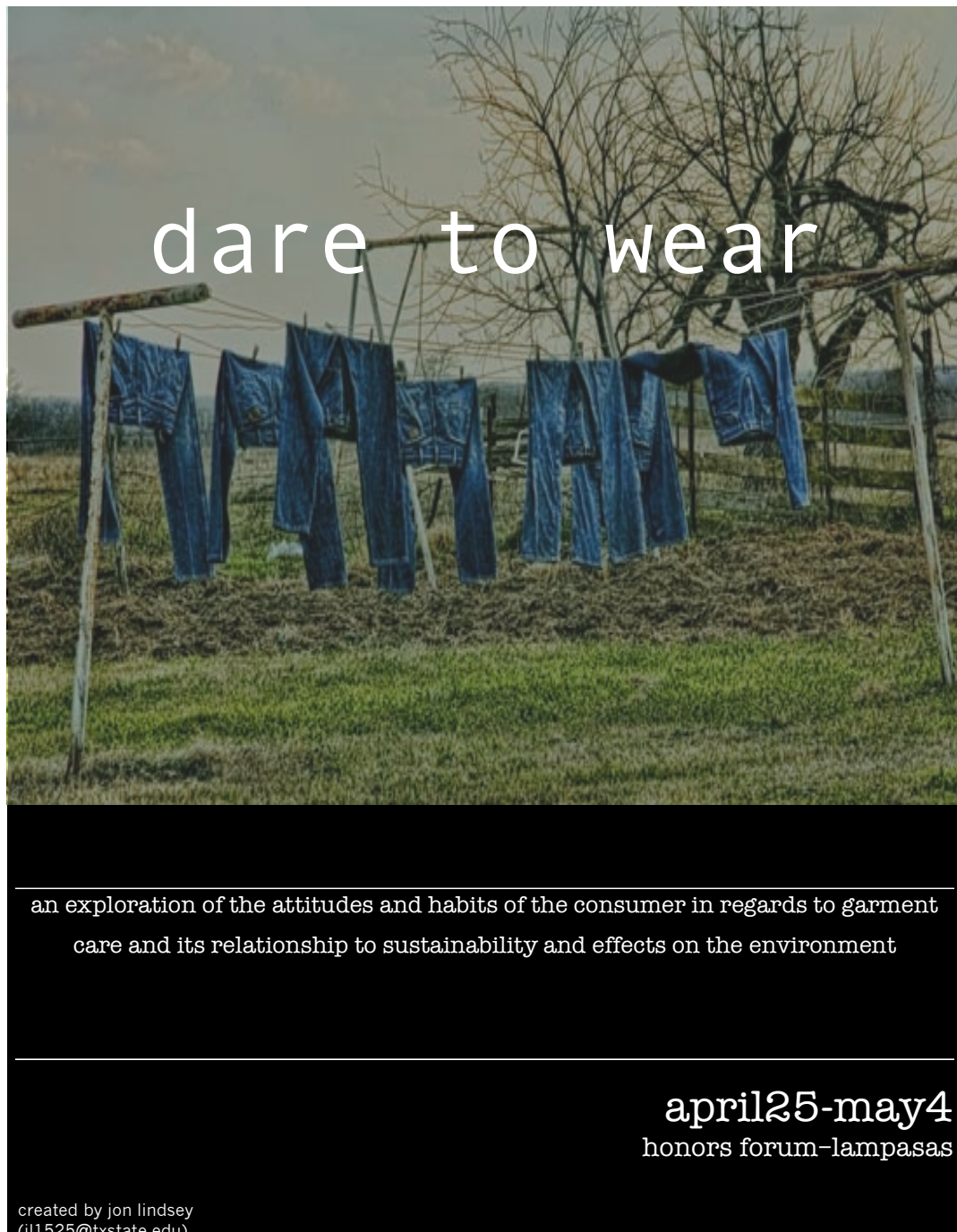


Photo 1: Poster for Exhibition

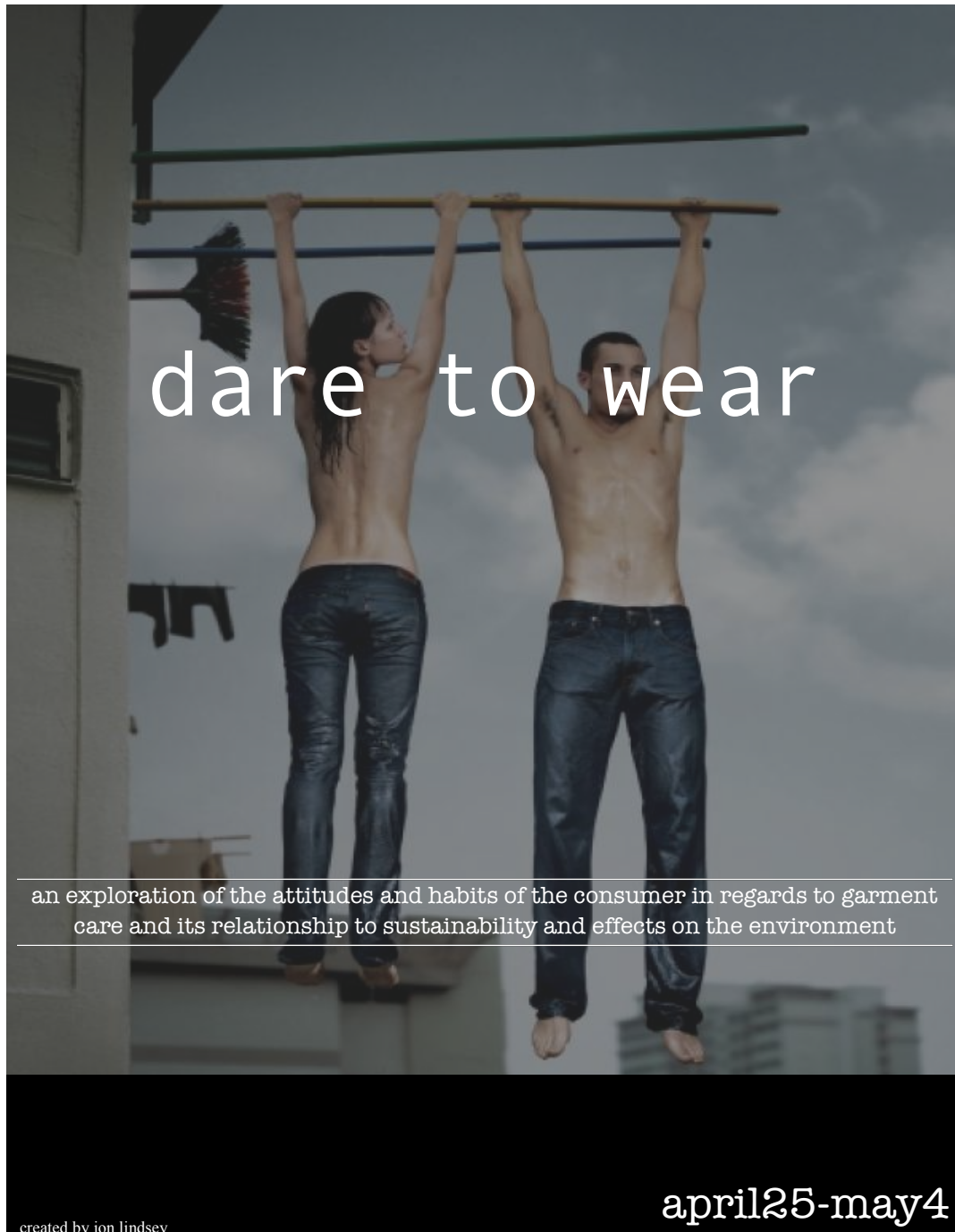


Photo 2: Poster for Exhibition

Photos of the exhibition





The following pages are the visuals from the exhibition that were generated using the blogs and photos provided by the activity participants. All the participants signed image releases and consented in writing to have their words and photos included in this project. Copies of the consent remain on file with Dr. Gwendolyn Hustvedt.



dare
to
wear

“no one has caught on that I am
wearing the same jeans”

usually I wear jeans
about 3 times before I wash
them but **this** has made me
wonder if my jeans can
last longer without
being totally disgusting

I had to rush to take a test this
morning, so knowing that I would be
wearing the same pair of jeans
everyday made it easy to get
dressed!!

For a recent project entitled "Dare to Wear", a group of students wore the same pair of jeans everyday for one week straight without washing them. One of the goals of this project was to explore the habits, conceptions and attitudes consumers have regarding their laundry while providing valuable information to the consumer about their options for not only laundering their jeans, but their entire wardrobe as well.



"The week went by fast and dressing up in the mornings was a piece of cake"

"I think that if I wear them once or twice they're automatically dirty but in fact they are not"

"I have to change my way of thinking because in the end its not my jeans that stink its my thinking"



**“I feel inspired to spread the word about this,
and I know if more people were aware, much
less water would go to waste and less
environmentally damaging laundry detergent
would be used”**

**“It is super unnecessary to wash jeans after
2 uses (what I used to do)”**

**“Really, the only reason I can see to launder my jeans at this point would
be to fulfill the social stigma that they’re dirty after being worn. As
things stand, though, I have no problem wearing them again tomorrow”**





“wearing jeans for a week is
totally do-able”



“At this point in my past, unsustainable life, I would have put the jeans
in my dirty clothes pile, but I’m pressing on and wearing my sandy jeans”

-I am glad I did this experiment because I thought somebody would
eventually notice or say something but no one did-



"I skateboarded to school twice today and had to walk up a monster hill!! Still my jeans are fitting and do not have any stains or smell"

-Day 5-

"Still clean, still tight"

"Even though I have worn these jeans everyday this week, they are still not going into my dirty laundry pile. They are not dirty, they are still tight, and they do not smell"

I wear my jeans twice
before considering
them dirty enough to
wash them

I hadn't thought
about the water I was
wasting by washing
jeans and other
clothes so often

Not washing clothes
as often is something
really easy to do that
saves time, money,
and is good for the
environment.

I haven't noticed any difference with
my jeans in how they fit or smell, so
I'm definitely going to
be wearing all my jeans longer
before washing them



*They didn't look or smell any worse
than if I had worn them only a couple of times*

*I'll be wearing my jeans more often before
washing because I don't ever wear the same
jeans for days in a row.*

*I have definitely learned not to wash my jeans
as much.*



CAN YOU GUESS?

One of these pair of jeans has only been worn once. The remainder of the jeans hanging above were worn for one week straight without being washed for “Dare to Wear”! Can you guess which pair of jeans have only been worn once?