

An Analysis of Animal Testing in Beauty Products and Its Ethicality

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Abstract:

Is Animal Testing in Cosmetics Products an Ethical Process? Some may think that there is an obvious answer to this question, however, this is an extremely debated topic around the world. The need for animal testing has been decreasing steadily for years due to the advancement of technology, however many cosmetic and pharmaceutical brands are still partaking in this practice. Animal testing provides a well-known and quicker way to test the safeness of a product, however, alternatives such as *In Vitro* methods are harm-free. Thus, this provides a dilemma. Do we sacrifice animals in the name of tradition, or do we use new and sometimes faulty alternative methods in the name of sustainability? Legislation plays a large role in the cruelty-free movement. Some countries, such as China, have mandated animal testing by law, whereas the U.S., turns a blind eye due to the cheaper imports of products. Various brands have turned away from animal testing. This is because consumer behavior indicates that consumer's purchasing decisions can be heavily influenced by ethically or sustainably produced goods. Animal testing is a process that was once useful but is now not necessary due to the many ethical alternatives. This Literature Review summarizes the historical elements of animal testing, pros and cons, alternative forms of testing, and how sustainability affects consumer behavior.

Introduction:

Approximately 100,000 million animals a year die at the hands of animal testing (Animal Testing Facts and Statistics, 2004). Animal testing is a widely debated practice in both the pharmaceutical and cosmetic realms. Many cosmetic brands, such as Estee Lauder, have begun to pull away from the practice, while others remain firm in their beliefs (Estee Lauder, 2019). Some feel that animal testing is a reliable and quick way to make sure that products are ready for consumption, while others believe it is unnecessary due to alternative forms of testing. Is it time to retire the practice completely? Research shows that sustainability is popular amongst consumers (Sheehan & Lee, 2014).

Animal experimentation has been recorded as early as the ancient Greek philosophers (Hajar, 2011). Currently, animal testing is more prevalent than one might think. It is used primarily in pharmaceuticals, as well as cosmetics and “wellness” products. Recently, the cruelty-free movement in cosmetics has been used as a major marketing trope to increase sales. Sustainability has become very popular with younger generations and marketing teams are acknowledging this (Bloodhart, B., & Swim, J. K., 2020). This movement is relevant to the marketing field because it is heavily involved with the psychological aspects of consumer behavior. Since women are the primary buyers of cosmetics, they are the ones who have the most purchasing influence. Consequently, according to the theory of eco-femininity, women also tend to care about environmental issues more than men, thus sustainability is important to them (Bloodhart, B., & Swim, J. K., 2020).

This paper will address the ethics of animal testing by conducting a literature review. This literature review will detail the historical aspects of animal experimentation, current

legislation around the world, the pros and cons arguments, alternatives to animal testing, and finally, how animal testing is related to consumer behavior.

Method:

A high level of concentration and thought was exercised to organize a quality literature review about this topic. Firstly, an extensive search was conducted to find peer-reviewed journal articles. This search included key terms and phrases such as; cruelty-free, animal testing, sustainability, cosmetics, consumer behavior, consumer buying decisions, and legislation. The Sacred Heart University library databases were used, thus an extensive amount of information was at my disposal. For articles that proved specifically useful, the reference sections were also analyzed and further researched. Through these steps, the literature review was created and investigated thoroughly.

Literature Review:

I. History of Animal Testing and Current Legislation:

Animals have been used for experimentation since the birth of medicine. Early Greek philosophers such as Aristotle and Erasistratus are recorded performing experiments on animals, as well as Galen, who made strides in subjects such as anatomy and pharmacology. These early scientists shaped our medical system to our current day standards (Hajar, 2011). In the United States, it is a prevalent practice to use animals to test chemicals that are meant for human consumption. This practice primarily utilizes rodents, such as rats, mice, guinea pigs, or rabbits (Innis, 2019). As Innis explains, “The most common tests conducted on animals include the application of chemicals onto the shaved skin or into the eyes of restrained animals without pain

relief, the repeated force-feeding of the animals to identify signs of potential health hazards such as cancer, and "lethal dose" tests where animals are force-fed "large amounts of ... test chemical[s] to determine the dose that causes death." After completion of these tests, animals are killed without pain relief, "normally by asphyxiation, neck-breaking, or decapitation." (Innis, 2019). The denial of animals' right to life became widely accepted in the 20th century as many products proved harmful to American citizens. These products, such as baby powder or cosmetics made with lead, were not tested on animals before consumption, thus the U.S. quickly changed its practices. In more recent years, cosmetic companies are given the freedom to choose whatever method they see fit, as long as their product is proved safe before given out for consumption (Innis, 2019).

The EU has made legendary strides in the abolishing of animal testing in cosmetics. Firstly, it is important to acknowledge that animals are sentient beings who not only feel pain but feel emotions. Thus, the EU believes that their rights must be protected and enforced. Firstly, the European Union banned animal testing in cosmetics entirely. Thus, all cosmetics made in the EU could not utilize animal testing to prove products safe for consumption. Secondly, in 2013, the EU banned the marketing of cosmetic products that were tested on animals in other countries. For instance, a brand from the US that is not cruelty-free is unable to advertise within the EU. By regulating this activity, the EU forced companies to become more sustainable (Innis, 2019).

While some countries, such as New Zealand, have made efforts to follow in the EU's footsteps, the United States has become virtually silent on the matter. The US has enacted animal welfare policies, however, they do not apply to cosmetic companies and they exclude the protection of certain rodents (primarily used in the testing for cosmetics). Two policies have been proposed that could potentially help this cause. Firstly, the Environmental Protection

Agency (“EPA”) has drafted a policy to promote the use of alternatives to test pesticide sensitivity rather than using the skin of animals. While this does not directly coincide with cosmetics, it could influence cosmetic companies to adopt non-animal forms of testing (Innis, 2019). Secondly, in 2017, the Humane Cosmetic Act was introduced to Congress. This act would criminalize the production and marketing of animal-tested cosmetic products, carrying a \$10,000 punishment for every offense (Innis, 2019). As of 2020, the bill was introduced to the Senate and the House, however, it has not yet been passed (Humane Cosmetics Act, 2020).

The biggest supporting force in abolishing animal testing in the US has been California. California has recently proposed many bills that would lead to the prohibition of animal testing. For example, California enacted the senate bill 2082, which “...prohibits the use of animal testing methods for cosmetics, pesticides, and additional household products, where "an appropriate alternative test method has been scientifically validated and recommended by the Inter-Agency Coordinating Committee for the Validation of Alternative Methods” (Innis, 2019). This bill excludes testing on animals for medical practices. Additionally, California proposed Senate Bill 1249, which is interchangeable with the Humance Cosmetic Act, barring it from being enforced on a state level. While this is a major victory for animal rights activists, this bill proposes many possible concerns regarding interstate commerce. The U.S. Constitution declares that interstate commerce must be federally regulated and states are limited in the ways they can interfere. Despite this, Congress has recognized state sovereignty, thus states have an interest in the wellbeings of their citizens (Innis, 2019). While animal rights have become a fast-moving trend within the United States, there is still much work to do before animal testing s fully eradicated in this country.

II. Pros and Cons Arguments

The controversy concerning the ethical dilemma of animal testing has been ongoing since the 17th century (Hajar, 2011). To summarize, those who support animal testing argue that animal testing has led to all major medical advancements, thus a non-living alternative simply cannot compete. Opponents of animal testing argue that due to advanced technology, there is no reason to continue this practice (Pros and Cons of Animal Testing, 2013). To understand the ethicality of animal testing, one must analyze both sides of the argument regarding the most common concerns of this practice.

Proponents of animal testing present many valid points which must be considered. Firstly, the proponent's strongest argument is that animal testing assists in medical breakthroughs and advancements. According to the California Biomedical Research Association, most medical advancements over the last century were direct results from testing on animals (*Get the Facts*, 2021). While this is an undeniable fact, it is important to separate the use of animal testing in Biomed research and the use of animal testing in cosmetics. Opponents have chosen not to argue with this fact, rather speak upon the gruesome methods of testing and disposal of these subjects (ie. the asphyxiation, neck-breaking, and decapitation of the animal subjects once they prove no longer useful) (Innis, 2019).

The next point presented is that animal testing is necessary to safely formulate vaccines. Due to the recent pandemic, the topic of vaccines has been more important than ever (Pros & Cons - PROCON.ORG, 2020). According to Nikolai Petrovsky, a professor of medicine in Australia, the testing of animals is crucial to the success of vaccines, especially during Covid-19. He continues to explain that avoiding this step would be dangerous and irresponsible (Einhorn, 2020). Opponents of this argument contest that vaccines can be tested via human trials (Pros & Cons - PROCON.ORG, 2020). Not only does this avoid the harm of animals, these trials often

give human subjects incentives. According to Mark Feinburg, the CEO of the AIDS vaccine initiative, the only responsible method of conducting vaccine testing for covid-19 was through human trials. Traditionally, vaccines are tested on both animals and humans over the span of approximately 20 years. Unfortunately, the world did not have that luxury due to the increasing numbers of covid-19 infected individuals this year. While he acknowledges that animal trials are often good indicators of faulty vaccines, human trials are the only true test (Coronavirus vaccine clinical trial starting without usual animal data- STAT, 2020).

Proponents of animal testing argue that there is no adequate alternative to testing on a real living being. Due to the complexity of both animals and humans, proponents reject the notion that any non-living alternative would be acceptable (Pros & Cons - PROCON.ORG, 2020). While this may be true in cases of biomedicine, there are well-known alternatives used to test ingredients used in cosmetics. Skin sensitization is the largest concern that is commonly tested in cosmetics. According to a journal written on toxicology, there are various methods of testing skin sensitization; In Silico, In chemico, and In-vitro. Each of these methods has proven successful, however, they have not been made regulatory (Ezendam et al., 2016).

Finally, Proponents argue that animal testing is highly regulated, thus the animals are “protected” (Pros & Cons - PROCON.ORG, 2020). According to the Animal Welfare Act, instituted in 1966, animals must be kept in certain living standards with access to clean food, water, etc. as well as regular veterinary inspection (*Animal Welfare Act*, 2013). Under the Animal Welfare Act, these animals must be regulated and their health must be monitored. Opponents disagree with this argument, claiming that many animals that are used in testing are not protected under this act (Pros & Cons - PROCON.ORG, 2020). According to Rachel Rubino, a scientist and veterinarian at Cold Spring Harbor Laboratory, only about 5% of animals used for

testing are regulated by the Animal Welfare Act. Specifically, the Animal Welfare Act does not protect animals such as rodents, birds, and fish. Furthermore, meaning that 95% of animals used for testing are subjected to unregulated practices and living conditions (*Of mice and model organisms*, 2019).

III. Current Updates on Alternatives

Now that sustainability and cruelty-free practices have become a popular trend, scientists and manufacturers have had to collaborate to find the best possible alternatives. The European Union has been at the forefront of this subject for many years, thus much research has been conducted on their behalf. Firstly, it is important to understand the vernacular used to describe the various methods of testing. *In Vitro* describes a method that happens outside of a living organism. *In Silico* describes a method that is managed through computer simulation. *In Chemico* is the studying and prior knowledge of how chemicals react in combination with other factors (Ezendam et al., 2016).

The EU has many suitable alternatives to animal testing available, however, these methods have not gained traction globally. This is primarily due to the stubbornness of authorities who refuse to regulate and analyze these methods. By ignoring these scientific advancements, authorities around the world are contributing to major inconsistency regarding the implementation of animal testing (Taylor, 2016). Cosmetic brands mainly test their products for skin sensitization. Contact dermatitis, characterized by red itchy bumps, is a common symptom of an allergic reaction to cosmetics (Kleinstreuer, 2018). According to the *Critical Reviews in Toxicology*, “Due to its prevalence, persistence, and impact on quality of life, skin sensitization is recognized as an important occupational and environmental health issue. There are a variety of

national and regional regulatory requirements for chemical testing to identify skin sensitizers (Kleinstreuer, 2018). In a publication conducted by the Organization for Economic Co-operation and Development, a list of criteria for non-animal alternatives was given. From these criteria, the “Adverse Outcome Pathway” or AOP was adopted. Once these criteria were implemented, many scientists were able to develop several methods to test skin sensitization. While this is a major step towards progress, each method has its drawbacks. It has been concluded that the best approach is to combine multiple methods (Kleinstreuer, 2018).

In recent years, many methods have been analyzed to optimize alternative approaches. An example of these optimization initiatives is the “False Positives Project” and the “3D Skin” project (Pfuhrer et al., 2014). The “False Positives Project” refers to *In Vitro* clastogenicity assays that continuously produced false positives when testing carcinogenic data. The goal of this project was to optimize the tests with the use of more specific cell types without compromising the sensitization of the test. It was concluded that through the careful selection of specific cell lines and measurement of toxicity, the precision of clastogenic assays will dramatically improve (Pfuhrer et al., 2014). The “3D Skin” project is the most relevant to cosmetics, as it focuses on human skin. This project is still ongoing, however, if completed, it can revolutionize the way cosmetics are tested. To summarize, using the RS model, scientists will use human keratinocytes to create an *In Vitro* layer of skin. Furthermore, this skin will be used to test many chemicals and the results will be recorded to produce a predictive model for the future (Pfuhrer et al., 2014). This study states, “ By establishing good predictivity of the RS MN and Comet models, together with the confirmation that the RS models mimic native human skin in terms of their metabolic capacity...our results will support their use in follow-up tests in the assessment of the genotoxic hazard of cosmetic ingredients in the absence of *in vivo* data.”

(Pfuhler et al., 2014). Simply put, these projects are heading in the right direction in regards to non-in-vivo methods.

Many Organizations have contributed to the mass exodus of animal testing and the promotion of testing alternatives. The Humane Society International (HSI) is a major driving force around the world concerning animal protection. HSI is often looked to for advice by governments and large corporations concerning protocol and regulations. The HSI has adopted the “Three R’s” practice, Replacement, Reduction, and Refinement, as its main procedure (Seidle, 2013). One of HSI’s main accomplishments was the development of the *Be Cruelty-Free* initiative. This initiative ended the practice of animal testing in the EU. HSI partnered with popular celebrities and companies such as Lush to create the *Be Cruelty-Free* campaign. Furthermore, they continued this work in other countries as well. The *Be Cruelty-Free* initiative, originating in 2012, recognizes that they have not achieved success until their policies are adopted globally. The Initiative was launched in eight countries, including the U.S. and Canada, intending to completely eradicate animal testing. Now, the initiative has expanded to twelve countries (Seidle, 2013).

The HSI and the *Be Cruelty-Free* initiative have achieved many accomplishments around the globe. In India, HSI convinced policymakers to eradicate the last remaining tests conducted on animals. Furthermore, HSI continues to attend high-level government meetings to end the sale of makeup tested on animals completely. HSI has worked with Brazilian lawmakers as they have adopted the “Three R’s” policy into their cosmetic safety guidelines. HSI proposed a bill that would end the sale of animal-tested cosmetics in Brazil, which was backed by roughly 150 members of the Brazilian parliament. Most notably, HSI was instrumental in the promotion of alternatives to animal testing in Asian countries. China is notorious for its previously strict

mandate that all cosmetics must be tested on animals. HSI and the Humane Society of the U.S. gave an \$80,000 grant to educate Chinese policymakers about *In Vitro* testing methods. After the *Be Cruelty-Free* initiative was launched in China, the Chinese food and Drug Administration conducted its first revision to the cosmetics act in over two decades. Additionally, HSI's work in South Korea has influenced the government to formally recognize alternative forms of testing, as well as opening an official Center for Alternatives to Animal Testing (Seidle, 2013). HSI is currently one of the strongest and most influential initiatives that have promoted alternatives to animal testing, and they continue to educate and reform to this day.

IV. Consumer Behavior and Sustainability

As a marketer, it is our job to respond to trends with corresponding stimuli to increase sales within our target market. Sustainability has become highly important amongst consumers in the recent decade, however, this begs the question, "why?". It is believed that marketing is the main cause for increased consumption resulting in materialistic and non-sustainable lifestyles. Thus, marketing has created the desire for sustainability, while also preying upon sustainability as a marketing tactic (Pantelic et al., 2016).

The term "sustainability" is seen as a "positive buzzword", meaning it makes consumers feel admirable when purchasing a seemingly sustainable product. Simultaneously, these consumers have also fed into a "sales pitch trick" (Pantelic et al., 2016). When consumers are making purchasing decisions, they rely on heuristics and values. Heuristics are, "risk-reduction and problem-solving mechanisms in prepurchase information seeking and processing" (Sheehan & Lee, 2014). When consumers perceive that a product is in alignment with their values, they will develop a positive brand image. This phenomenon is referred to as the "halo effect". This is

crucial to the marketing funnel, as a positive brand image contributes to repeat customers and positive word of mouth. Furthermore, if a brand's message ties into a consumer's sacred values, values in which one is not willing to compromise, the consumer is now motivated by moral heuristics. This is the process cruelty-free brands use to persuade consumers (Sheehan & Lee, 2014). For example, if Sarah is passionate about animal rights due to her dog being previously abused, she will only buy cruelty-free cosmetics because animal protection is a sacred value to her. A study was conducted to analyze how persuasive the phrase "cruelty-free" was to consumers. 132 participants, none of which were affiliated with animal rights groups, participated in an online survey. In this survey, the participants were asked if they knew what cruelty-free meant, if they recognized the leaping bunny symbol, followed by sections where they rated opinions of the cruelty-free movement based on a scale of 1-10. The researchers found that only 8% of participants knew of the leaping bunny symbol, and only 64% of participants knew that cruelty-free was associated with the testing on animals. This data shows that most people are unclear about the cruelty-free movement. More importantly, this study showed that the phrase, whether the participant understood it or not, was highly persuasive (Sheehan & Lee, 2014).

Research shows that gender may also be a contributing factor to the increase in sustainable beauty products. Studies show that women's buying habits are far more sustainable than men's (Bloodhart & Swim 2020). Traditional female gender roles implicate that women must be caring and loving in nature. Contrarily, men are expected to be dismissive and private about their emotions. These expectations are also evident in the way each gender feels about the environment (Bloodhart & Swim 2020).

Due to systemic gender roles, women primarily participate in private purchases, meaning food, clothes, and cleaning supplies. Men primarily participate in “homeowner role” purchases, meaning renovation or building supplies. Since women are stereotypically more consumeristic than men, they are expected to participate in more sustainable practices. This phenomenon is called the principle of “eco-femininity”. This expectation has perpetuated to men that sustainability is inherently feminine, thus straight males may turn away from the practice altogether as a form of self-preservation. With this information, companies have recognized that women are the primary consumers that sustainability can influence (Bloodhart & Swim 2020). To conclude, the perpetuation of consumerism promoted through marketing and the principle of “eco-femininity” has widely contributed to the increase in sustainability within women’s products.

Conclusion:

In conclusion, animal testing is proving to be a subjectively unethical practice. While it is necessary for fields such as biomedicine (*Get the Facts*, 2021), it is not necessarily needed for the production of cosmetics. Due to recent technological advancements, alternative testing methods, such as In Vitro assays, have been able to test the skin sensitization of certain chemicals used in cosmetics (Pfuhler et al., 2014). In the United States, the Animal Welfare Act does not protect most animals used for routine product testing. Consequently, these animal treatments are left to the discretion of labs. Once these animals are no longer needed, they are disposed of in painful and inhumane ways (Innis, 2019). According to recent studies, sustainability and cruelty-free marketing have proven to be extremely persuasive amongst consumers (Sheehan & Lee, 2014). Non-cruelty-free companies should use this finding as

motivation to step away from the mistreatment of animals and to adopt more sustainable practices.

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