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Crafting Next Generation Eco-Label Policy

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ARTICLES

CRAFTING NEXT GENERATION ECO-LABEL POLICY

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Eco-labels present a promising policy tool in the effort to achieve sustainable consumption. Many questions remain, however, about the extent to which eco-labels can contribute to sustainability efforts and how to maximize their effectiveness. This Article deploys research from evolutionary psychology, behavioral law and economics, and norm theory to offer specific insights for the design and implementation of eco-labels to enhance their influence on sustainable consumer choice. Notably, this research suggests possibilities for eco-labels to shape or expand consumer preferences for green goods, and thereby enhance eco-label influence on consumer behavior by extending it beyond eco-minded consumers. We suggest that public exposure of the label (so that people see it) and the exposure of the purchasing behavior (so that other people can see that you have bought the product) are key elements to the success of eco-labels—the social context around product purchasing may be as important as the eco-label itself. We recommend that behavioral insights be used to improve eco-labeling as traditionally understood by incorporating knowledge

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about behavioral tendencies into label design so as to allow for more accurate matching of consumers' preexisting environmental preferences to eco-labeled goods, and develop next-generation eco-labeling policy with the potential to significantly expand the market for eco-labeled goods. Specifically, 1) Eco-labels could be purposefully designed and implemented to attract consumers motivated by social norms; 2) Eco-labels could appeal to a wider range of abstract norm alternate more broadly or locally accepted and strong abstract that are stronger and/or more broadly accepted or locally-salient; and 3) Eco-labels could highlight private, near and near-term benefits.

I. INTRODUCTION

Eco-labeling policy sits at the intersection of three powerful developments in environmental law and policy—the effort to craft effective policies to address unsustainable consumption, increasing deployment of informational regulation as a policy tool, and a new focus on individuals as potential targets of environmental regulation.

Unsustainable consumption, arising in part from individual consumption practices, is generally recognized as a key driver of environmental harm and there is widespread consensus about the need to develop policy to improve consumption practices. The World Wildlife Fund's 2014 Living Planet Report concludes that 1.5 Earths would be required to meet human demands each year, that the number of countries whose consumption footprint exceeds its own biological productive capacity continues to grow, and that the per capita ecological footprint of high-income countries is about five times more than that of low-income countries.[1] The importance of consumption practices as a driver of environmental harm and the need to develop policy directed at achieving sustainable consumption has been recognized globally for decades.

In 1992, the United Nations Conference on Environment and Development concluded: "[T]he major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of grave concern, aggravating poverty and imbalances. . . . Developed countries should take the lead in achieving sustainable consumption patterns[.]"[2]

The General Assembly reiterated the importance of sustainable consumption in 2012, endorsing the outcome document of the United Nations Conference on Sustainable Development, *The Future We Want*, which recognizes "that urgent action on unsustainable patterns of production and consumption where they occur remains fundamental in addressing environmental sustainability" and that "fundamental changes in the way societies consume and produce are indispensable for achieving global sustainable development."[3] The General Assembly also accepted the recommendation in *The Future We Want* to adopt a 10-year Framework of Programmes on Sustainable Consumption and Production (10YFP);[4] the 10YFP is presently being implemented under the direction of a ten member board consisting of two members from each U.N. regional group with the United Nations Environment Programme serving as Secretariat.[5]

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1 WORLD WILDLIFE FUND, LIVING PLANET REPORT 9–10, 12, 38 (2014).

2 U.N. Conference on Environment and Development, *Agenda 21*, ¶¶ 4.3, 4.8(b), U.N. Doc. A/Conf.151/26 (June 3–14, 1992) [hereinafter *Agenda 21*]; *see also* Paul Ekins, *The Sustainable Consumer Society: A Contradiction in Terms?*, 3 INT'L ENVTL. AFF. 243, 249 (1991) ("[T]he environmental crisis . . . must be laid squarely at the door of northern industrial consumer lifestyles and their imitations now in nearly all countries of the Third World.").

3 G.A. Res. 66/288, annex, The Future We Want, ¶¶ 61, 224 (Sept. 11, 2012). Goal 12 of the 2030 Agenda for Sustainable Development also aims to ensure sustainable consumption and production patterns, stating in Paragraph 28 of the 2030 Agenda: "We [Countries] commit to making fundamental changes in the way that our societies produce and consume goods and services." Transforming Our World: The 2030 Agenda for Sustainable Development, ¶ 28, U.N. Doc. A/Res/70/1 (2015).

4 The Future We Want, *supra* note 3, ¶ 226.

5 G.A. Res. 67/203, ¶ 5 (Feb. 27, 2013); *see also* Econ. & Soc. Council, Progress report on the 10-year framework of programmes on sustainable consumption and production patterns, ¶¶ 2, 7–9, U.N. Doc. E/2015/56 (Mar. 31, 2015) (further discussing the board of the framework and implementation). For an overview of the work on the 10-year framework programmes, see

However, the clear unsustainability of present levels and patterns of consumption, and the stated resolve to develop policy to address the same, stands in stark contrast to the halting progress toward that goal.[6] As evidenced by the World Wildlife Fund's tracking of consumption and ecological footprints, if there has been on-the-ground progress, it has been quite limited.[7] And a review of the 10YFP suggests that global policy efforts are still very much in the stage of development, with many initiatives focused on information collection and the implementation of case studies.

The struggle to develop effective consumption policy can be attributed in part to the fact that to do so requires a reorientation of traditional environmental law and policy. Environmental law has long focused on pollution as opposed to consumption[8] and on large, industrial sources as opposed to individuals.[9] While upstream controls on the manufacturers of consumer goods and services, typical of traditional environmental regulation, is important, achieving sustainable consumption will also likely require interventions targeted more directly at individual consumption.[10] The aggregated environmental impact of consumption by individuals is clear.

In the context of climate change, for example, greenhouse gas emissions attributable to the direct emissions of individuals or households, indexed primarily to emissions generated by private transportation and home energy use, are estimated to account for approximately 30% of total U.S. emissions, or roughly 8% of worldwide emissions.[11] Notably, this

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10YFP: Global Action for Sustainable Production and Consumption, UNITED NATIONS ENV'T PROGRAMME, https://perma.cc/2K6P-VZJ4 (last visited July 14, 2018).

6 Doris A. Fuchs & Sylvia Lorek, *Sustainable Consumption Governance: A History of Promises and Failures*, 28 J. OF CONSUMER POL'Y 261, 282 (2005); Lucia Reisch et al., *Sustainable Food Consumption: An Overview of Contemporary Issues and Policies*, SUSTAINABILITY: SCI., PRACTICE & POL'Y, Summer 2013, at 7, 16–17 (observing with respect to food policy and sustainability, "On the demand side, national governments generally play a relatively weak role in managing the adverse effects of (over)consumption[,]" and "explicit policies for sustainable consumption in general and for food consumption in particular are uncommon.").

7 *See* WORLD WILDLIFE FUND, *supra* note 1, at 32–33, 39, 57 (explaining that humanity's ecological footprint and consumption levels are still rising).

8 Doug Kysar & Michael P. Vandenbergh, *Introduction: Climate Change and Consumption*, [2008] 38 Envtl. L. Rep. (Envtl. L. Inst.) 10,825, 10,825–28 (describing the historical lack of attention to consumption from environmental policy, discussing the relationship between law and consumer preferences, and explaining why consumption must now be addressed head on by environmental policy).

9 *E.g.*, Michael P. Vandenbergh, *From Smokestack to SUV: The Individual as Regulated Entity in the New Era of Environmental Law*, 57 VAND. L. REV. 515, 536–37, 542–43 (2004).

10 U.N. ENV'T PROGRAMME, SUSTAINABLE CONSUMPTION AND PRODUCTION: A HANDBOOK FOR POLICYMAKERS 7 (Emily Briggs ed., 2015) (observing that sustainable production and consumption "requires policy to not just improve production, but also to support consumers to move towards sustainable consumption choices. Therefore everyone in society has a role to play in this transition including governments, educators, the private sector and each and every consumer.") (emphasis omitted). Individuals are also an important source of political will to generate and sustain political interventions in support of sustainability.

11 Michael P. Vandenbergh et al., *Implementing the Behavioral Wedge: Designing and Adopting Effective Carbon Emissions Reduction Programs*, [2010] 40 Envtl. L. Rep. (Envtl. L. Inst.) 10,547, 10,549; Anne E. Carlson et al., *The Forum: Creating the Carbon-Neutral Citizen*, ENVTL. F. Nov.–Dec. 2007, at 46, 46; Michael P. Vandenbergh & Anne Steinemann, *The Carbon-*

estimate counts only direct emissions; estimates of greenhouse gas emissions attributable to individuals are far greater when indirect emissions resulting from the preparation (production and delivery) of a product or service before its use (such as the emissions generated during the manufacture and delivery of a car) are included. One study that adopted a consumer lifestyle approach designed to capture both direct and indirect emissions concluded that consumer lifestyle decisions account for 85% of all energy use in the United States and that consumer consumption activities account for 102% of U.S. carbon dioxide emissions.[12] A European Union study showed that groups of products from only three areas—food and drink, private transportation, and housing—are together responsible for 70–80% of the environmental impacts of personal consumption.[13]

In addition to requiring a reorientation of traditional approaches to environmental regulation, sustainable consumption touches on a number of complex and vexing issues. Scholars observe that "sustainable consumption's ultimate objective remains indistinct, blurred by disagreement over appropriate measures, issues of international and intergenerational equity, and, most important, implications on individual lifestyles" and that "issues of sustainable consumption go to the very heart of societal norms such as lifestyle, equity, and cultural identity—issues that cannot be easily resolved in the legislature or courtroom."[14] Many also suggest that achieving sustainability will require reductions in overall levels of consumption, at least in the developed world, which is at odds with the pro-growth tenets of capitalism.[15] Developing consumption policy thus presents distinct policy challenges.

Two developments in environmental regulation may, however, prove helpful in the effort to craft consumption policy. First, a growing number of scholars recognize the importance of extending the reach of environmental law to individuals and are examining how this can occur.[16] Additionally, environmental policy has embraced informational regulation, or "regulation

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Neutral Individual, 82 N.Y.U. L. REV. 1673, 1677 (2007). In defining individual behavior, Vandenbergh and Steinemann include emissions from personal motor vehicle use, personal air travel, mass transport, and emissions attributable to household electricity use. *Id.* at 1677, 1690.

12 Shui Bin & Hadi Dowlatabadi, *Consumer Lifestyle Approach to US Energy Use and the Related CO_2 Emissions*, 33 ENERGY POL'Y 197, 203–05 (2005).

13 B.P. WEIDEMA ET AL., ENVIRONMENTAL IMPROVEMENT POTENTIALS OF MEAT AND DAIRY PRODUCTS 17 (Peter Eder & Luis Delgado eds., 2008).

14 James Salzman, *Sustainable Consumption and the Law*, 27 ENVTL. L. 1243, 1255–56 (1997).

15 *See* Michal Jemma Carrington et al., *The Ideology of the Ethical Consumption Gap,* 16 MARKETING THEORY 21, 24 (2016) (arguing the social failure to consume ethically is driven by destructive capitalist structures that undermine ethical consumerism).

16 *See, e.g.*, JASON J. CZARNEZKI, EVERYDAY ENVIRONMENTALISM: LAW, NATURE & INDIVIDUAL BEHAVIOR (2011); Hope M. Babcock, *Assuming Personal Responsibility for Improving the Environment: Moving Toward a New Environmental Norm*, 33 HARV. ENVTL. L. REV. 117 (2009); Michael P. Vandenbergh, *The Individual as Polluter*, [2005] 35 Envtl. L. Rep. (Envtl. L. Inst.) 10,723; Michael P. Vandenbergh, *Order Without Social Norms: How Personal Norm Activation Can Protect the Environment*, 99 NW. U. L. REV. 1101 (2005).

through disclosure."[17] "Generation of information about the environmental consequences of actions can provide a means of encouraging better environmental performance."[18] "[I]nformation helps inform government decisions about how and whether to protect the environment[,]" and can motivate the avoidance of environmental problems.[19] In particular, "[t]he provision of environmental information about products, processes that lead to the products, and producers of the products (owners of the processes) has become an accepted, if by no means fully understood, part of the environmental policy toolkit."[20] These "new tools" of environmental policy "all have one or both of two features. They use education and the provision of information to try to change behavior, and the changes in behavior are voluntary in the sense that they are not driven by specific regulatory directives, externality taxes, or permit markets."[21] Most importantly, in light of the difficulties of applying more traditional interventions such as mandates for individuals,[22] informational regulation may constitute a more feasible policy option for addressing individual consumption.[23]

In terms of regulatory policy, a key question at the intersection of these related developments—the imperative to address consumption, a focus on individuals as potential targets of environmental regulation, and the growing use of informational regulation—is whether information production and dissemination can lead to consumer-driven environmental improvement.[24] Much work is focused on this question. For example, to support revision of

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17 Cass R. Sunstein, *Informational Regulation and Informational Standing:* Akins *and Beyond*, 147 U. PA. L. REV. 613, 613 (1999). *See also* ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 327–44 (6th ed. 2009) (describing the development of "regulation through revelation").

18 DAVID M. DREISEN & ROBERT W. ADLER, ENVIRONMENTAL LAW: A PRAGMATIC AND CONCEPTUAL APPROACH 329 (2007).

19 *Id.* (citing Daniel C. Esty, *Environmental Protection in the Information Age*, 79 N.Y.U. L. REV. 115, 121–40 (2004)).

20 Clifford S. Russell et al., *Environment, Information and Consumer Behaviour: An Introduction*, *in* ENVIRONMENT, INFORMATION AND CONSUMER BEHAVIOR 1 (Signe Krarup & Clifford S. Russell eds., 2005).

21 Thomas Dietz & Paul C. Stern, *Exploring New Tools for Environmental Protection*, *in* NEW TOOLS FOR ENVIRONMENTAL PROTECTION 5 (Thomas Dietz & Paul C. Stern eds., 2002).

22 Ann E. Carlson, *Recycling Norms*, 89 CAL. L. REV. 1231, 1235 (2001) (identifying the difficulties of applying traditional regulation to individuals and observing that "[w]hen numerous people must act to solve a collective problem and lack the economic incentive to do so, traditional government regulation, such as formal law, may be infeasible, ineffectual, or politically difficult. The costs of monitoring and enforcement can be prohibitively expensive or may raise privacy concerns.").

23 Vandenbergh, *From Smokestack to SUV*, *supra* note 9, at 608 ("Perhaps the most important implication of the new focus on individuals as polluters is the need to look beyond the command and control versus economic incentives debate to informational regulation and norm management.").

24 For an overview of doubts about the utility of ethical consumption generally, arguing that it avoids systemic critique of consumerist capitalism, see Carrington et al., *supra* note 15, at 21, 24 ("[E]ven if the currently low percentage of ethical consumers would double or even triple . . . the effect would be negligible. . . . [I]n the context of the natural environment, many observers have argued that in order to halt the ecological catastrophe we need not only responsible consumption but significantly reduced consumption[.]" (citations omitted)).

the *Sustainable Consumption and Production Industrial Policy (SCP/SIP) Action Plan*, the European Commission launched a research study, *Policies to Encourage Sustainable Consumption*, that undertook an in-depth review of issues related to sustainable consumption and behavior, including a review of the main policy tools for promoting consumer behavior change (behavioral, informational/communication, economic, and regulatory).[25] Notably, the study identifies the existence of "good practice" with respect to the design of environmental labels but observes that "[t]here is much to be learned from marketing experts on how to effectively communicate information aimed at influencing consumers' decisions"[26] and concedes that while "[a] number of EU policies to date have been based on the premise that providing consumers with information is sufficient to bring about change, . . . there are indications that the approach of 'providing consumers with information' in order to make decisions is not sufficient to bring about changes in consumption behavior."[27] The study recognizes and investigates the use of behavioral approaches to more effectively influence consumer behavior but ultimately cautions that policymakers should "not consider the possibility of using the behavioural approach and 'nudges' until the consumer decision-making process has been well understood."[28]

The 10YFP being implemented pursuant to the *The Future We Want* includes a program focused on consumer information and, as with the European Union research study discussed above, articulates the need for additional research to support consumer behavior interventions. The implementation pathway adopted in 2014 for the 10YFP Consumer Information Programme sets out as one "sub-work area" to "[i]dentify and scale up effective practices of consumer information" and as another "[m]oving from information to action: [u]nderstanding the impact of sustainability information on consumer behavior."[29] These work areas are focused on understanding how to communicate sustainability information to individual consumers in ways that cause them to adopt sustainable consumption practices. The implementation pathway cites to recognized challenges and these include that "[c]ommunication of information is not always effective" and that "[h]igh-quality consumer information does not necessarily lead to a change in consumption practices."[30] Action items specified in the implementation pathway include "[s]tocktaking of existing research on consumer behaviour related to sustainability information" and "[a]pplied field research []testing drivers to behavioural change and effective communications practices . . . ."[31]

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25 *See* JONATHAN BAIN ET AL., POLICIES TO ENCOURAGE SUSTAINABLE CONSUMPTION: EUROPEAN COMMISSION TECHNICAL REPORT 2012-061, at 7, 13–14 (Aug. 22, 2012), https://perma.cc/5RCJ-374Y [hereinafter EUROPEAN COMMISSION TECHNICAL REPORT].

26 *Id.* at 13.

27 *Id.* at 35.

28 *Id.* at 9.

29 U.N. ENV'T PROGRAMME, 10YFP CONSUMER INFORMATION PROGRAMME: IMPLEMENTATION PATHWAY (2015), https://perma.cc/3XGA-FUM3.

30 *Id.*

31 *Id.*

The above-described developments illustrate the importance of and potential for crafting policies to maximize the use of eco-labels to encourage pro-environmental consumer choice; the conclusions and objectives of the European Union research study, *Policies to Encourage Sustainable Consumption*, and the Consumer Information Programme Implementation Pathway, however, make clear that important knowledge gaps must be filled to do so effectively. At present, eco-labels are ubiquitous (by one count, in 2009 roughly 600 labels were used worldwide to characterize products as environmentally-friendly in some manner) but not well understood.[32] The United States alone has at least 19 eco-labels and environmental certifications in the food context.[33] The proliferation of labeling programs and guidelines has preceded and outpaced research about eco-label program design and implementation. While there is great research interest in and an emerging body of research addressed to the use of eco-labels, significant questions remain about core considerations, such as the best process for creating an eco-label, what types of eco-labels are effective in changing consumer behavior, and how they should be designed and implemented.

This Article seeks to advance understanding of how the design and implementation of eco-labels, incorporating both communication and behavioral approaches, can influence consumer decisions. Part II describes current approaches to eco-labeling and identifies the limitations of existing eco-label policy, including, most importantly, the fact that labels have produced uneven results to prompt significant numbers of consumers to consistently choose sustainably produced products. Part III then reviews bodies of research with the potential to yield insight into label design and implementation, including work in the fields of evolutionary psychology, behavioral law and economics, and norm theory. While research into label design already incorporates insights from some of these fields (or the underlying psychological research that they draw from), evolutionary psychology has not been the subject of prior extensive study in the context of eco-labels nor has there previously been an effort to compare and synthesize insights across these fields. Part IV summarizes, reconciles, and distills insights from these research streams into specific recommendations for eco-label design and implementation. Specifically, Part IV recommends that behavioral insights can be used to 1) improve eco-labeling as traditionally understood by incorporating knowledge about behavioral tendencies into label design to as to allow for more accurate matching of consumers' preexisting environmental preferences to eco-labeled goods, and 2) develop next-generation eco-labeling policy with the potential to significantly expand the market for eco-labeled goods by invoking social norms, broadening the normative bases to which eco-goods appeal, and emphasizing private, near and near-term benefits of eco-goods. Part V

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32 Jason J. Czarnezki et al., *Creating Order Amidst Food Eco-Label Chaos*, 25 DUKE ENVTL. L. & POL'Y F. 281, 281 (2015).

33 DAN VERMEER ET AL., AN OVERVIEW OF ECOLABELS AND SUSTAINABILITY CERTIFICATIONS IN THE GLOBAL MARKETPLACE 30 (Jay S. Golden ed., 2010), https://perma.cc/P2HY-VGBY.

concludes by discussing the broader implications of these recommendations for eco-label policy and identifying areas where policy development would benefit from further research.

II. ECO-LABELING POLICY

Given the potential policy advantages of information regulation and dissemination, consumer interest, and perceived economics gains for producers and retailers for making and selling a value-added product, eco-labeling on consumable and durable goods has proliferated worldwide. Proponents of eco-labeling argue that they can help foster environmentally friendly consumer behavior and, in the aggregate, influence and reduce environmental harm.[34] An eco-label informational and certification scheme can provide engaged consumers with a measurable analysis created by experts and also provide a single point of product comparison for the less-engaged consumer.

Significant questions remain, however, about eco-label design and efficacy.[35] There are, for example, concerns about consumer confusion and best practices. How entities define adjectives on eco-labels varies greatly, and the accuracy of these claims may be questionable. The increase in unverifiable and non-third-party certified eco-labels, in particular, can create confusion among consumers and can undermine the value of well-intentioned labeling schemes that seek to highlight environmentally friendly options.[36] As a form of information regulation, eco-labels contain many different types of information that come from many different sources. In terms of a taxonomy of eco-labels, labels have content—the type of information that the label contains—and require validation by an entity that determines what information is conveyed and assesses its validity.[37] It is further unclear the extent to which eco-labeling can be expected to support widespread sustainable consumption. As discussed *infra*, to date eco-labeled goods have largely failed to garner significant market share, although some sectors show growth.[38] Expansion of eco-label market share may occur through refinement and improvement within existing eco-labeling

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34 *See* Jason J. Czarnezki, *The Future of Food Eco-Labeling: Organic, Carbon Footprint, and Environmental Life-Cycle Analysis*, 30 STAN. ENVTL. L.J. 3, 4 (2015) (suggesting that "consumer informational labeling can be an effective regulatory tool in encouraging eco-friendly choices").

35 *See* Jason J. Czarnezki et al., *Eco-labelling*, THE OXFORD HANDBOOK OF COMPARATIVE ENVIRONMENTAL LAW (forthcoming 2018) (manuscript at 4) (on file with authors) (noting that, despite the popularity of eco-labels, successful eco-labels face a number of implementation barriers and normative concerns such as the cost and technical challenges to generate accurate, verifiable, and understandable information; inequality as many lack access to or cannot afford high-priced eco-labeled products; and the voluntary purchasing context of the individual consumer does not require any actual changes to primary behavior).

36 *See id.* at 20–21 ("The increase in unverifiable and non-third-party certified eco-labels can create confusion and skepticism among consumers, who may not trust the word of private profit-seeking corporations.").

37 *Id.* at 5.

38 *See infra* notes 70–77 and accompanying text.

paradigms, perhaps coupled with increases in societal awareness and eco-minded consumers. There are, however, reasons to believe that it may also be helpful or necessary to orient eco-labels to a broader consumer segment to drive meaningful changes in consumption patterns.

A. Eco-label Content

Eco-label content can be sorted into two sets of categories. First, the label conveys environmental information that is positive—a claim that the product is environmentally friendly in some way—negative—a warning that the product is risky to human health or the environment—or neutral—information that may only be meaningful relative to a scale. Warning labels often also include instructions for safe use. Second, the label conveys information either about the product itself or about the process by which the product was made.

Neutral labels offer information that is not in itself positive or negative. For instance, "environmental product declarations" (EPD) are "industry-created statements containing a variety of information about the composition and environmental characteristics of a product based on life-cycle assessment . . . ."[39] This approach would inform consumers about a wide range of life-cycle environmental concerns associated with the product such as water usage, chemicals used, pollution and carbon emissions, and waste disposal. Unlike an eco-label seal, an EPD alone would disclose information "in a neutral way that enables evaluations by purchasers but that does not seek to judge the environmental characteristics of a product."[40]

Positive claims attempt to induce consumers to choose eco-friendly items over a substantially similar, but not as eco-friendly, item. As eco-friendly products are often more expensive to produce, labels are a mechanism for sellers to increase the price and capture the consumer's willingness to pay more for the actual or perceived benefits associated with the environmental claim.[41] Positive claims might relate directly to consumer health or might communicate an environmental characteristic of the product.

The process/product distinction is also key to understanding eco-label content. "Process claims convey information about the conditions of manufacture, including, but not limited to, chemical and fossil fuel inputs, ingredient sourcing practices, water and energy use during processing, distribution methods, and environmental by-products of processing."[42] A process claim does not, however, convey any information about the product

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[39] Nancy J. King & Brian J. King, *Creating Incentives for Sustainable Buildings: A Comparative Law Approach Featuring the United States and the European Union*, 23 VA. ENVTL. L.J. 397, 436 n.232 (2005) (citing EUR. COMM'N, SUMMARY OF DISCUSSIONS AT THE 2ND INTEGRATED PRODUCT POLICY EXPERT WORKSHOP: ENVIRONMENTAL PRODUCT DECLARATIONS (ISO 14025 TECHNICAL REPORT) 2 (2001), https://perma.cc/RR23-H2RB).

[40] *Id.*

[41] Czarnezki et al., *supra* note 35, at 6; *see also* VERMEER ET AL., *supra* note 33, at 11.

[42] Czarnezki et al., *supra* note 35, at 7.

itself, which may be functionally and chemically identical to a product produced under different circumstances.

B. Eco-label Sources

A major form of voluntary, private-sponsored labeling consists of "self-declared" or "first-party" claims, some of which state a single attribute like "sustainable," or more recently, make an environmental claim based on a number of self-created standards. "A self-declaration environmental claim is one that is made without independent third-party certification by manufacturers, importers, distributors, retailers, or anyone else likely to benefit from such a claim."[43] Surveys demonstrate that the proliferation of manufacturer-sponsored eco-labeling schemes "has caused widespread consumer confusion and skepticism over the alleged environmental claims[,]" leading many manufacturers and retailers to turn to independent, third-party expert entities to certify that environmental product claims are valid.[44]

First-party labels are governed only by the producing company, while some label schemes rely on private third-party certification.[45] Third-party labels mitigate transparency and accuracy concerns by imposing uniform publicly available standards, yet accountability concerns remain.[46] While third-party certifications have grown dramatically in recent years, both first-party and third-party schemes are entirely voluntary.[47] Some labels are publicly governed, helping to abate accountability concerns through publicly mandated information disclosures, and making voluntary labels subject to government oversight of label standards or a public verification process.[48]

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43 Richard B. Stewart, *A New Generation of Environmental Regulation?*, 29 CAP. U. L. REV. 21, 136 n.449 (2001). *See also* Atsuko Okubo, *Environmental Labeling Programs and the GATT/WTO Regime*, 11 GEO. INT'L ENVTL. L. REV. 599, 608 (1999) ("The other subcategory of the voluntary, private-sponsored labeling schemes is based on self-declaration claims, or first-party claims. A self-declaration environmental claim is an environmental claim that is made, without independent third-party certification, by manufacturers, importers, distributors, retailers, or anyone else likely to benefit from such a claim. Such a declaration can take such forms as statement symbols, package labels and advertising." (footnote omitted)).

44 Elliot B. Staffin, *Trade Barrier or Trade Boon? A Critical Evaluation of Environmental Labeling and Its Role in the "Greening" of World Trade*, 21 COLUM. J. ENVTL. L. 205, 216–17 (1996) (citing U.S. ENVTL. PROT. AGENCY, STATUS REPORT ON THE USE OF ENVIRONMENTAL LABELS WORLDWIDE 6–7 (1993)); Avi Gesser, *Canada's Environmental Choice Program: A Model for a "Trade-Friendly" Eco-Labeling Scheme*, 39 HARV. INT'L L.J. 501, 511–12 (1998) ("Understandably, consumers are skeptical about the truthfulness of environmental claims made by the manufacturers themselves. As a result, unregulated first-party environmental labeling programs provide little assistance for many environmentally conscious consumers. This is not only because producers may make misleading claims about the environmental friendliness of their products, but also because they may lack the resources and expertise to properly evaluate their goods.").

45 Czarnezki et al., *supra* note 35, at 9–10; *see also* Staffin, *supra* note 44, at 220, 230.

46 Czarnezki et al., *supra* note 35, at 10.

47 *Id.*

48 *Id.*; *see* U.S. ENVTL. PROT. AGENCY, STATUS REPORT ON THE USE OF ENVIRONMENTAL LABELS WORLDWIDE 2–18 (1993).

Private voluntary label schemes can either be self-declared or third-party certified.

There is no shortage of eco-labeling regimes in terms of third-party certifiers and government sponsored labels. Organic labeling programs for food exist, carbon labeling programs and environmental best practices for all products are under development, and environmental life-cycle assessment and costing labels are under consideration. Taking food as an example, the third-party certifier KRAV in particular has long been the key player in the Swedish organic market[49] and has created a best practices approach in different food sectors[50] to receive its label, adding climate standards into their existing organic label.[51] The label does not provide quantifiable emissions numbers, but ensures that measures have been taken to reduce climate impact. KRAV labeling takes organic and climate factors into account, but also standards for animal welfare, social responsibility, and public health.[52]

Both the United States and European Union have developed organic food certification and labeling programs. And the nature of food labeling has shifted from private marketing and sales efforts to also include public and environmental health. Nutritional labeling began in the United States in 1990 under the Nutrition Labeling and Education Act.[53] The U.S. Organic Foods Production Act (OFPA)[54] establishes a national organic certification program in which agricultural products may be labeled as organic if produced and handled without the use of synthetic substances. Under the OFPA and the National Organic Program (NOP), the U.S. government creates production, handling, and labeling standards for organic agricultural products.[55]

But what does "organic" mean? What counts as organic? For many, the organic label means healthy, environmentally friendly, safe, and pesticide-free. While in some cases these characteristics are true, they are not elements of the legal definitions of organic—and legal definitions matter. The NOP created under OFPA creates a four-tiered labeling system for organic foods.[56] All organics are not created equally. The label does not signify that that food is healthier for the consumer.

First, a product can be labeled "100 percent organic" and carry the United States Department of Agriculture and certifying agent seals if it contains 100% organically produced ingredients as defined by OFPA (e.g.,

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49 *See generally* KRAV, *Market Report 2016* (2016), https://perma.cc/3FHX-CRW5.

50 This is a decision to use verifiable production process standards, or standards based on quantitative data/statistics about environment costs.

51 "KRAV has noted this in its slogan accompanying its label. The label is a green 'KRAV' surrounded by an oval with the slogan, 'Du får mer,' meaning 'you get more.'" MARY JANE ANGELO ET AL., FOOD, AGRICULTURE AND ENVIRONMENTAL LAW 314 & n.123 (2013).

52 *Id.* at 314.

53 Nutrition Labeling and Education Act of 1990, Pub. L. No. 102–535, 104 Stat. 2353 (codified as amended in scattered sections of 21 U.S.C.).

54 Organic Foods Production Act of 1990, 7 U.S.C. §§ 6501–6522 (2012).

55 *See, e.g.*, *id.* § 6517 (laying out production standards).

56 7 C.F.R. § 205.301 (2014). In addition to looking for "organic" labeled foods, consumers can look at five-digit PLU codes. Organic foods all start with 9.

without synthetic substances).[57] Second, a product must contain at least 95% organic ingredients to be labeled simply "organic" and use the USDA and private certifying agent seals.[58] Third, a product with at least 70% organically produced ingredients (or perhaps better stated, with *only* 70% organic ingredients) can be labeled "made with organic ingredients" and carry the seal of a private certifying agent.[59] For products containing less than 70% organic ingredients, organic ingredients may be listed on the label, but neither the word "organic" nor any seal can be used.[60] Thus, consumers of organic products should look for the USDA seal over the sole seal of other certifying agents, including state governments, because it guarantees at least 95% organic content.

In addition to the existence of government labels in some markets, "best practices" guidance does exist for eco-labels, to help avoid consumer confusion. For example, the United States Federal Trade Commission (FTC) published the Guides for the Use of Environmental Marketing Claims ("Green Guides")[61] to enlighten marketers and explain how FTC will enforce federal law in the context of environmental marketing and advertising.[62] These guidelines "seek to provide marketers with a 'safe harbor' concerning certain 'green' claims . . . so that they will know when a claim is potentially deceptive or misleading."[63] The Green Guides reflect the FTC's five general requirements for all advertising claims: 1) claims must be substantiated; 2) claims may not be overbroad and unqualified; 3) comparative claims must state the basis for comparison; 4) claims "should not exaggerate or overstate attributes or benefits[;]" and 5) claims should not use "symbols or seals of approval whose significance the public doesn't understand[.]"[64]

Similarly, the International Organization for Standards (ISO), a private entity that develops voluntary standards through industry consensus, has developed guidelines for eco-labels.[65] As a consequence, according to ISO standards, eco-labels must be "accurate, verifiable, relevant, and not

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57 7 C.F.R. §§ 205.301(a), 205.303 (2014). OFPA defines "synthetic" as "a substance that is formulated or manufactured by a chemical process or by a process that chemically changes a substance extracted from naturally occurring plant, animal, or mineral sources, except that such term shall not apply to substances created by natural occurring biological processes." 7 U.S.C. § 6502(21); 7 C.F.R. § 205.2.

58 7 C.F.R. §§ 205.301(b), 205.303.

59 *Id.* § 205.301(c).

60 *Id.* § 205.301(d).

61 16 C.F.R. §§ 260.1–260.17 (2014).

62 Kimberly C. Cavanagh, Comment, *It's a Lorax Kind of Market! But Is It a Sneetches Kind of Solution?: A Critical Review of Current Laissez-Faire Environmental Marketing Regulation*, 9 VILL. ENVTL. L.J. 133, 155–56 (1998).

63 Staffin, *supra* note 44, at 215 (citing 16 C.F.R. § 260.3 (1995)). *See also* Cavanagh, *supra* note 62, at 155–56.

64 J. THOMAS ROSCH, RESPONSIBLE GREEN MARKETING, FED. TRADE COMM'N REPORT 6–8 (June 18, 2008), https://perma.cc/Y4ZC-TGQ5.

65 Int'l Org. for Standardization, Reference No. ISO 14021, Environmental Labels and Declarations - Self-Declared Environmental Claims (Type II Environmental Labelling) § 1 (1999); *See also* David A. Wirth, *The International Organization for Standardization: Private Voluntary Standards as Swords and Shields*, 36 B.C. ENVTL. AFF. L. REV. 79, 81, 89 (2009).

misleading" and "based on scientific methodology that is sufficiently thorough and comprehensive to support the claim . . . ."[66]

Eco-labels require a good quality assurance scheme, which would benefit from governmental ownership of the label, and a successful marketing program.[67] Centralized government eco-labels are more effective than numerous private ones, unless the private labels are well known with long-standing tradition and space in the market, and simple, clear, obvious, and transparent seal-of-approval logos and labels have generally shaped consumer behavior more than the complex information-disclosure labels.

C. Eco-label Efficacy

Perhaps the biggest challenge for eco-labels is in determining how to best convey information to consumers in a manner that will effectively shift buying behavior. While sales of green products continue to grow in some sectors (in particular the organic food sector, which has shown rapid growth),[68] eco-labeled goods overall struggle to capture significant market share.[69] In the United States, for example, hybrid car sales constituted roughly 2% of total auto sales in 2016;[70] green products account for only 3% of household cleaner and laundry products.[71] And "[a]lthough the organic

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66 Int'l Org. for Standardization, ISO 14020, Environmental Labels and Declarations – General Principles §§ 4.2.1, 4.4.1 (1998).

67 *See* Helen Nilsson et al., *The Use of Eco-Labeling Like Initiatives on Food Products to Promote Quality Assurance—Is There Enough Credibility?*, 12 J. CLEANER PRODUCTION 517, 522, 524 (2004) (arguing that third-party quality assurance enhances label trustworthiness and that proper marketing is vital).

68 For an overview of ethical spending in the UK, see TRIODOS BANK, ETHICAL CONSUMER MARKETS REPORT 2015 (2015), https://perma.cc/2DNC-7MYT (last visited July 14, 2018).

69 Numerous scholars have noted the low market share of green products. *E.g.*, Aindrila Biswas, *A Consumption Value-Gap Analysis for Sustainable Consumption*, 24 ENVTL. SCI. POLLUTION RESOURCES 7714, 7714 (2017) ("Despite the emphasis of various stakeholders towards environmental aftermath, the market share of green products has not shown equivalent augmentation." (citations omitted)); Iris Vermeir & Wim Verbeke, *Sustainable Food Consumption: Exploring the Consumer "Attitude-Behavioral Intention" Gap*, 19 J. OF AGRIC. & ENVTL. ETHICS 169, 170 (2006) ("Practice, however, shows that initiatives like sustainable organic food, products free from child labor, legally logged wood, and fair-trade products often have market shares of less than 1%." (citation omitted)); Emma Rex & Henrikke Baumann, *Beyond Ecolabels: What Green Marketing Can Learn from Conventional Marketing*, 15 J. CLEANER PRODUCTION 567, 567 (2006) ("Except for a handful of product groups, the overall market share of ecolabelled products is low. . . . Although a great deal of effort has been put into making ecolabelling schemes more effective and efficient, actual sales of ecolabelled products have remained at moderate levels."); Jung-Ah Hwang et al., *Why Do Consumers Respond to Eco-labels? The Case of Korea*, SPRINGERPLUS (2016), at 1, https://perma.cc/R8JQ-WVZV ("The impact of eco-labels has been much lower than expected, and little increase has been seen in the market share of eco-labeled products.").

70 Leslie Josephs, *Long Before the Combustion Engine, the Hybrid Car is Facing Obsolescence*, QUARTZ (July 14, 2017) https://perma.cc/8REJ-LESQ.

71 Caitlin Stewart, *3 Reasons Sales of Green Household Products Are Dropping*, MARKETRESEARCH.COM (March 26, 2016), https://perma.cc/CL4F-JKYB ("The green market still remains a niche, accounting for only 3 percent of the total household cleaner and laundry product market. . . . Hard-core green consumers have continued to purchase eco-friendly

food market has grown continuously over the past decade, the total share of organic food is still small compared with the total food market[;]"[72] even optimistic projections still show organic market share climbing to at most 10% in most select markets.[73] That said, certain labels and criteria have developed a significant market share or widespread importance such as dolphin-safe tuna and the recyclable logo. And the overall organic market share of all food products is nearing 10% in Sweden, and reached the record level of over 13% in Denmark in 2017.[74]

While this level of market share is not insignificant, representing millions of consumers, it would be hard to point to 10% market share as success at "achieving sustainable consumption patterns."[75] To understand the potential contribution of eco-labeling as a policy tool, it will be important to first understand the reasons for this limited market share and whether (and how) we can reasonably expect eco-labeling to generate broader shifts in consumption behavior.

III. RESEARCH STREAMS WITH THE POTENTIAL TO INFORM DEVELOPMENT AND IMPLEMENTATION OF SUCCESSFUL ECO-LABELS

The basic mechanics for structuring a sustainability-focused eco-labeling scheme would look like this:[76] First, a group of experts can pick market categories to target, identified in part by the scope of their adverse environmental impacts, where eco-labels could make a significant

household products, helping to keep the market afloat, but these consumers only represent a relatively small part of the U.S. population.").

72 H. Stolz et al., *Consumer Attitudes Towards Organic Versus Conventional Food with Specific Quality Attributes*, 58 NJAS-WAGENINGEN J. OF LIFE SCI. 67, 67 (2011) (footnote omitted).

73 Market share of organic foods in the United States and in several European countries is predicted at 7–10% in 2017. *See Organic Monitor: Predictions for Sustainable Foods in 2017*, ORGANIC-MARKET.INFO (Dec. 1, 2017), https://perma.cc/3W79-5YYF; *see also* U.S. DEP'T OF AGRIC., RELEASE NO. 084-16, USDA REPORTS RECORD GROWTH IN U.S. ORGANIC PRODUCERS, $1 BILLION IN USDA INVESTMENTS BOOST GROWING MARKETS FOR ORGANIC PRODUCTS AND LOCAL FOODS (Apr. 4, 2016) (reporting a significant increase in the number of certified organic operations); David Pierson, *Organic Products Grew to $35.1 Billion in Sales*, L.A. TIMES (May 15, 2014), https://perma.cc/8BPW-TUGK (reporting on a market study prepared by the Organic Trade Association). In Sweden, the sales of ecological food products increased by 18% from 2015 to 2016, and by 9.8% from 2016 to 2017, reaching 9.3% of the total sales. EKOWEB, EKOLOGISK LIVSMEDELSMARKNAD: RAPPORT OM DEN EKOLOGISKA BRANSCHEN SAMMANSTÄLLD AV EKOWEB.NU 5 (Jan. 25, 2018), https://perma.cc/B2QP-VMHC. The only country that has passed the 10% level of organic food market share is Denmark, which reached the record level of 13.3% in 2017. Press Release, Organic Den., Danes Are Second to None When It Comes to Buying Organics (May 7, 2018), https://perma.cc/2TDH-DXQC.

74 EKOWEB, *supra* note 73, at 5; Press Release, Organic Den., *supra* note 73.

75 *Agenda 21*, *supra* note 2, ¶¶ 4.1, 4.8–4.9.

76 *See* CZARNEZKI, EVERYDAY ENVIRONMENTALISM, *supra* note 16, at 79–80. For a discussion of a similar potential eco-label model, see also JULIAN MORRIS, GREEN GOODS?: CONSUMERS, PRODUCT LABELS AND THE ENVIRONMENT 30–34 (1997).

improvement to the environment.[77] Second, objective scientific criteria to evaluate products could include a full life-cycle analysis.[78] A life-cycle analysis would include consideration of natural resource and chemical use (starting at the production process or raw extraction stage), as well as emissions and pollution generated during the production, distribution and use, and disposal stages. The key is to inventory the materials that make up the product and allow for product production, and the resulting environmental impact, something that is more difficult to determine. Third, products could be evaluated according to that scientific criteria and a seal awarded.[79] Fourth, in light of technology and innovation, production selection criteria would be consistently reviewed.[80]

A more challenging, but key task is to determine what factors influence the success of any eco-labeling program. It is important to target product categories whose regulation would help the environment if their carbon, chemical, and waste footprints were reduced. It is also, however, important to target product categories and consumption contexts where eco-labels are likely to influence consumer behavior and to design labels that promote eco-consumption.

Even if the producer scheme of an eco-labeled product fulfills all desired criteria, consumers may not necessarily choose to purchase the product. This is evident from the low market share of most eco-labeled products discussed *supra*.[81] Scholars have documented an "attitude-behavior gap" in eco-consumption. Consumers often appear to be favorably inclined toward the environment and express an intent to so conform their consumption (roughly 30% by many accounts), yet purchasing behavior often fails to reflect this attitude and intention.[82] This may be because these eco-minded consumers hold other values (relating, for example, to product quality, convenience, or price) or are subject to other influences (habit, perceived availability of eco-goods) that outweigh or displace environmental

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77 MORRIS, *supra* note 76, at 31. Outside the food context, Europe has led in the creation of eco-labels with the Nordic Council Program (of Norway, Sweden, and Finland), Germany's Blue Angel Program, and the European Union's Eco-Label Award Scheme. In Germany's Blue Angel Program, an environmental label jury composed of representatives from environmental groups, science organizations, consumer associations, industry, trade unions, and the media, review life-cycle reports to determine whether the "Unweltzeichen" ("environmental label") is appropriate. Surya P. Subedi, *Balancing International Trade with Environmental Protection: International Legal Aspects of Eco-Labels*, 25 BROOKLYN J. INT'L L. 373, 377–78 (1999). The European Union uses five administrative layers to implement its eco-label scheme, developing product groups and ecological criteria to harmonize environmental labeling in its member countries. MORRIS, *supra* note 76, at 58–59. The eco-label can be affixed to those products that meet established product group criteria for the entire life-cycle of the product.

78 MORRIS, *supra* note 76, at 31.

79 *Id.*

80 *Id.*

81 *See supra* notes 68–75 and accompanying text.

82 Vermeir & Verbeke, *supra* note 69, at 173 (exploring "the gap between the positive attitude of consumers and their actual purchase behavior"); Iain A. Davies et al., *Do Consumers Care About Ethical-Luxury?*, 106 J. BUS. ETHICS 37, 38 (2012) ("The attitude-behavior gap is a well-documented phenomenon which explores why the 30% of consumers that are perceived to be ethically orientated, do not translate this into ethical purchasing behaviour.").

values.[83] It is also possible, however, that pathologies in eco-label design (for example, the type of environmental information provided or the manner in which it is presented) dissuade eco-minded consumers from purchasing eco-labeled products. Both visual and verbal communication of an eco-label may affect the purchasing decision, and the effects may also be additive.[84] Eco-labels may also interact with the signal of brands that it co-occurs with, as shown in a French study on consumer choice of smoked salmon.[85] The perceived product quality was improved by an organic label only when combined with a brand of low equity, but not with a high equity brand. One approach to increasing consumer purchase of eco-labeled goods is thus to increase the translation of pro-environmental attitudes into pro-environmental purchases by reducing barriers (such as inconvenience) and improving label design.

Consumers may also not choose an eco-labeled product because they don't support or value adequately the ecological benefit associated. Here, there is no gap between attitude and behavior; the consumer simply isn't interested (or interested enough) in participating in environmental protection.

> [I]t is unlikely that a consumer pays attention to an environmental label unless he or she values protecting the environment, perceives buying (more) environmentally friendly products as an effective means to achieve this goal . . . and perceives the information that the label conveys as useful for this purpose.[86]

However, people may not necessarily buy eco-labeled products for the sake of the environment, but rather do it to signal cooperativeness, altruism, or high status. This suggests that the effectiveness of an eco-label is determined by a combination of its own signaling message and the messages of the context in which it occurs. Eco-labeling belongs to the category of branding. The success of a brand may often be connected to some quality aspect, but in many cases brands may be more related to social, political, subcultural, and personal preferences.[87] It might, therefore, be possible to increase the success of eco-labels by structuring their design and implementation

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83 *See* Vermeir & Verbeke, *supra* note 69, at 172–73 (discussing values and habit as causes); *see also* Biswas, *supra* note 69, at 7715 (describing the "theory of consumption values, which propounds that consumers make informed purchase decisions after considering multiple value dimensions such as quality, price, environmental impact, emotions, and their trade-offs").

84 Esther Tang et al., *Visual and Verbal Communication in the Design of Eco-label for Green Consumer Products*, 16 J. INT'L CONSUMER MARKETING, no. 4, 2004, at 85, 96.

85 Fabrice Larceneux et al., *Why Might Organic Labels Fail to Influence Consumer Choices? Marginal Labelling and Brand Equity Effects*, 35 J. CONSUMER POL'Y 85, 91, 97 (2012).

86 John Thøgersen, *Psychological Determinants of Paying Attention to Eco-Labels in Purchase Decisions: Model Development and Multinational Validation*, 23 J. CONSUMER POL'Y 285, 290 (2000) (citations omitted).

87 Elizabeth C. Hirschman, *Evolutionary Branding*, 27 PSYCHOL. & MARKETING 568, 569 (2010); *cf.* David A. Aaker & Kevin Lane Keller, *Consumer Evaluations of Brand Extensions*, J. MARKETING, Jan. 1990, at 27, 38–39 (documenting the complexity of brand associations).

(including consideration of consumption context) to capture consumers motivated by a variety of non-environmental considerations.

Part III mines different research streams—evolutionary psychology, behavioral law and economics, and norm theory—for insights relevant to the design and implementation of eco-label regimes to promote environmental purchasing behavior. In many cases, the lessons gleaned from these different research areas converge, offering support for the same conclusion from different perspectives. This convergence should serve to increase confidence in the utility of the insight. In Part IV, we summarize and reconcile the lessons for eco-label design and implementation gleaned from these bodies of research and provide specific recommendations for eco-label design and implementation.

A. Putting Eco-labeling in an Evolutionary Psychology Perspective

The logic behind eco-labels is that consumers who are concerned about the environment should be able to distinguish products with less environmental impact from those with higher impact and buy the former ones. Thus, it is assumed that if people are concerned about the environment, this should also be expressed in their consumption behavior. However, as noted above, even if people are well informed about the different environmental impact of products they may still choose to buy the less environmentally friendly ones, and this gap between knowledge and behavior has been well documented.[88]

The reason for this cognitive-behavioral gap is still unclear, but Gifford made an attempt to categorize what he considered to be "psychological barriers" to pro-environmental behavior (in the context of climate change).[89] One of these identified barriers was the "ancient brain," which referred to the fact that the human brain evolved under completely different environmental and social conditions than today, where individual concern about the environment (and particularly global issues) was not a favored trait. Such an evolutionary approach for understanding consumer behavior has been presented and discussed in several previous studies based on the field of evolutionary psychology.[90] The main message is that human consumption behavior cannot be understood without considering the

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88 Anja Kollmuss & Julian Agyeman, *Mind the Gap: Why Do People Act Environmentally and What Are the Barriers to Pro-environmental Behavior?*, 8 ENVTL. EDUC. RES. 239, 241 (2002); Shis-Ping Lin, *The Gap Between Global Issues and Personal Behaviors: Pro-environmental Behaviors of Citizens Toward Climate Change in Kaohsiung, Taiwan*, 18 MITIGATION & ADAPTATION STRATEGIES FOR GLOBAL CHANGE 773, 774 (2013).

89 Robert Gifford, *The Dragons of Inaction: Psychological Barriers That Limit Climate Change Mitigation and Adaptation*, 66 AM. PSYCHOL. 290, 290 (2011).

90 *See* GAD SAAD, THE EVOLUTIONARY BASES OF CONSUMPTION xvii (2007); GAD SAAD, THE CONSUMING INSTINCT: WHAT JUICY BURGERS, FERRARIS, PORNOGRAPHY, AND GIFT GIVING REVEAL ABOUT HUMAN NATURE 12 (2011); Vladas Griskevicius et al., *Going Green to Be Seen: Status, Reputation, and Conspicuous Conservation*, 98 J. PERSONALITY & SOC. PSYCHOL. 392, 394, 400 (2010); Vladas Griskevicius & Douglas T. Kenrick, *Fundamental Motives: How Evolutionary Needs Influence Consumer Behavior*, 23 J. CONSUMER PSYCHOL. 372, 372 (2013).

evolutionary history and adaptations of the human mind. The basis of evolutionary psychology is that the human mind consists of evolved cognitive and behavioral mechanisms that promoted individual survival and reproductive success in pre-historic generations, mainly during Pleistocene.[91] According to evolutionary psychology, we still largely rely on this pre-historic brain and its inherent psychological mechanisms in an environment that is dramatically different from that of the hunter-gatherer populations of our ancestors, in which the brain evolved. This makes our brains ill-equipped to respond to the need for sustainable behavior.

Griskevicius et al. proposed five evolutionary derived tendencies of the human mind with importance for pro-environmental behavior: "(1) propensity for genetic self-interest, (2) motivation for relative rather than absolute status, (3) proclivity to unconsciously copy others, (4) predisposition to be shortsighted, and (5) proneness to disregard impalpable concerns."[92]

Genetic self-interest is a fundamental principle in the theory of evolution by natural selection. Individuals with traits promoting their own survival and reproduction, and that of their kin, were the ones that persisted and increased in frequency over time, while those with a propensity to give up their own reproductive success in favor of other individuals lost ground in the competition for representation in later generations.[93] For this reason, individual sacrifices in favor of benefits for a group or a global community cannot be generally expected unless there are close genetic relationships between the individual and the group, or strong dependencies and expectations of reciprocal behavior ("reciprocal altruism").[94] Since pro-environmental behavior in many cases is perceived as subordinating individual interests to the interests of a larger community, this aspect of the human mind is clearly problematic. On the other hand, if policies for pro-environmental behavior, including eco-labeling, can be framed as favoring self-interest in terms of, e.g., benefits for kin or health, it may be more effective.

The role of status has a close connection with genetic self-interest, in that high status in a group signals individual quality, competitiveness, and access to resources, which are important determinants for attractivity and mating opportunities. Griskevicius et al. argue that status must be considered in relation to other individuals, resulting in a continuous struggle

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91 *See* Leda Cosmides et al., *Introduction: Evolutionary Psychology and Conceptual Integration, in* THE ADAPTED MIND: EVOLUTIONARY PSYCHOLOGY AND THE GENERATION OF CULTURE 5–9 (Jerome H. Barkow et al., eds., Oxford University Press 1992).

92 Vladas Griskevicius et al., *The Evolutionary Bases for Sustainable Behavior: Implications for Marketing, Policy, and Social Entrepreneurship*, 31 J. PUB. POL'Y & MARKETING 115, 115–16 (2012). For a slightly different categorization, see Griskevicious & Kenrick, *supra* note 90, at 372–74.

93 *Cf.* Griskevicius et al., *The Evolutionary Bases for Sustainable Behavior: Implications for Marketing, Policy, and Social Entrepreneurship*, *supra* note 92, at 118 ("Natural selection does not care about the survival of the species; what matters is the replication of one's genes, which often comes at the expense of the survival of others' genes[.]" (citation omitted)).

94 *See id.* at 119 (explaining reciprocal altruism).

for status, regardless of the absolute level of resources obtained.[95] Since excessive and costly behavior is a way to signal individual quality and access to resources ("costly signaling theory"[96]), this may provide one explanation for excessive consumption. However, more qualitative aspects of consumption such as the purchase of eco-labeled products may signal altruism and cooperativeness, characteristics that may also be attractive for potential partners. Achievement of status from such "competitive altruism"[97] represents an interesting aspect of pro-environmental consumption that may be used in policy. Both costly signaling and competitive altruism, however, rely on a visibility of the signal to other people, in order to mediate the message that results in increased status. That people are responsive in their behavior to the presence of real or imaginary others is indicated by studies showing that eye images increases the willingness to behave altruistically.[98]

In the context of pro-environmental consumption and purchase of eco-labeled products, this emphasizes the importance of making such consumption visible to others, either at the site of purchase or in the subsequent use of the product. Purchase of green products signals both a willingness and ability to buy products that benefit others at a personal cost, and this may activate status motives for exhibiting pro-environmental behavior. In a recent study, Griskevicius et al. reported that that the effect of activating status interacted with the relative cost of the green product.[99] Status activation increased the desire to purchase more when the product was expensive relative to a non-green comparative product. This suggests that attempts to lower the price of eco-labeled products may not necessarily be a successful strategy. Rather, the higher price of many ecological products may contribute to status, given that purchase of the product allows signaling by being visible to others.

The third tendency of the human mind discussed by Griskevicius et al. is to copy other's behavior.[100] This tendency has been interpreted as an evolved adaptive strategy facilitating learning,[101] and is also closely related to the development of norms (discussed below). An example of copying behavior is the well-known study of towel reuse in hotels,[102] and neighbors'

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95 *Id.* at 120.

96 *Id.* (citing AMOTZ ZAHAVI & AVISHAG ZAHAVI, THE HANDICAP PRINCIPLE: A MISSING PIECE OF DARWIN'S PUZZLE (Oxford University Press 1997))

97 Mark Van Vugt, Gilbert Roberts & Charlie Hardy, *Competitive Altruism: A Theory of Reputation-Based Cooperation in Groups*, *in* OXFORD HANDBOOK OF EVOLUTIONARY PSYCHOLOGY 531, 534 (Robin Dunbar & Louise Barrett eds., Oxford University Press 2007).

98 Kate L. Powell et al., *Eye Images Increase Charitable Donations: Evidence from an Opportunistic Field Experiment in a Supermarket*, 118 ETHOLOGY 1096, 1096–97 (2012); Melissa Bateson et al., *Do Images of 'Watching Eyes' Induce Behaviour That is More Pro-Social or More Normative? A Field Experiment on Littering*, PLOS ONE, Dec. 2013, at 1, 7.

99 Griskevicius et al., *Going Green to Be Seen: Status, Reputation, and Conspicuous Conservation*, *supra* note 90, at 392–96 .

100 Griskevicius et al., *The Evolutionary Bases for Sustainable Behavior: Implications for Marketing, Policy, and Social Entrepreneurship*, *supra* note 92, at 121.

101 *Id.*

102 Noah J. Goldstein et al., *A Room with a Viewpoint: Using Social Norms to Motivate Environmental Conservation in Hotels*, 35 J. CONSUMER RES. 472, 472–73 (2008).

behaviors often predict environmental behavior better than personal attitudes.[103] Copying behavior may also be pronounced by connecting behavior to perceived "leaders" and celebrities.[104]

The fourth tendency is that humans are inclined to discount events (benefits or costs) that lie in the distant future, and put more value on the present.[105] This makes sense in an evolutionary perspective simply because concern about the distant future has had no selective value during human evolution. Arguments about the importance of pro-environmental consumption are therefore expected to be more effective if they refer to present life (e.g., health and well-being, status) rather than to the future. This clearly is in contrast to most sustainability arguments, which refer to concerns about our future society. Also, evolutionary theories about the adaptation of the human mind predict that individual humans should be more concerned about environmental issues that are not only proximate in time, but also in space (spatial discounting), and have direct effect on the individual, compared to issues that are spatially distant.[106]

The latter aspect also connects to the fifth tendency of the human mind to disregard impalpable concerns, problems that are diffuse in effect and are not directly experienced by our senses. Climate change belongs to this category as well as environmental hazards such as pollution that are not recognized by our sensory and cognitive systems. Many of these hazards were not present in the environment in which we evolved, and the effects of an individual's behavior were more immediate and tangible than in today's society. We are therefore not well equipped from our evolutionary history to recognize and handle many of the environmental problems that we face today.

In summary, several messages of relevance for eco-labeling emerge from considering the five proposed evolutionary based tendencies of the human mind. First, reference to kin may activate an interest to buy pro-environmental products. Second, visibility of purchase situations or use of the product (e.g., clothes) may increase the attractivity to buy by signaling competitive altruism. Third, a higher price of eco-labeled products may not necessarily prevent consumer choice, but under some conditions rather improve attractivity by signaling access to resources. Fourth, the tendency of humans to copy behavior of others may be used to promote pro-environmental norms, again relying on visibility of the consumer choice. Fifth, even though eco-labeling ultimately aims at promoting long-term

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103 Jessica M. Nolan et al., *Normative Social Influence Is Underdetected*, 34 PERSONALITY & SOC. PSYCHOL. BULL. 913, 913–15, 920–22 (2008).

104 *See* MIKAEL KLINTMAN, CITIZEN-CONSUMERS AND EVOLUTION. REDUCING ENVIRONMENTAL HARM THROUGH OUR SOCIAL MOTIVATION 60–61 (2013) (explaining the theory of looking to celebrities and perceived leaders regarding how to be environmentally conscious).

105 Shane Frederick et al., *Time Discounting and Time Preference: A Critical Review*, 40 J. ECON. LITERATURE 351, 351–56 (2002) (discussing different models of the discount function).

106 Dustin J. Penn, *The Evolutionary Roots of Our Environmental Problems: Toward a Darwinian Ecology*, 78 THE Q. REV. OF BIOLOGY 275, 276–77, 292, 294 (2003) (discussing how humans discount future problems); Joel T. Heinen & Roberta S. Low, *Human Behavioural Ecology and Environmental Conservation*, 19 ENVTL. CONSERVATION 105, 111 (1992).

sustainable consumption, framing eco-label messages in more proximate and tangible terms may be more successful.

To our knowledge, no studies on eco-labeling have been framed in an evolutionary psychology context. However, it is becoming increasingly clear that information, e.g., in terms of eco-labeling, is not enough to promote pro-environmental consumption, and that behavioral interventions are needed.[107] In this change towards an understanding of consumer choice based on behavioral sciences, evolutionary psychology and related evolutionary sciences (e.g., human behavioral ecology, evolutionary anthropology) should play an important role, by complementing the proximate theories and explanations from social sciences with ultimate evolutionary explanations based on evolutionary theory. These proximate and ultimate sciences should really be seen as complementary, not opposed, scientific perspectives. As should be clear from the above description of some tendencies of the human mind derived from evolutionary theory, the social context is predicted to play a very important role in human behavioral decisions. Promotion of social norms for green consumption may therefore prove to be more successful than attempts to influence individuals as autonomous entities.[108] Although the discourse on human behavior as well as environmental policies are still dominated by theories from behavioral economics and social/cognitive psychology, evolutionary sciences are slowly beginning to be recognized. The resulting multi-disciplinary approach to human behavior may provide a better foundation for developing effective interventions for pro-environmental consumption, including eco-labeling strategies where human tendencies are used strategically rather than opposed.

B. Eco-labeling and Behavioral Law and Economics

Behavioral law and economics constitutes another body of research with the potential to inform eco-label design and implementation. Traditional law and economics hypothesizes that individuals behave in rational ways—by gathering optimal information to maximize utility from a stable set of preferences—and anticipates the legal implications of this rational maximizing behavior.[109] Consistent with traditional law-and-economics principles, "[t]he existing literature on ecolabeling and green consumerism . . . has often been framed within a classical market context in which price and quality are the drivers of consumer choice."[110] Behavioral law and economics "explore[s] the implications of *actual* (not hypothesized) human behavior for the law[,]" drawing from the social sciences to identify ways that individuals consistently depart from the rational actor model for a

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107 Gilles Grolleau et al., *Helping Eco-Labels to Fulfill Their Promises*, 16 CLIMATE POL'Y 792, 798–99 (2016).

108 *See, e.g.*, KLINTMAN, *supra* note 104, at 129–30.

109 *See, e.g.*, Christine Jolls et al., *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1476 (1998).

110 Fredrick Carlsson & Olof Johansson-Stenman, *Behavioral Economics and Environmental Policy*, 4 ANN. REV. RESOURCE ECON. 75, 81 (2012).

variety of reasons.[111] An extensive body of scholarship considers human behavioral tendencies and their implications for law and policy, including the environmental context.[112] Initially focused on identifying common cognitive errors or "bounds" on human behavior,[113] behavioral law and economics has evolved to emphasize "the relationship between human behavior and the social background" and to consider whether and how it might be possible to influence, or "nudge," behavior by changing that background through "choice architecture."[114] Some of the insights to emerge from this literature that may be particularly relevant with respect to informing eco-label design and implementation are described in more detail below.[115]

1. Interpreting Labels

A core insight for eco-labeling from behavioral law and economics is the recognition that consumers' decisions do not simply "depend on the relationship between economic incentives and underlying preferences" (i.e., the cost of a good, the attributes of a good, desire to help the environment).[116] Consumers often base their decisions on predictably irrational judgments.[117] Eco-label design should accordingly account for the common cognitive short-cuts, errors, and/or behavioral tendencies of consumers.

The manner in which information is presented on labels (or framed) can significantly impact whether and how consumers attend to, understand,

111 Jolls et al., *supra* note 109, at 1476–77.

112 *See, e.g.*, Carlsson & Johansson-Stenman, *supra* note 110, at 86, 92; Cass R. Sunstein & Lucia A. Reisch, *Automatically Green: Behavioral Economics and Environmental Protection*, 38 HARV. ENVTL. L. REV. 127, 141 (2014) (arguing for the green "default" in some circumstances); Amanda R. Carrico et al., *Energy and Climate Change: Key Lessons for Implementing the Behavioral Wedge*, 2 GEO. WASH. J. ENERGY & ENVTL. L. 61, 64–65 (2011).

113 This includes bounded rationality (cognitive limitations and the mechanisms developed to accommodate the same, such as the use of rules of thumb), bounded willpower (difficulties planning for long-term interests and the mechanisms to mitigate the same), and bounded self-interest (concern about the behavior of others centered on fairness). Jolls et al., *supra* note 109, at 1476–80.

114 *E.g.*, Lucia Reisch & Cass R. Sunstein, *Redesigning Cockpits: Introduction to Special Issue of Journal of Consumer Policy on Behavioural Economics, Environmental Policy and the Consumer*, 37 J. CONSUMER POL'Y 333, 335, 339 (2014); RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS 99–102 (2008).

115 Norm theory provides the basis for some behavioral insights that have been incorporated into behavioral law and economics. There is, however, a stand-alone norm literature that developed independently and is treated separately below. For a discussion of the wide range of fields that can contribute insights about departures from the traditional rational actor model, including behavioral economics and norm theory, see Michael P. Vandenbergh et al., *Regulation in the Behavioral Era*, 95 MINN. L. REV. 715, 717–18 (2011) (explaining their use of the term "behavioral science" to refer to a wide range of fields, including behavioral economics, behavioral and social sciences, sociology, and social psychology).

116 Sunstein & Reisch, *Automatically Green*, *supra* note 112, at 128.

117 *See, e.g.*, Carrico et al., *supra* note 112, at 65 ("[I]ndividuals reliably prefer certain choices to others based on how those choices are framed . . . often invok[ing] systematic deviations from what neoclassical economists would view as rational[.]").

and respond to labels.[118] One recently documented example is the effect of two behavioral tendencies, anchoring and loss aversion, on consumers' interpretations of energy efficiency labels.[119] Anchoring refers to the observation that "[i]n many situations, people make estimates by starting from an initial value that is adjusted to yield the final answer."[120] Loss aversion refers to the observation that people tend to value losses more than gains.[121] When the scale used in the European energy label for electrical appliances was updated, changing from a closed scale depicting energy efficiency from A to G to an extended scale depicting energy efficiency from A+++ to D, anchoring and loss aversion may have combined to "weaken[] the label, resulting in consumers attaching less importance to energy efficiency[:]"[122]

> Specifically, psychological theory and research suggests that there is a risk that the letter A becomes an anchor for consumers' judgment of energy efficiency in the sense that all categories labelled with an A are perceived as more or less the same, irrespective of the number of plusses added. That would lead to steps beyond A (A+ to A+++) being wrongly perceived as smaller than the steps between categories labelled with different letters. If the class A labelling has become the standard or reference point that the energy labelling of a piece of equipment is compared to, an energy class below A might be perceived as a loss and one beyond A as a gain. Since losses loom larger than gains, this would lead to improvements in energy class beyond A being valued less than a similar improvement below A.[123]

An experimental study of Danish consumers confirmed this hypothesis, revealing that under the updated efficiency scale, the same change in energy efficiency had "less than half of the impact of the original scale" with respect to increasing the likelihood of choosing a more energy efficient TV set.[124] The updated scale used on the labels thus presents the same information to consumers but in a different format that intersects in unfortunate ways with individuals' cognitive tendencies to reduce the effectiveness of the label at prompting consumers to choose the most energy efficient product. Generalized to other contexts, these results caution that in the design of eco-

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118 Folke Ölander & John Thøgersen, *Information Versus Nudging in Environmental Policy*, 37 J. CONSUMER POL'Y 341, 345 (2014) ("[T]here is research documenting that the design of an eco-label has an impact on how consumers perceive the information it aims to convey and consequently on their behavior[.]"(citations omitted)); Carrico et al., *supra* note 112, at 65 ("A large and growing body of literature suggests that even when the expected utility of a set of options is identical, individuals reliably prefer certain choices to others based on how those choices are framed." (footnote omitted)).

119 *See, e.g.*, Ölander & Thøgersen, *supra* note 118, at 345–48 (describing anchoring effects on consumer perception).

120 Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, *in* JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES 14 (Kahneman et al., eds., 1982).

121 *See* Ölander & Thøgersen, *supra* note 118, at 344.

122 *Id.* at 349.

123 *Id.* at 346 (citation omitted).

124 *Id.* at 346–49.

labels, relying on a central point of reference for communicating about the environmental attributes of a good will tend to over-emphasize the eco-shortcomings of goods below that reference point, and under-emphasize the eco-superiority of goods exceeding it.

The above example illustrates how cognitive errors can intersect with label design to shape how consumers understand and value the environmental attributes of a good. There may also be value in understanding the potential for labels to overcome cognitive errors or behavioral tendencies where they tend to irrationally discourage consumers from preferring environmentally-superior goods. In many cases, energy efficient products cost more to purchase but save consumers money over the life of the product (in the form of avoided energy costs).[125]

Consumers, however, are notoriously bad at factoring those future savings into their purchasing decision as a result of a cognitive tendency termed hyperbolic discounting.[126] Research confirms that "relative to the higher up-front cost of purchasing a more efficient appliance, consumers tend to devalue savings achieved through lower operating costs at a rate that is well above market value."[127] Labels for energy efficient products may, therefore, need to be designed to account for and overcome the tendency of consumers to steeply discount savings from the reduced cost to operate those products. It may thus be important for labels on energy efficient products to clearly communicate lifecycle costs at the point of sale.[128] It may also be helpful to "frame" the decision to purchase energy efficient appliances "as an opportunity to avoid future losses rather than to achieve future gains . . . ."[129]

Many other behavioral tendencies have been documented that may be relevant to understanding consumer response to label design, including a host of heuristics (availability, affect, elimination, recognition), representativeness, the endowment effect, and optimism bias.[130] The complex interaction of these human behavioral tendencies with eco-labels may be difficult to predict yet integral to the performance of a label. It seems clear, then, that eco-label design and implementation should reflect not only

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125 *See, e.g.*, *Purchasing Energy-Efficient Commercial Dishwashers*, U.S. DEP'T ENERGY, OFF. OF ENERGY EFFICIENCY & RENEWABLE ENERGY, https://perma.cc/6QFM-BH3L (last updated Dec. 2015).

126 Nadia Ameli & Nicola Brandt, *What Impedes Household Investment in Energy Efficiency and Renewable Energy?*, *in* OECD ECONOMICS DEPARTMENT WORKING PAPERS NO. 1222 5, 19 (2015) (citing to a study suggesting that "hyperbolic discounting could be an explanation for underinvestment in energy efficiency").

127 Carrico et al., *supra* note 112, at 64.

128 *Id.*; *see also* Vandenbergh et al., *Regulation in the Behavioral Era*, *supra* note 115, at 746–47 ("Research in the social and behavioral sciences suggests that well-designed information, particularly when provided at the point of decisionmaking, can help to overcome steep discount rates or may prime the individual to consider operating costs when making decisions about product purchase and use.").

129 Vandenbergh et al., *Regulation in the Behavioral Era*, *supra* note 115, at 775.

130 *See, e.g.*, HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT (Thomas Gilovich et al. eds., 2002); Cass R. Sunstein, *Hazardous Heuristics*, 70 U. CHI. L. REV. 751, 763–67 (2003).

environmental expertise (with respect to understanding the relevant effects of consumer goods on the environment) but also psychological and sociological expertise (with respect to understanding the influence of labels on consumer behavior).[131]

2. The Cognitive Demands of Choosing

Another core insight from behavioral law and economics for eco-label policy is that purchasing decisions can impose cognitive demands that individuals seek to minimize or avoid.[132] It imposes costs on consumers to engage in environmentally-motivated "active choosing" about their purchases; they must seek out, read, understand and value information about the environmental attributes of products.[133] That this is so undergirds some important observations about human behavior and eco-labeling. First, it should be recognized that, conceptually, eco-labels function as choice architecture. Choice architecture refers to interventions in the social background that influence, but preserve, choice.[134] The use of point-of-sale eco-labels constitutes choice architecture because it allows consumers to choose eco-conscious products with as little effort as they might choose conventional products. Eco-labels reduce the decision burdens on environmentally-conscious individuals by collecting and presenting environmental information about products; those individuals need not seek out that information themselves. Eco-labels thus reduce the informational demands for eco-conscious shoppers, thereby generating through choice architecture conditions more favorable to environmentally-friendly choice.

Additionally, the cognitive demands associated with active choosing can help to explain the power of the affect heuristic in environmental purchasing decisions. The affect heuristic, sometimes referred to as "choosing by liking," refers to the idea that individuals sometimes make choices not through "a cognitive procedure involving an analysis of an option's constituent features[,]" but instead "intuitively[,] by the spontaneous affective evaluation of liking or disliking that options may elicit . . . ."[135] This "qualifies as an automated decision heuristic because affective impressions are readily available and provide an easier basis for

131 Carrico et al., *supra* note 112, at 65 ("[P]olicymakers should consult psychologists or behavioral economists when developing messages that frame choices.").

132 *See generally* Vandenbergh et al., *Regulation in the Behavioral Era*, *supra* note 115, at 747, 758 (describing the importance of cognitive costs for behavior generally, observing that "[t]raditional rational-actor models tend to underestimate the cognitive costs of seeking out and evaluating information, as well as the cognitive benefit of avoiding hassles" and discussing the power of habits that "often supplement the cognitive process of decisionmaking or even override attitudinal preferences and normative influence on behavior"); *see also* Reisch et al., *supra* note 6, at 11 (describing the complexity and volume of information and choice regarding food consumption and observing that "many consumers report being overwhelmed and would rather adhere to their habitual choices" (citation omitted)).

133 *See* Sunstein & Reisch, *Automatically Green*, *supra* note 112, at 141–42.

134 Reisch & Sunstein, *Redesigning Cockpits*, *supra* note 114, at 335.

135 Shane Frederick, *Automated Choice Heuristics*, *in* HEURISTICS AND BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT 550 (Thomas Gilovich et al. eds., 2002).

decisions than a deliberate cognitive assessment of each option . . . ."[136] For the environmentally concerned, "[d]enominating a product a green choice may be sufficient to create a kind of brand that sparks a 'warm glow[,]'" inviting individuals to make a "rapid, automatic judgment" in favor of a product without subjecting that choice to careful consideration.[137] In these accounts, the association between product, environment, and personal benefit is not closely or critically examined; it is, instead, emotional and intuitive.

This suggests two points of caution for the designers of eco-labels. First, designing labels to provide additional—accurate and sometimes detailed—information about a product's environmental attributes may be irrelevant, or even counterproductive, if it forces consumers into active choosing and/or exposes a false association (many consumers, for example, might be surprised to learn that organic does not mean healthier).[138] Second, for some consumers a green label may cue a *negative* intuitive, emotional (affective) response. The information presented in labels can "interact with an individual's previous experiences or ideological worldview to trigger certain responses."[139] For example, the term "tax" can spur a negative reaction, particularly in conservative individuals; using the term "offset" instead can avoid this reaction and "[c]onsequentially, more Republicans and Independents are willing to purchase a more expensive product when its cost is inflated due to a 'carbon offset' rather than a 'carbon tax.'"[140] Likewise, an empirical study of the effect of "nudge" designed to reduce home energy use through the distribution of home energy reports (comparing a household's energy usage to other similarly situated households), revealed "that environmental nudges are most effective in relatively liberal communities. What works in California may not work in Lubbock, Texas."[141] Thus, it should be recognized that the affect heuristic can cut both for and against purchase of an eco-labeled good depending upon the consumer's preexisting attitudes.

Finally, the cognitive demands of active choosing help to explain the power of defaults. The most powerful "label" of all may be the designation of the default choice, which also represents a form of "nudge." Studies reveal that setting green energy as the default for utility consumers' energy source,

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136 *Id.* at 554 (citation omitted).

137 Sunstein & Resich, *Automatically Green*, *supra* note 112, at 130 (emphasis omitted) (citing to DANIEL KAHNEMAN, THINKING, FAST AND SLOW 20–22 (2011)).

138 For example, the USDA Organic Seal expressly does not endorse the idea that organic certified foods are healthier than non-organic alternatives. *See* Miles McEvoy, *Organic 101: What the USDA Organic Label Means*, U.S. DEP'T. AGRIC. (Mar. 22, 2012), https://perma.cc/CSU6-29JQ (lacking superiority claims); *see also* Ulf Hjelmar, *Consumers' Purchase of Organic Food Products: A Matter of Convenience and Reflexive Practices*, 56 APPETITE 336, 341 (2010) (describing studies finding that organics are not healthier or more nutritious).

139 Carrico et al., *supra* note 112, at 65.

140 *Id.*

141 Dora L. Costa & Matthew E. Kahn, *Energy Conservation "Nudges" and Environmentalist Ideology: Evidence From a Randomized Residential Electricity Field Experiment*, 11 J. EUR. ECON. ASS'N 680, 698 (2013).

and requiring them to opt out to choose lower cost gray-sourced energy, has a very powerful effect, significantly increasing the number of consumers choosing green energy.[142] The power of defaults is hypothesized to arise from a number of factors, including that individuals presume "the default was chosen by someone sensible and for a good reason[,]" are inclined to inertia because departing from the default requires an active choice with the associated cognitive demands, and interpret the default as a reference point with departures therefrom weighed more heavily as losses (because of the anchoring effect and loss aversion).[143]

With respect to most consumer goods (food, clothes, sundries) there is no formal government-determined default from which a consumer must opt out to make a different choice. However, it is interesting to consider the extent to which a host of background factors give rise to near-default status for certain gray goods.[144] In some sense, that we must label environmentally-friendly goods to flag eco-attributes signals that traditional gray goods are the default and eco-goods are the opt-out. And it is possible to think of many other ways in which it is tacitly suggested that eco-goods present the opt-out. Think, for example, of the layout of a traditional supermarket. Organic or "natural" foods are often grouped in a special section or aisle with offerings typically comparatively smaller than those of traditional foods. The baseline for eco-labeling and the practical treatment of eco-goods may thus put them at an inherent disadvantage by suggesting that traditional goods are the default and eco-goods the opt-out. Imagine, for example, unsustainably sourced foods were required to bear a label proclaiming that status and segregated into a small corner of the supermarket.

C. Eco-labeling and Norm Theory

Norm theory is a related body of research that likewise offers insight for eco-label design and implementation. Norms are obligations that guide behavior even in the absence of a formal legal rule.[145] These normative constraints are ubiquitous yet often "so taken for granted that they seem invisible."[146] Individuals regularly, for example, tip their waiters, remove their hat when entering a church, walk on the right side of the sidewalk, choose the subway seat that leaves the most space between themselves and other passengers, and cover their mouth when sneezing. Norms are the invisible hand guiding these quite uniformly followed—but not legally compelled—behaviors. Norms can provide an alternative to, supplement, or shape responses to formal legal rules and a large body of legal scholarship explores how norms develop, function, and relate to formal legal rules and

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142 Sunstein & Reisch, *Automatically Green*, *supra* note 112, at 135–37.

143 *Id.* at 140–44.

144 Or perhaps merely evidence or signal that most choose the gray option, thereby potentially invoking descriptive norms.

145 *See* Robert C. Ellickson, *The Evolution of Social Norms: A Perspective from the Legal Academy*, *in* SOCIAL NORMS 35 (Michael Hechter & Karl-Dieter Opp eds., 2001).

146 Cass R. Sunstein, *Social Norms and Social Roles*, 96 COLUM. L. REV. 903, 912 (1996).

behavior.[147] A smaller, but still substantial, literature has focused more specifically on how norms intersect with individual environmental behaviors.[148]

Despite this sustained scholarly attention, much remains to be learned about the mechanisms through which norms arise and influence behavior. It is possible, however, to offer a general account of how many scholars believe norms function. Individuals are theorized to hold general, broad or abstract norms, values or preferences that support and find expression as narrower concrete norms, or specific behaviors.[149] For example, an individual possessed of the abstract norm of environmental protection might carry a reusable cloth bag to the market; the use of a reusable bag is a specific behavior, or concrete norm, followed by the individual to give expression to the underlying abstract norm of environmental protection held by the individual. Norms can thus be grounded in values or beliefs held by the individual (personal or internal norms).[150]

Norms can also be grounded in beliefs about the expectations (or anticipated response) of others (social or external norms).[151] For an

147 *E.g.*, ROBERT C. ELLICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES (1991); ERIC A. POSNER, LAW AND SOCIAL NORMS 2–4 (2000); Robert D. Cooter, *Three Effects of Social Norms on Law: Expression, Deterrence, and Internalization*, 79 OR. L. REV. 1, 2–3 (2000); Dan M. Kahan, *Social Influence, Social Meaning, and Deterrence*, 83 VA. L. REV. 349 (1997); Lawrence Lessig, *The New Chicago School*, 27 J. LEGAL STUD. 661 (1998); Richard H. McAdams, *Origin, Development, and Regulation of Norms*, 96 MICH. L. REV. 338 (1997).

148 *E.g.*, Carlson, *supra* note 22; Babcock, *Assuming Personal Responsibility for Improving the Environment*, *supra* note 16; Hope M. Babcock, *Civic Republicanism Provides Theoretical Support for Making Individuals More Environmentally Responsible*, 23 NOTRE DAME J.L. ETHICS & PUB. POL'Y 515 (2009); Hope M. Babcock, *Global Climate Change: A Civic Republican Moment for Achieving Broader Changes in Environmental Behavior*, 26 PACE ENVTL. L. REV. 1 (2009); Andrew Green, *Creating Environmentalists: Environmental Law, Identity and Commitment*, 17 J. ENVTL. L. & PRAC. 1 (2006); Andrew Green, *Norms, Institutions, and the Environment*, 57 U. TORONTO L.J. 105, 107 (2007); Andrew Green, *Self Control, Individual Choice, and Climate Change*, 26 VA. ENVTL. L.J. 77 (2008); Andrew Green, *You Can't Pay Them Enough: Subsidies, Environmental Law, and Social Norms*, 30 HARV. ENVTL. L. REV. 407 (2006); Albert C. Lin, *Evangelizing Climate Change*, 17 N.Y.U. ENVTL. L.J. 1135, 1136 (2009); Michael P. Vandenbergh et al., *Individual Carbon Emissions: The Low-Hanging Fruit*, 55 UCLA L. REV. 1701, 1705 (2008) (recommending targeting individual behavior through information distribution); Vandenbergh & Steinemann, *supra* note 11, at 1678 (advocating a norm campaign grounded in the abstract norm of personal responsibility and designed to support a concrete norm of carbon neutrality); Vandenbergh, *Order Without Social Norms*, *supra* note 16; Jed S. Ela, Comment, *Law and Norms in Collective Action: Maximizing Social Influence to Minimize GHG Emissions*, 27 UCLA J. ENVTL. L. & POL'Y 93 (2009).

149 Vandenbergh & Steinemann, *supra* note 11, at 1706 (identifying this distinction as one of the "fundamental understandings" around which "[n]orms scholars have begun to converge").

150 Green, *Norms, Institutions, and the Environment*, *supra* note 148, at 113 ("Individuals follow external norms because of sanction by the community. For example, such sanction could occur through the granting or withholding of esteem . . . . Internal social norms, on the other hand, are those that are self-sanctioned by the individual, such as through a feeling of guilt or shame when not following the norm or a good feeling when following the norm.").

151 *See id.* at 112–13 (explaining that external norms create the threat of sanction by the community); *see also* McAdams, *supra* note 147, at 376–78 (describing community endorsement and internalization of social norms); Vandenbergh & Steinemann, *supra* note 11, at 1706–07 (discussing social norms and the influence of expected social sanctions and rewards).

individual who chooses to use reusable shopping bags because he or she believes it is the right thing to do, reusable bag use expresses a personal norm and may reaffirm self-concept, create a sense of satisfaction, and avoid the discomfort of acting against one's beliefs (cognitive dissonance). For an individual who chooses to use a reusable shopping bag because of how she believes others will perceive and respond to that choice, reusable bag use reflects compliance with a social norm and the individual likely anticipates that compliance will result in favorable esteem from others. Scholars posit that individuals contemplating a behavior often engage in a rough utility calculus in which the benefit of compliance with personal and social norms is weighed along with a variety of other factors, such as monetary cost and convenience.[152] When these factors weigh against compliance with a norm, they can be understood as "barriers." Even an individual who wishes to protect the environment and believes that use of reusable bags helps to do so (personal norm) and wishes to use reusable bags to avoid perceived social opprobrium associated with plastic bag use (social norm) may sometimes choose to use a plastic bag, for example, when she realizes after getting to the store that she has forgotten her reusable bag and finds it too inconvenient to return home (inconvenience barrier).

Many other attributes of norms have been theorized that build upon this general framework. Two of these that may be particularly relevant with respect to thinking about how norm theory can inform eco-label design and implementation—visibility and context—are described in more detail below.

1. Visibility

One possibility for increasing consumer purchases of eco-labeled goods is to enhance the influence of desirable social norms on purchasing behavior. There appears to be growing recognition that simply providing consumers with information about the environmental attributes of goods through eco-labels often does not suffice to change consumer purchasing decisions.[153] One explanation for this result is that for information about the

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152 *See* Vandenbergh & Steinemann, *supra* note 11, at 1,697–98; Vandenbergh et al., *Regulation in the Behavioral Era*, *supra* note 115, at 760–62 (describing socio-ecological frameworks that influence individual behavior); *see also* Cooter, *supra* note 147, at 7–8 (discussing the benefits, including avoiding social sanctions, and costs of obeying a norm); Lin, *supra* note 148, at 1160–61 (explaining that external factors can limit behavioral choices even where a concrete norm has been activated).

153 *E.g.*, EUROPEAN COMMISSION TECHNICAL REPORT, *supra* note 25, at 35 (observing that "there are indications that the approach of 'providing consumers with information' in order to make decisions is not sufficient to bring about changes in consumption behaviour"); Reisch & Sunstein, *Redesigning Cockpits*, *supra* note 114, at 339 (commenting on the acknowledgment by others that "information has not been proven to be a very successful means of promoting voluntary behavior change to protect the environment"); Carrico et al., *supra* note 112, at 64 ("Although simply providing information to consumers is rarely sufficient to change behavior, accurate and actionable information is often a necessary component to achieving this end." (footnote omitted)).

public environmental attributes[154] of a good to change consumption decisions relies largely on personal norms to change behavior—labels provide information to consumers to allow them to exercise a preference (personal norm) for environmental protection. For a personal norm to change consumption choice, the consumer must hold the personal norm and connect the consumption decision to the personal norm; additionally, the value of the benefit associated with acting in conformance with that personal norm (sometimes referred to as "intrinsic value"[155] or "self-conception"[156]) and other values associated with purchase of the good must outweigh barriers and competing motivations.[157] Thus, an eco-label designed simply to communicate information about public environmental attributes to the consumer may only speak to the subset of individuals concerned about environmental protection and then change the ultimate purchasing decision of only the number of that subset for whom the value of the eco-friendly purchase outweighs any barriers, or competing considerations, such as cost. Personal environmental norms, standing alone, simply may not be sufficiently widespread or strong enough to overcome barriers to eco-friendly consumption choices,[158] particularly if, as some have posited, individuals feel less obligated by personal norms in the consumer, as opposed to civic, context.[159]

Eco-label policy that activates social as well as personal norms could expand the number of consumers open to a label's influence beyond those who hold a personal norm of environmental protection. It could also increase the value of purchasing an eco-labeled product for individuals who hold a personal norm of environmental protection, thereby increasing the likelihood that the value of the eco-conscious purchasing decision will outweigh any costs (barriers). And many have posited that, once invoked, social norms can achieve relatively swift, widespread changes in behavior

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154 Public environmental attributes refer to those that benefit the environment or world generally; private attributes refer to those that accrue directly to individuals (such as the perceived personal health benefit of avoiding exposure to pesticides by consuming organic foods). Grolleau et al., *Too Much of a Good Thing? Why Altruism Can Harm the Environment?*, 68 ECOLOGICAL ECON. 2145, 2146 (2009).

155 Cooter, *supra* note 147, at 7 (distinguishing between internalized norm compliance which provides intrinsic value to individuals, and external norms from which individuals derive instrumental value from compliance).

156 Sunstein, *Social Norms and Social Roles*, *supra* note 146, at 916.

157 *See* Vandenbergh & Steinemann, *supra* note 11, at 1708 ("[A] sense of obligation may lead to the formation of a behavioral intention without actually changing behavior. Other barriers may exist, such as the effort involved, a lack of infrastructure, social costs, or financial costs. Other social norms also can serve as barriers." (footnote omitted)).

158 *See generally* Green, *You Can't Pay Them Enough*, *supra* note 148, at 414–15 (evaluating the strength of the environmental protection norm in the United States); Vandenbergh & Steinemann, *supra* note 11, at 1713 ("Given the vast number of people who must change their behavior, the challenge posted by climate change is to identify abstract norms that are sufficiently widespread to influence individuals who do not identify with environmentalism.").

159 *See* Sunstein, *Social Norms and Social Roles*, *supra* note 146, at 924 (discussing why individuals may be more likely to press collective interests in their role as citizen even while not conforming their private practices to the same standard).

(through the "bandwagon effect" or norm cascades), particularly when championed by influential individuals, or norm entrepreneurs.[160]

Social norms, however, typically exert influence only where behavior is visible to others.[161] This is so because individuals follow social norms with an eye to how others perceive their behavior—they change their behavior out of deference to a social norm to avoid the disapproval or obtain the approval of others.[162] When relevant others do not witness a behavior, no social judgment or value can attach and the benefit of complying with the social norm may not be factored into the decision. Consistent with this, some research describes a "green to be seen" effect whereby environmentalists engage in more pro-environmental behavior when watched.[163] To deploy the influence of social norms on decisions about the purchase of eco-labeled goods it may, therefore, be necessary or helpful to recognize visibility as an important variable, create or increase visibility where possible and, where not possible, to understand that the absence of visibility constrains possibilities for deploying social norms (and perhaps eco-labels) effectively in that context.

The visibility of eco-consumption, and the potential for labels to change the same, depends greatly on product and context. Visibility of a consumer's eco-conscious choice will be high where the good is publicly purchased and used by the consumer and the eco-attributes of the good are apparent. Thus, for example, a Tesla or Prius is typically purchased and driven by the car owner in public and its eco-attributes are obvious, although communicated not by a label, but by distinctive car design and public brand knowledge.[164] All of these factors lead to high visibility and suggest that social norms can be powerful in this context.

Visibility will be lower where products are not purchased and/or used publicly and where the environmental attributes of the product are not apparent. There is, for example, typically less visibility with respect to food and sundries such as cleaners, toilet paper, paper towels, etc. Use of many of these types of products occurs within the home and is therefore not generally visible to others. Additionally, many of these products are taken out of their package for use/consumption causing the eco-attributes to no longer be apparent. (If served broccoli at a friend's home, one will not know—short of inquiring—if it is organic.) Even the act of purchasing products may not be visible if done on-line using a grocery delivery service.

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160 *Id.* at 929–30.

161 *See* Ela, *supra* note 148, at 118–21 (observing that visibility is "determinative of norm formation" in leading norm theories and noting that "according to both leading theories of norm origins, social influences can begin wherever behavior is visible").

162 *Id.*

163 Cameron Brick et al., 51 J. ENVTL. PSYCH. 226, 228 (2017).

164 Steven E. Sexton & Alison L. Sexton, Conspicuous Conservation: The Prius Effect and Willingness to Pay for Environmental Bona Fides, 2 (Apr. 21, 2011) (unpublished paper) (on file with *Environmental Law*) (describing how the "unique design" of the Prius has "historically provided the most powerful signal of the owner's affinity for the environment of any vehicle in the U.S.").

It is interesting to consider how eco-label policies might increase visibility to enhance the influence of social norms with respect to food and sundries. For foods that are more commonly consumed in public, can the environmental attributes of a product be communicated more effectively to others? Imagine for example if, like the Tesla or Prius, there was a distinctive package shape allowed only for eco-certified items. Are there ways to enhance the visibility of eco-conscious purchasing at the supermarket? What if, in addition to the 10 items or fewer express line, grocery stores maintained eco-lines open only to those purchasing 10 or more organic items?[165] Or used their loyalty programs to track organic purchases and maintained special "green" carts available only to customers with a record of green purchases?

Finally, in addition to using awareness of the power of visibility to improve label design and policy to better harness social norms, it may also be important to identify those situations in which visibility is not possible and to tailor expectations and policy appropriately.[166] Where visibility is not possible (and there is no unusually appealing private attribute to recommend the eco-product), progress in changing consumer behavior may need to come from promoting broader acceptance of abstract norms of environmental protection, grounding labeling in an alternate abstract norm (such as thrift or energy independence) that is more broadly embraced as a personal norm, or (perhaps) invoking the power of "reverse" visibility by invoking descriptive norms.

Descriptive norms refer to the propensity of individuals to "follow the crowd in the absence of strong preferences that direct them otherwise."[167] "[C]alling attention to common behaviors within a population (a descriptive norm) will induce other individuals to also adopt that behavior[,]"[168] *regardless* of whether the behavior of those individuals is visible to others. Consistent with this descriptive norm, studies of household energy consumption have shown that comparing a household's energy use to that of similarly situated neighbors can cause households (both those who deviate from the norm through excessive consumption and those who deviate by using comparatively less energy) to conform their energy use more closely to the norm.[169] This can be so even where the individual's own behavior is not visible to others. This thus presents a context of reverse visibility—

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165 Although consideration would have to be given to whether such an intervention might decrease incentives for those holding a personal norm of environmental protection as a result of motivational crowding. *See infra* notes 185–189 and accompanying text (discussing motivational crowding in the context of price subsidies).

166 Ela, *supra* note 148, at 124 ("To a designer of a practical behavior-change program, the importance of visibility to social influence has two implications. First, other things being equal, scarce resources should be directed toward the most visible behaviors first, since strong social influences may make them more promising candidates for change. Second, other things being equal, interventions should be designed so as to raise the visibility of less-visible behaviors.").

167 Vandenbergh et al., *supra* note 115, at 752.

168 *Id.* at 752–53.

169 *Id.*

previously invisible information about the behavior of others is made known to households whose own behavior remains invisible to peers.

This phenomenon suggests some possibilities for implementing eco-labels to take advantage of descriptive norms by publicizing (making visible) the behavior of others even when social norms are unlikely to exert influence because individual consumption behavior is not readily visible. For example, imagine if grocery stores (in physical locations or online purchasing applications, like Fresh Direct) publicized the average customer "green" score (calculated by percentage of green items purchased per customer or a similar metric) and included on receipts an individual's comparative "green" score. Or public service messaging designed to explain and encourage the choice of green options emphasized (where possible) the growing number of individuals choosing the green option (and, importantly, avoided lamenting that common consumption choices contribute to an environmental problem as this may only serve to communicate the descriptive norm that the environmentally unfriendly consumption is common).[170]

2. Context

Visibility of behavior is one aspect of the context, or background conditions, for environmental consumption. As noted above, whether behavior is visible can significantly change the extent to which social norms influence consumption behavior. Other aspects of context may also be important for understanding whether and how eco-labels interact with norms to influence consumption behavior.

Context includes the existence and strength of prevailing norms (abstract, concrete, personal and social) in a community (defined geographically or otherwise).[171] "Both existing norms and the ability of norms to change depend heavily on the social, economic, and historical context of the community in which these norms developed"[172] and thus "[t]he type of consumption that creates status varies between contexts and time."[173]

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170 *Id.* at 753–54 (observing that "[m]essages are often designed to convey the scale of the problem by bringing attention to an undesirable behavior. . . . By doing this, however, a campaign may promote the belief that the behavior, though undesirable, is widespread" and suggesting that education campaigns could take advantage of descriptive norms by emphasizing that the purchase of a green good is "widespread or is becoming widespread" to "signal to consumers that not adopting an action will be seen as out of the norm").

171 *See* Sunstein, *Social Norms and Social Roles*, *supra* note 146, at 919–22 (describing "norm communities" and explaining that different norms may attend to different "social roles"); Vandenbergh et al., *Regulation in the Behavioral Era*, *supra* note 115, at 761 (explaining the concept of socio-ecological frameworks for organizing influences on individual behavior and noting that this includes individual factors (such as income), "the community environment (including neighborhoods, cities, and states), and the broader national and policy environment").

172 Green, *Norms, Institutions, and the Environment*, *supra* note 148, at 116.

173 Carlsson & Johansson-Stenman, *supra* note 110, at 81 ("Although driving a Toyota Prius may, at least in some contexts, provide social status, driving a Rolls-Royce or a new Ferrari contributes more to social status in other contexts.").

The personal value and social meaning of purchasing and using eco-labeled goods can vary greatly. Drivers in Berkeley, California (a notoriously eco-friendly enclave), are likely to hold an abstract and personal norm of environmental protection and also a concrete norm connected thereto of driving a fuel-efficient vehicle. Additionally, within that community, there is also likely a social norm favoring environmental protection and fuel efficiency—i.e., drivers in Berkeley are likely to engender social benefits from driving a fuel efficient Prius and suffer social penalties from driving a gas-guzzling Yukon Denali.[174] In other communities, however, individuals may be less likely to hold an abstract or personal norm of environmental protection or a concrete norm of driving a fuel efficient vehicle flowing therefrom, and there may even be a reputational *cost* to driving a Prius.

The distribution and strength of background norms may significantly affect the extent to which eco-labels influence consumer purchasing decisions and therefore if the policy goal is to increase the purchase of sustainable goods, policymakers may wish to be strategic about choosing the norm in which to ground labels.[175] At present, eco-labels appear to largely appeal to the abstract norm of environmental protection.[176] While logical, this little-examined default may not always be wise from a strategic perspective. In the United States, for example, "environmental protection norms are widespread" but "not universally held"[177] and tend to be "shallow."[178] Moreover, environmentalism has become politicized in the United States such that "[p]ro- and anti-environmental identities are social group memberships that individuals are motivated to strategically signal, because these groups have identifiable clothing, speech, vehicles, and other social markers."[179] For some individuals, environmentalism may be an "unwanted

174 Sexton & Sexton, *supra* note 164, at 2–3 (discussing the "green halo" produced by purchasing a Prius and observing that "a Prius is more valuable in communities with a strong green ethos like Berkeley, Calif. than in communities with greater heterogeneity in attitudes toward the environment, like, for instance, Bakersfield, Calif.").

175 *See* Vermeir & Verbeke, *supra* note 69, at 186–87 (suggesting that messaging about sustainable food could be tailored to different consumer segments depending, in part, upon the extent to which they might be influenced by social norm pressure). It might also be possible to tailor to the educational or social-marketing supporting a labeling regime to appeal more broadly to different audiences. Mario F. Teisl et al., *Non-dirty Dancing? Interactions Between Eco-labels and Consumers*, 29 J. ECON. PSYCHOL. 140, 142 (2008) ("Heterogeneity in consumer reactions to eco-labels is not generally policy relevant as it is not practicable to allow for various designs for the same label. However, eco-labeling *programs* can entail more than just the labels *per se*; they can also include an educational or social-marketing component.").

176 If the goal of eco-labeling is narrowly to advance individual autonomy by giving consumers information to connect abstract personal norms to concrete behaviors, thereby allowing eco-minded consumers to give effect to a preference for environmental protection, then it would be acceptable to simply provide information in understandable ways to speak only to those individuals holding a personal norm of environmental protection.

177 Vandenbergh & Steinemann, *supra* note 11, at 1712 (recommending that norm management efforts directed to carbon emission reduction should be grounded in an abstract norm that is more widespread than that of environmental protection).

178 Green, *You Can't Pay Them Enough*, *supra* note 148, at 415.

179 Brick et al., *supra* note 163, at 226–27 (citation omitted).

identity" causing them to eschew eco-labeled goods, particularly when their consumption choices are visible:

> When a person's identities are aligned with a behavior, e.g., when a liberal has the opportunity to buy a 'green" product, social visibility may increase behavior frequency. However, a conservative may choose not to publicly purchase this product when conspicuously labeled.
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> Individuals in the United States increasingly think that the environmentalist movement has done more harm than good, and since 1991 identification with environmentalists has decreased steadily to 42%. . . . When negative aspects of environmentalism are salient, visibility may overall reduce pro-environmental behavior, since individuals will be motivated to maintain their social reputation by avoiding the negative category ("brown to keep down").[180]

The ability to persuade consumers to purchase eco-labeled goods through appeal to environmental norms is therefore inherently limited (unless the environmental protection norm is broadened and strengthened).

Might there be another, more broadly and/or deeply held abstract norm, with greater behavior-influencing potential, in which to ground eco-labels? One possibility is to orient eco-labels, where possible, to the norm of "personal responsibility not to harm others[,]" which has the benefit of being "remarkably widespread across the political spectrum . . . resonat[ing] even with those who oppose regulatory solutions to social problems."[181] Label design, informational materials, and reports about products might focus, for example, on how the improved production processes of sustainable goods protect others; instead of a green earth symbol or similar, the label might depict a child under an umbrella. Additional research is required into the penetration of different abstract norms and the fit between those norms and sustainable goods. For present purposes, we raise the idea that it could be useful to thoughtfully assess the apparent default decision to ground eco-labels in an appeal to environmental protection norms.

Price—including not just cost to the consumer, but also the way that the price of a product is presented and explained—is another contextual factor that can interact with norms to shape consumer behavior, sometimes in complex and unexpected ways. The often increased cost of green goods is typically understood as a barrier to eco-consumption—a factor that weighs against a green purchasing decision. Research suggests that while a subset

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180 *Id.* (citations omitted) (publishing the results of a study finding that anti-environmentalists engaged in fewer pro-environmental behaviors when those behaviors were more visible).

181 Vandenbergh & Steinemann, *supra* note 11, at 1712–13 (footnote omitted) (recommending that norm management efforts focused on individual carbon neutrality appeal to the personal responsibility norm as opposed to environmental protection norms).

of consumers are willing to pay more for eco-goods, they are typically not willing to pay significant premiums;[182] additionally, many scholars studying how norms intersect with environmental behaviors have concluded that where costs are borne by individuals while environmental benefits are widely shared (often termed "large-number, small-payoff collective action" problems[183]), barriers must typically be low for behavior change to occur.[184]

Interestingly, however, as described in a theory referred to as motivational crowding or crowding-out, price interventions can sometimes undercut personal and social norms supporting environmental behaviors.[185] For example, the social message of commitment to environmental protection or altruism may be stronger when an individual goes to great lengths—for present purposes, pays significantly more—to choose a green good (for example, a Tesla). And using subsidies to reduce the cost of green goods can have unintended consequences.[186] A subsidy designed to prompt consumers to purchase a green good might inadvertently cause them to be suspicious about the overall quality of the good.[187] Subsidies can also undercut the intrinsic motivation, grounded in a personal norm, to purchase a green good. In one study involving carbon footprint labeling of grocery items, consumers were less likely to buy green goods when accompanied by an explicit statement that the price had been reduced to reflect an environmental subsidy, causing the authors to conclude that "combining information on the relative environmental performance of products with a monetary reward for switching is less effective than information alone."[188] On the other hand, well-designed economic policy instruments are also hypothesized to have "potential crowding-in effects" that "reinforce[] . . . intrinsic motivation."[189] What seems clear is that the intersection between

182 *Cf.*, Davies et al., *supra* note 82, at 48 ("Consumers are less likely to brand switch based on ethics due to the low priority of ethics in the purchasing decision[.]").

183 Carlson, *supra* note 22, at 1234 & n.8.

184 Vandenbergh et al., *Individual Carbon Emissions: The Low-Hanging Fruit*, *supra* note 148, at 1715 ("Although many examples exist of costly individual behavior change, studies of consumer and nonconsumer environmentally significant behavior suggest that on balance individuals will act in their pecuniary interest. . . . Research on recycling and other environmentally significant behaviors suggests that behavior change is difficult when sustained and substantial changes are necessary." (footnotes omitted)).

185 Carrico et al., *supra* note 112, at 63 (admonishing that "[p]olicymakers should . . . be careful to avoid introducing economic incentives or penalties to change behaviors that may already be governed by moral norms" because of the risk of motivational crowding).

186 Green, *You Can't Pay Them Enough*, *supra* note 148, at 429–35; Sexton & Sexton, *supra* note 164, at 21 ("Because conspicuous-conservation goods enable their purchasers to signal their willingness to sacrifice to enhance the environment, the public subsidy of such goods diminishes the value of such goods as social signals. Subsidies may, therefore, have the perverse effect of reducing demand for conspicuous conservation.").

187 Xiaogu Li et al., *The Effect of Mail-in Utility Rebates on Willingness-to-Pay for ENERGY STAR® Certified Refrigerators*, 63 ENVTL. & RESOURCE ECON. 1, 2, 16 (2016).

188 Grischa Perino et al., *Motivation Crowding in Real Consumption Decisions: Who is Messing with My Groceries?*, 52 ECON. INQUIRY 592, 602 (2014).

189 Carlsson & Johansson-Stenman, *supra* note 110, at 83, 93 (concluding that "although intrinsic motives can sometimes be crowded out by monetary incentives, we argue . . . that monetary incentives will sometimes amplify intrinsic motivation").

price and behavior is complex and best navigated with caution and the benefit of careful research.

IV. RECOMMENDATIONS FOR ECO-LABELING DESIGN AND IMPLEMENTATION

Behavioral insights from evolutionary psychology, behavioral law and economics, norm theory, and related research streams converge in a number of respects (the importance of visibility and the behavior of others, difficulty valuing distant costs and benefits) and suggest a number of possibilities for improving eco-label design and implementation. Some of these insights could be used to enhance what might be thought of as the traditional, or "thin," understanding of eco-label purpose and function. Under this thin understanding, eco-labels provide information about the environmental attributes of products to consumers to allow consumers to make choices consistent with their environmental preferences. Behavioral insights can enhance the way that eco-labels currently perform in this thin capacity by improving the extent to which eco-labels help consumers match environmental preference to product.

These research streams also, however, suggest more transformational possibilities for using behavioral insights to develop a next generation of eco-labels with a "thicker" conception of the purpose and function of eco-labels. Eco-labels could be understood as a means to substantially grow the number of individuals purchasing eco-goods by more actively shaping consumer preference (i.e., encouraging more individuals to prefer eco-labeled products) or communicating non-environmental but desirable coexisting product attributes that broaden the segment of consumers to whom the product may appeal. This Part describes how behavioral insights can enhance eco-labeling as currently understood and redefine eco-labeling so as to increase its efficacy.

A. Behavioral Insights for Enhancing a Thin Conception of Eco-labels

As traditionally conceived, eco-labels function to enable consumers to identify goods that match their environmental preferences. When successful under this model, eco-labels present a win-win, reducing environmental harms while supporting consumer choice. This thin account of eco-labels is consistent with the account provided by norm theory about how and why consumers' purchasing decisions can reflect personal norms. Those holding a personal norm of environmental protection derive value from conforming their purchasing behavior to their personal belief and weigh that value in their purchasing utility calculus.[190]

Behavioral law and economics, however, instructs that eco-labels need to be carefully designed to avoid cognitive errors on the part of pro-environment consumers that derail environmental purchasing. Individuals possessing a personal norm of environmental protection may be dissuaded

190 *See supra* notes 149–152 and accompanying text.

by a cognitive error or behavioral tendency from purchasing an eco-good that in fact aligns with their environmental preferences. The potential for this to occur is illustrated by the response of Danish consumers to changes in the European energy label described *supra*. In that studied example, a change in the way that energy efficiency data was presented on the product label triggered loss aversion and anchoring effects, artificially reducing the impact of energy efficiency on purchasing decisions.[191]

Norm theory further suggests the need to be mindful of the relative value afforded to environmental norms when consumers make purchases. The traditional account of eco-labels is premised on consumers exercising a preference for the public good of environmental protection in their purchasing decisions. Behavioral insights might also be deployed to maximize the extent to which pro-environmental consumer attitudes are brought to bear in purchasing decisions. A recent study indicates that relatively simple nudges external to the eco-label itself may significantly influence the decision of customers to buy green products.[192] The study showed that grocery store customers could be influenced to buy eco-labeled bananas just by brief information (verbal or written) about the eco-labeled option.[193] Information transmitted by a grocery store employee had a stronger effect than information on a sign, but both experimental designs increased significantly the choice of the eco-labeled option.[194] The interpretation of the results was that reminding customers of their pro-environmental attitudes near the site of purchase may nudge them to make choices that are in line with those attitudes, and that the stronger effect from a real person transmitting information may have activated a response related to the social context (e.g., signaling).[195]

Research suggests, however, that the environmental protection norm is widespread but shallow,[196] and evolutionary psychology suggests that the public environmental benefits of eco-goods, which often accrue far away temporally or geographically, are likely to be afforded low value.[197] In terms of thinking about how environmental protection is weighed when a consumer is deciding whether to purchase a good, it is useful to understand that for many individuals a personal norm favoring environmental protection may cause the individual to assign some additional value to purchasing an eco-good, but that the additional value may not be great and will often be considered alongside other considerations (such as difficulty procuring the good or other inconvenience). Even many environmentally-inclined consumers may be willing to pay only relatively small premiums for eco-goods, and in terms of personal environmental behaviors, it is typically

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191 *See supra* notes 122–124 and accompanying text.

192 Per Kristensson et al., *Influencing Consumers to Choose Environment Friendly Offerings: Evidence from Field Experiments*, 76 J. BUS. RES. 89, 93 (2017).

193 *Id.*

194 *Id.* at 94.

195 *Id.* at 94–95.

196 Green, *You Can't Pay Them Enough*, *supra* note 148, at 415.

197 *See supra* notes 105–107 and accompanying text.

considered feasible to change through persuasion only those behaviors with relatively few barriers.[198]

A behavioral analysis of eco-labels as traditionally conceived—as a means to match eco-minded consumers to goods with environmental attributes—thus suggests that eco-label performance can be improved by designing labels to present information so as to avoid or account for cognitive errors or behavioral tendencies that distort consumers' perception of a goods environmental attributes. The analysis also, however, surfaces an apparent upward limit in the market share of eco-labeled goods (defined by the number of individuals who assign sufficient value to environmental protection in their consumption choices) that traditionally has been understood to be capable of being overcome only or primarily through means exogenous to eco-label policy (such as the development of broader and deeper public environmental concern or a reduction in barriers to the purchase of eco-goods, such as reductions in cost or increasing availability of eco-labeled goods).[199] As discussed below, however, behavioral insights also suggest possibilities for transforming eco-labels to significantly enhance their market share by increasing the perceived value of eco-labeled goods to consumers.

B. Behavioral Insights for Next Generation Eco-labels

Eco-labels could be reimagined as a means to build, expand, and define consumer preference for eco-labeled goods. That eco-labels do not presently function in this capacity may reflect the fact that over time eco-labels have increasingly become the product of government policy as opposed to private marketing efforts.[200] One critique of eco-labels from a marketing perspective

198 Paul C. Stern, *Information, Incentives, and Proenvironmental Consumer Behavior*, 22 J. CONSUMER POL'Y 461, 464–66 (1999) ("The chief implication for policy is that the extent to which behavior can be changed by interventions in the personal domain, such as education or information, depends on the strength of contextual forces: There are times and places when personal-domain interventions are likely to be effective and others when they will predictably fail."); *id.* at 468 ("[E]ven information programs that are carefully designed to achieve these objectives produce only modest short-term behavioral changes. The most carefully crafted informational interventions have produced reductions of 10–20% in certain targeted consumer behaviors, such as littering, electricity consumption during peak-load periods, and electricity use for home cooling. The behaviors that change to produce these effects are almost always simple behaviors that can be changed with little inconvenience or expense—that is, behaviors for which external constraints are weak."). *See generally* Davies et al., *supra* note 82, at 40 ("[C]onsumers were willing to pay 28% more for a $10 item with ethical credentials [but only] 15% more for a $100 item.").

199 Hjelmar, *supra* note 138, 342–43 (describing convenience-shopping consumers as "pragmatic" and recommending that to encourage these pragmatic consumers to buy organic it will be necessary to decrease barriers such as price and availability).

200 In this paper, we do not address implementation of next generation labeling and thus leave for future consideration the propriety of government undertaking the approaches outlined herein. We note, however, the possibility that private entities or interest groups might spearhead these next generation approaches. We further note that many have noted that there are already many forces conditioning consumer sovereignty, often in an anti-environmental direction:

observes that the general marketing literature takes "the view that the company has an active role in shaping a market for its products" while the green marketing literature "assum[es] that there is an existing green consumer[:]"[201]

> [T]he past and current focal areas in green marketing have been the measurement of market size, identification of the green consumer and positioning through ecolabels. However, from the conventional marketing literature, other possible means of green marketing can be identified, including analyzing current and potential market needs and wants and addressing not only an existing green consumer segment but also a broader range of consumers.[202]

Our review of behavioral research suggests three possibilities for deploying eco-labels to shape and expand the market for eco-labeled goods: 1) Eco-labels could be purposefully designed and implemented to attract consumers motivated by social norms; 2) Eco-labels could appeal to a wider range of abstract norms, including abstract norms that are stronger and/or more broadly accepted or locally-salient; and 3) Eco-labels could highlight private, near and near-term benefits.

1. Appealing to Social Norms

One way to expand the market for eco-labeled goods is to expand their appeal to those who do not hold a personal norm of environmental protection, or at least for whom that norm is not sufficiently strong to motivate a green purchase, by tapping into the power of social norms in communities with strong environmental identity. One way to do this is to increase the visibility of eco-consumption. Both evolutionary psychology and norm theory suggest that individuals might find value (in the form of social esteem) in purchasing an eco-labeled good because of the social signal it sends. Indeed, in some contexts, invoking social norms may incent purchasing even where (or especially where) there are high barriers (high cost, high effort). Barriers might increase the social esteem value of purchasing a good *because* others are aware of the high cost or effort involved. Thus, the purchase of an expensive good can, through costly signaling and competitive altruism, suggest that the consumer is wealthy and

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> [A]n entire supply chain of decisions and choices have occurred before the consumer reaches the store to choose from a predetermined range of options that have been procured and controlled by powerful corporate actors. In the midst of this contestation between consumer choice and corporate control, consumers are given the illusion of choice while both the supposed needs and desires underpinning these choices are constructed, and the choice set is strictly controlled, by marketing managers.

Carrington et al., *supra* note 15, at 27.

201 Rex & Baumann, *supra* note 69, at 572.

202 *Id.* at 573.

thoughtful;[203] through the lens of norm theory, it might also communicate that the person is a very committed environmentalist.[204]

It might also be possible to use reverse visibility to invoke descriptive norms to encourage green purchases. Individuals tend to follow the crowd. Communicating that others are purchasing eco-goods can signal a descriptive norm and encourage others to likewise purchase eco-goods.[205] The concept of reverse visibility refers to the idea that there may be circumstances where the eco-consumption of others is unknown (invisible) but can be purposefully surfaced and publicized (made visible). Descriptive norms around eco-consumption could be communicated by a host of on- and off-label means. Labels or informational campaigns, for example, might advertise that the growth of organic foods exceeds that of conventional foods or offerings within stores might be physically presented to suggest that eco-goods are a common choice (by placing them first and at eye level, for example).

2. Appealing to Alternate Abstract Norms

Appealing solely to the abstract norm of environmental protection misses an opportunity to invoke more widely accepted or more fervently embraced alternative abstract norms and also creates the risk of triggering anti-environmental identities and backlash. The public benefits of eco-goods often serve values consistent with a host of abstract norms such as personal responsibility, the idea of not harming others, thrift, and the avoidance of waste. Reflexively presenting the myriad public benefits of eco-goods solely through the lens of environmental protection unduly constrains the segment of consumers to whom the information about those goods will appeal. This may be particularly important in the United States where environmental protection is politically charged and polarized.

Decades of public appeals to increase environmental values and boost environmental actions have resulted in pro-environmental behaviors being paired with social groups, for example through imagery of green leaves, the planet, or the word organic. Unfortunately, anti-environmentalists may avoid these behaviors, even ones they would otherwise choose, when those actions carry an unwanted identity. "Thus, we advise caution in associating target behaviors with identities when designing environmental messages, product labels, or appeals to action."[206]

3. Highlighting Private, Near and Near-term Benefits

Public environmental benefits are often shared widely and accrue distantly, in both a temporal and geographic sense. Principles of behavioral law and economics and evolutionary psychology both suggest that these

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203 *See supra* notes 97–98 and accompanying text.

204 *See supra* notes 172–174 and accompanying text.

205 *See supra* notes 101–104, 167–169 and accompanying text.

206 Brick et al., *supra* note 163, at 235.

public environmental benefits are thus likely to be afforded low value in a consumer's purchasing utility calculus.[207] Behavioral law and economics has documented that individuals engage in hyperbolic discounting, tending to overvalue the present and greatly discount events in the distant future.[208] Evolutionary theories predict that humans should be concerned about environmental issues that are proximate in time and space and directly affect the individual.[209] Moreover, general consumers (those without a strong personal environmental norm) might be uninterested in public environmental benefits.[210]

It might, therefore, be beneficial to identify and exploit the private, near-term and geographically close benefits of eco-goods to enhance the value that they are afforded in a consumer's purchasing calculus. The characterization of a product that uses less packaging might be reformulated from "save the earth" to "haul less garbage." A product boasting low GHG emissions in production might be touted with a "save your seasons" exhortation. And to the extent that an eco-good offers a private benefit related to its public environmental benefits, that product attribute could be highlighted. For example, attributes of the reusable dish towel that could be emphasized might include the fact that it costs less over time than paper towels, results in the consumer having to haul less trash, and reduces kitchen clutter.

We will close with a hypothesis and descriptive example. While we have lamented the low market share for most eco-goods, we have also noted the recent and notable growth of the organic food sector.[211] Studies of organic consumers reveal that a substantial proportion choose organic food for its perceived health benefits[212] and have little understanding of the actual meaning of the term organic as used in labeling.[213] Notably, organic labels do not attest to the healthfulness of the food nor do studies appear to demonstrate that organic foods are, in fact, healthier.[214] One way to understand the relative success of organic foods is that an affect heuristic

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207 Others, exploring the gap between consumers' ethical intentions and purchasing behaviors, posit that employing self-interest in purchasing decisions is a feature of market-based exchange relations; i.e., that structural capitalism supports and promotes self-interested consumer decisions. Carrington et al., *supra* note 15, at 28.

208 *See supra* notes 126–129 and accompanying text.

209 *See supra* notes 105–107 and accompanying text.

210 *See* Hwang et al., *supra* note 69, at 11 (presenting the results of a study demonstrating for general consumers in Korea the private benefits of a product were more influential in purchasing than public environmental benefits).

211 *See supra* notes 68–74 and accompanying text.

212 Many studies "have found health and nutritional concerns to be the most important factors influencing organic food purchase," while others have shown that "health benefits are among the most important factors motivating the purchase of organic food." Hjelmar, *supra* note 138, at 337, 341 (citation omitted).

213 *Id.* at 341 ("Research has shown that consumers generally do not understand the complexities of organic farming practices and food quality and consumers often feel uncertain and helpless." (citations omitted)).

214 *Id.* ("Studies, however, have shown that there is no evidence that organic food is healthier or more nutritious than conventional food."(citations omitted)).

(associating natural or organic with healthy) contributes to the common perception that organic foods offer consumers a significant private eco-benefit (healthfulness) thereby prompting a larger share of consumers to purchase organic foods. Indeed, a well-known legal scholar speculates "that the immense popularity of organic foods owes a great deal to heuristic-driven thinking, above all to the view that there is an association between the natural and the healthy, and between chemical and danger."[215] Viewed through a behavioral lens, then, one way to interpret the growth in the market for organic foods is as a manifestation of affect heuristic-driven belief in the (unproven) private benefits of organic food consumption. The growth of the market for organic foods may thus illustrate the potential power of behavioral insights to expand the market for eco-goods.

V. CONCLUSION

Evolutionary psychology offers insights into eco-labeling campaigns so as to increase their efficacy. We suggest that public exposure of the label (so that people see it) and the exposure of the purchasing behavior (so that other people can see that you have bought the product) are key elements to the success of eco-labels—the social context around product purchasing is as important as the eco-label itself. Thus, the success of eco-labeling is not just about the label itself. The social context around the product may be even more important, relying on deeply rooted psychological and behavioral propensities.

We recommend that behavioral insights be used to improve eco-labeling as traditionally understood by incorporating knowledge about behavioral tendencies into label design so as to allow for more accurate matching of consumers' preexisting environmental preferences to eco-labeled goods; and develop next-generation eco-labeling policy with the potential to significantly expand the market for eco-labeled goods by invoking social norms, broadening the normative bases to which eco-goods appeal, and emphasizing private, near and near-term benefits of eco-goods.

What remains to be determined is the proper course for implementation (whether it is appropriate for the government to engage in more marketing-like activity, whether and how to tailor labels to different consumer segments, the possibility of expanding beyond labels to promotional/information materials, the design of grocery stores, and the like), and how to design eco-labels to achieve other purposes, such as citizen education and to promote policy spillover.[216]

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215 Sunstein, *Hazardous Heuristics, supra* note 130, at 768.

216 And there is the possibility that taking "environment" out of eco-goods promotion might jeopardize possibilities for positive policy spillover. *See* Trine Mørk et al., *Determinants of Citizen Acceptance of Environmental Policy Regulating Consumption in Public Settings: Organic Food in Public Institutions*, 148 J. CLEANER PRODUCTION 407, 413 (2017) (explaining that "in attempts to enact change towards more sustainable consumption, market- and policy driven change may go hand in hand, as determinants of the one and support for the other are governed by the same mechanisms—at least in the case of organic food").