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The Bright Green Study

This study used ethnographic methods to gain a deep understanding of the values and priorities of 35 "green" households whose occupants have made significant changes to their homes and behaviors in order to be more environmentally responsible. Field locations were chosen to represent areas that have strong activity in environmental sustainability, as well as for diversity of climate, culture, and economic conditions. We visited homes in Portland and Bend in Oregon; the San Francisco Bay Area, Santa Barbara , and Los Angeles in California; and Taos and Albuquerque in New Mexico. Visits included semi-structured interviews and home tours, as well as design exercises in mapping interpretations of the home and understanding values associated with it.

Our participants cite a wide range of motivations for green building and green living, such as a sense of ethical responsibility to future generations, concern about global climate change, concern about reliance on imported oil, a drive to be frugal and/or conserve resources, a desire to create a healthy home environment, and religious or spiritual beliefs that include caring for the earth. They strive to make a difference by taking personal action to be more environmentally responsible.

> Wikipedia: "Bright green environmentalism aims for a society that relies on new technology and improved design to achieve gains in ecological sustainability without reducing (indeed, increasing) the potential for economic growth. Its proponents tend to be particularly enthusiastic about green energy, hybrid automobiles, efficient manufacturing systems and bio and nanotechnologies... Their ideas can be contrasted with what they consider traditional environmentalism: pessimistic, return-to-primitivism, unattractive, "dark green" ideas that depend on a reduction in human numbers or a relinquishment of technology to reduce humanity's impact on the Earth's ecosphere."

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Green as a Social Phenomenon

Growing concerns over resource depletion, global warming, and environmental degradation have led increasing numbers of people to reconsider their actions and the impact they have on the planet. As discussion of these issues gains momentum in the broader population, more and more individuals are taking personal action to modify their behaviors and lead by example.

This upswing in public interest in environmental issues is likely to stimulate new markets for technologies that help maximize energy efficiency and minimize resource consumption, as well as influence consumers' perceptions of technologies in terms of sustainability and green values. Our study participants are lead adopters who may presage the technology needs and purchasing decisions of an increasingly large market.

"I have a friend that says 'if they don't think you're cool, wait until they see your house.'"
– Jane, Portland, OR

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Like Living on a Ship

For many green homeowners, living in a green home means constant activity to keep it in tune with nature's changing state and rhythms. Residents can minimize energy use and maximize comfort by constantly reconfiguring windows, doors, skylights, solar panels, etc. Keeping the home in tip-top shape also increases efficiency – for example, clean refrigerator coils or clean solar panels are significantly more efficient than dirty ones.

While automation is an option for some, many enjoy the immediacy of interacting with nature through physical activity. This connection with daily and seasonal rhythms adds a rich texture to the lives of the residents.

"You have to treat it kind of like living on a ship... You know, you have to batten down the hatches at this time of day and then open them back up at this time of night and, you know, things like that to get that efficiency." – Jason, Portland, OR

"We call them [the heavy blankets insulating a long expanse of windows] window coverings, but when we're dealing with them, we call them sails. ... because it's like raising and lowering the sails... It's quite – it actually can be really cool and meditative." – Kylie, Bend, OR

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Continuous Computation

Many green homeowners monitor data about their homes. Tracking resource generation and use helps them tune the home and make tangible their contributions to improving the environment. These behaviors also allow them to calculate the financial rate of return they are receiving on their investments. Tracking flows of resources through logs and other devices can be so interesting that some green homeowners come to consider themselves "data geeks." They find the data personally motivating and are also eager to share it with others who are considering building green.

This constant process of computation and estimation to minimize impact on the environment often carries over into other areas of their lives, such as transportation and purchasing decisions. Even non-technical participants often enjoy the mental challenge of these small puzzles and optimizations.

"...it really brings out the inner data geek. You become a total data freak because now I'm all about like okay how am I doing. Have I put too many lights on and how much am I using? I want to really keep track of it." – Jason, Portland, OR

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The Path to Sustainable Living

Participants find it rewarding to become more environmentally responsible over time. They frequently refer to green living as an evolving and continuous process in which they conduct research, weigh different criteria, network with others who share their interests, experiment with different strategies, and execute on their accumulated knowledge and experience. This evolution is often associated with a distinct narrative order, a natural strategic sequencing of modifications to behaviors, activities, and purchasing.

Participants often have a strong sense of where they and others are on this "path" to more sustainable living. They are highly motivated to take visible actions to inspire others and to illustrate the path by example.

"You have to eat your conservation vegetables before you get your solar cookies."
– Cory, Portland, OR

"I think of it as a path... in a way it is an apt way to describe it because it makes you more conscious of every step you take. It really does. To start not doing things automatically but doing things as a result of thought and analysis, you know, of what would be a better way to do this."
– Janet, Los Angeles, CA

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What is Green Technology?

Members of this population expend tremendous effort to make environmentally responsible purchasing decisions and to behave in environmentally responsible ways. They want to buy green products, to be green in the way they use products, and to display green choices to others.

Participants in our study frequently perform sophisticated and complex analyses to determine their preferred course of action, often drawing on many facts and heuristics. Their knowledge and reasoning about the environmental impact of computing devices is markedly less sophisticated than their thinking in other areas such as transportation, home energy use, water use, food purchases, etc.

Participants often have a strong interest in visibly displaying their choices and behaviors to others – they see living by example as an important type of activism. They find it exciting to express green values by purchasing, using, and displaying environmentally responsible products.

A wide range of possibilities exists for environmentally responsible computing technologies, such as modular and reusable product design, persuasive technologies that support green behavior, and home monitoring and home automation technologies.

"When the new hybrids came out who knows if they're going to work, not work, whatever. But I thought – and my friend and I calculated how much it would cost me to take the risk to buy a hybrid. And we realized that it would only cost me an extra 2,000 dollars total for the car to just try it. And so it's a 2,000 dollar contribution to making the world a better place in my mind. So I decided it was worth it... it cost me an extra 2,000 to have it be clean... [When purchasing a computer] I don't know how to do that [consider environmental factors]..." – Susan, Santa Monica, CA

"When I drove that car [my first hybrid], I was doing something right every second and it changed my life... I mean, suddenly, it was like I was an activist every minute. And it added so much value to my life. It just turned me on. It was like, 'Wow! I'm doing something right every second.' And I have this way to not be screaming about it, but show people that I care." – Kylie, Bend, OR

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