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Mapping 2020: Charting a Precautionary Future

Exploring Scenarios for the Unfolding Precautionary Movement

Commissioned by the Science and Environmental Health Network

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The future is not a result of choices among alternative paths offered by the present, but a place that is created--created first in the mind and will, created next in activity. The future is not some place we are going to, but one we are creating.

--John Schaar

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Precautionary 2020 Scenarios

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Introduction

2020. To some it may seem a far away date, but the reality is in order to create the kind of changes that the present situation demands, our movements need long term strategies that help us think big. The first step in creating these strategies is to unleash our imaginations and to envision what victory could really look like. This document is an effort to do just that – to imagine different scenarios for how the movement for precautionary action could succeed in shifting the U.S. economy, political system and culture to incorporate precautionary thinking.

This document is the product of *smartMeme*'s work with the Science and Environmental Health Network (SEHN) on long term scenario planning and messaging strategy for the Precautionary Principle (PP). The scenarios described in this document were developed in conjunction with the companion document *The Future of Foresight: Long Term Strategic Considerations for Promoting the Precautionary Principle*. Jointly both documents represent the result of nine months of collaborative work, and many hundreds of hours of inquiry, research, discussion, rethinking, and writing.

Mapping 2020 explores possible narratives of how Precautionary Principle advocates can manifest a future that captures their goals and dreams. It is meant to be an emerging roadmap to the desired future. The companion document -- *The Future of Foresight* -- is intended to explain how the scenario "maps" were constructed by providing our thinking about the "building blocks" -- the drivers, key trends and strategic issues -- that we felt were most relevant to the PP. We offer this work as a potential starting point for dialogue PP advocates on long term strategic planning, thinking, and vision.

It is important to begin by acknowledging that our approach to this project comes from a place of exploration, rather than expertise. We are not experts in scenario planning, nor are we trained social scientists, nor psychics! We are grassroots intellectuals and social change practitioners who are daring to think big in partnership and collaboration with our colleagues at SEHN. We believe deeply that in order for social movements to create the world in which we want to live, we need to develop better tools for creating long-term strategy and vision. Thus we have approached this work in the spirit of humble inquiry, imagination, and innovation.

This project assesses the complex, interlocking factors and intertwined threads of the future by utilizing some frameworks from the field of scenario planning, as well as *smartMeme*'s story-based strategy approach. As with all scenario work, this document is partially based in our research on current trends and partially a product of our creative analysis of possibility. Our full methodology is outlined in the December 2005 process document *Capturing the Future*.

SmartMeme began by surveying materials provided by the SEHN staff, along with myriad and diverse relevant source materials (see bibliography in *The Future of Foresight*). We also conducted a face-to-face scenario development/brainstorming process with SEHN staff and members of BESAFE. The focus of this session was to contextualize the various narratives in play around the Precautionary Principle, with common vision around some of the challenges and opportunities that may arise over the next 15 years.

SEHN provided us with an initial list of goals for future Precautionary movement work that could inform the development of the scenarios. These goals were used through out the process of developing *Mapping 2020*, and its companion document *The Future of Foresight* the goals below were utilized.

Key Goals for Scenarios

- Widening circles of influence: SEHN seeks to move the Precautionary Principle beyond the environmental-health community.
- Averting/redirecting opposition: Opposition to the Precautionary Principle is escalating because of the success activists and governments have had in using the principle to find new ways of protecting public health and the environment.
- Environmentalism beyond regulation: The Precautionary Principle must be carried into the courts and other institutions in a way that influences the law as well as policy. But beyond that, this cutting edge science must continue to reveal the patterns of complex natural systems and our effects on them.
- Mainstreaming the PP: The Precautionary Principle must go mainstream if it is to influence the larger national political agenda. This inevitably means “rebranding” the PP, and creating a culture around the Precautionary Principle as a policy piece as well as *a way of doing things*.
- New ways of doing business: Business is embracing the Precautionary Principle. This can happen. SEHN wants to find and articulate the common purpose that will put business on the same trajectory as those working for justice and sustainability.
- New institutions: We need new governance models and institutions that are more harmonious with the patterns of the real (natural and social) world. What institutions are called for in our day that will fully implement the Precautionary Principle?
- Democratic engagement: All of this requires a commitment to finding new ways to exercise true democracy, dialog, and participation, so that traditional opposition patterns are overcome or avoided and the vision can grow organically and come into being.

Inevitably our work has merely scratched the surface of these issues and no doubt as the precautionary movement grows and builds momentum, much more work will be needed to analyze the strategic possibilities. But rather than foster an illusion of definitiveness this document is intended to start conversations, ignite imagination and most fundamentally remind all of us that today's big problems call for big solutions. The future is an uncertain and exciting place. We look forward to exploring it together.

For a future worth fighting for!
the *smart*Meme collective

1. The Owl Economy

As the first decade of the 21st Century came to a close, the economic impacts of the ecological crisis (most notably global warming) were becoming clear to even the most ideologically blinded. While most major investment companies merely adjusted their own strategies to profit from the disruption, new voices began to surface to challenge the *status quo* cynicism of Wall Street.

PP advocates connected with existing socially responsible investing networks, green venture capitalists, and markets based environmental advocacy work to tell the story of a market beyond Bull or Bear. Together these groups developed a common vision of an economy and a corporate culture that was based on wisdom and embraced the Owl as its totem.

A Wall Street investment whiz among this cadre wrote: *Hidden Costs* (hailed as Wall Street's *Silent Spring*). The book outlined the devastating effects of ecological and environmental health problems on the U.S. economy and on individuals, and advocated for the PP as a tool of investors to build the new kind of precautionary company. PP movement strategists seized the opportunity and helped direct the accompanying media blitz (internet based meta-blogs and networks, talk show circuits, book signings etc). The book and its author became a pop culture success and PP activists used the media spotlight to draw attention to the growing movement of locally based PP "solution-oriented activism." The PP movement nationally seized the moment to educate the public about the need to shift towards full cost accounting.

Within the year Green-Capitalist spokespeople, tagged by the media as the ECO-CEOs, emerged. They questioned crony capitalism, externalized costs, and outdated toxic production methods, preaching the value of long-term sustainability.

The PP advocates' message that "precaution pays" was also incorporated into a motivational book for business leaders, *7 steps to Profit and Success with the Precautionary Principle* which rode a wave of success and became the twenty-teens version of *The 7 Habits of Highly Effective People*.

With help from an increasingly networked PP movement, several of the ECO-CEO's became figureheads in a growing militant investor's movement demanding real changes on Wall Street. By 2012, several new management funds began alliances with large membership-based organizations (Sierra Club, labor unions, MoveOn etc.) that offered their members a chance to pool their 401K's as a tool of transformation. PP activists labeled the trend the SMART Economy (Sound Markets Acting Responsibly for Tomorrow), and by using the latest applications in hand held and RFID technologies, harnessed public concern into a significant market force. In 2013 "reverse-auction" shopping (where consumers post their shopping lists or use personal shopping devices in their phones and area retailers bid to fill them) helped to usher in the smart economy. By 2014, the integration of PP derived analysis into business management and corporate decision-making had become a benchmark for socially responsible/holistic companies.

As public awareness of the shift in investment grew, commentators begin talking beyond bull and bear markets and started referring to the new SMART Economy forces as "owlish," picking up on a popular symbol for PP influenced economics. The owl came to represent a vision of a wiser economy with a more systemic perspective. By the elections of 2016, politicians played on the old political slogan "it's the economy, stupid" with "it's the stupid economy" to contrast the out-dated business practices of counting destruction,

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pollution, and disease as profit with the emerging “SMART Economy” of precaution, full-cost accounting, and community control.

In the final years of the decade, the political battle between the forces of the new economy and some of the old entrenched polluting industries came to a head. The petrochemical industry (widely known as the Fossil Fools) was the target of mass outrage around climate de-stabilization and was forced to redirect its massive profits towards renewable energy and green chemistry.

Drivers

Environmental Change
Economics

Trends

Climate Change and Disruption
Increasing Economic impact of Global Warming
Growth of Green Capitalism/Eco-entrepreneurs
Growth of socially responsible investing/financial activism

Key Constituencies

Socially Responsible Investing Community
Green Venture Capitalists

2. From Fence Line to Picket Line

Looking back at the first decade of the 21st Century, it was clear that it was a time when various interlocking crises overwhelmed the U.S. public's framework for understanding the world around them. Between the massive price tag of U.S. militarism, the devastation of extreme weather, the collapse of health care infrastructure and the epidemic of environmental illnesses it was clear that 20th Century single-issue politics was inadequate in the face of the mounting crisis. Many concerned citizens turned their attention to local politics as a place where solutions could actually be implemented and the PP increasingly became a word associated with civic participation.

By the end of the decade a strong grassroots "climate justice" movement, rooted among the IDP (Internally Displaced Persons aka "eco-refugees") networks, was articulating the connections between poverty, racism, corporate power, and who was being displaced by the increasingly unpredictable weather. After a few intense years of destructive Gulf Coast hurricane seasons, the growing tension, between the under-resourced support efforts to communities versus the government handouts to the petrochemical industry, laid the groundwork for a major anti-corporate backlash.

The great turning point in people's confidence in the *status quo* came with the insurance scandals of 2011. As the Gulf Coast recovered from the latest devastating hurricane season and the Northeast assessed the billions of dollars of damage done by a massive ice storm, the issue of insurance coverage and government bailouts erupted into the preeminent national issue. People were getting angry, and the issue began to polarize along race and class lines.

Representatives from impacted areas began demanding "global warming insurance." There was public debate about what constituted the loophole of "an act of God," which, many argued; the impacts of global warming were not (they were an act of humanity.) The insurance industry, already stressed by the mounting price tag of extreme weather, used numerous fine print clauses to defraud millions of their expected reimbursements. As a public outcry aroused, and was echoed by, politicians and the media, it became clear that the rules of the economy were a source of many of the problems rather than the solution.

As public attention turned to the issue, the news spread about wildcat protests and picket lines, which IDP networks were putting up at insurance companies who had been bailed out by the government, but were backing out of paying them. These grassroots convergences also hit some of the big corporations who had been granted lucrative, no-bid reconstruction contracts. A new culture of protest involving both physical picketing and electronic civil disobedience began to spread rapidly as a healthy antidote to apathy and despair. New hand-held technologies allowed for easy coordination and soon "the culture of protest" was bringing different constituencies together.

Before long environmental justice activists and eco-refugees began showing up to join Veterans suffering from Gulf War Syndrome II protesting outside the military contractors who produced DU (depleted uranium) weapons. Inspired by the culture of protest, organizations representing the families who lost loved ones in the 2009 nano-food contamination outbreak began picketing Kraft and Kellogg. PP advocates played a key role in uniting these different constituencies by offering a framework to express the shared failures of the regulatory system and the need for more systemic change. As the core skills of alliance building, organizing and leadership development spread, a new cross-cultural, cross-class multi-sector movement for change began to emerge.

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In the aftermath of the 2016 hurricane season, grassroots action councils largely superceded state and federal authorities throughout the South. The councils started as people's efforts to collectively coordinate disaster clean up, and organically grew into participatory democracy networks that facilitated sweeping new land ordinances, ecological restoration, and the creation of local economic networks. With the U.S. government embroiled in the debt crisis, few people could complain as the Bolivarian governments of Latin America supported the grassroots reconstruction with money and people power. By 2020, the grassroots councils were spreading across the U.S. with the PP as a central driving force. Over the next decade the ideological confrontation between the new Precautionaries and the old guard Federalists continued to erupt in sporadic incidents of state repression and mass non-cooperation until the Living Earth Constitutional Convention of 2032 brought this dramatic period of adaptation and unrest to a close.

Drivers

Environment
Economic
Technology

Trends

Global Climate Disruption.
Increase in Internally Displaced Person (IDP) as extreme weather creates more eco-refugees
RFID technologies for tracking production chain

Key Constituencies

Fence line Communities, Gulf Coast Communities and other Impacted Constituencies
Iraq Vets
Food Consumer Watchdogs

3. PP Brands and the Bottom Line

By the beginning of the second decade the realities of climate chaos, racial tension, massive divisions of wealth and access to basic services such as the maxed-out health care system, had made it increasingly obvious that the middle class “American Dream” was a lifestyle of segregated opulence. The blame-the-fat-Americans meme coming from abroad and from the margins within began to penetrate mass consciousness and guilt plagued the floundering middle class, directing their unease with current affairs into shifting consumption patterns. Looking for a way to feel like they were a part of the solution rather than the problem, those with the means responded dramatically to values-based advertising initiatives promoting sustainable products.

PP activists built bridges to other certification movements such as local organic, fair trade, and the emerging green chemistry labels. The PP provided a logic and system, which helped link many of the overlapping values, which a growing number of consumers were responding to in the market place. Various green entrepreneurs worked out logos and symbols to market PP products including a common branded PP sound for the new generation of interactive product labels. These became the brand family that captured the elements of the principle as applied to management, safety, trade, social justice, and ecological appropriateness...

Just as news of good products spread rapidly, so did the (brand) “smears” and electronic occupations of polluting companies. Cell phones became one of the most powerful tools of corporate accountability as the ubiquitous use of RFID tags and Bluetooth technology began to virtually link everything physical—all products—into a data-sphere where their ecological footprint, components, and “story” could be exposed. A new level of technologically enabled consumer education and action collided with the fragility of an “on-demand” and highly specialized marketplace. The result was a flash-mob action alert model of consumer action against egregious products and brands spearheaded by trailblazing PP oriented groups.

The market responded quickly. It had to. Oscar night 2014 stood out as a dramatic moment in the shift. During their red carpet interviews, reporters from the ECO Channel scanned celebrity outfits and publicized which clothes were sourced from pesticide using companies or made in foreign sweatshops. The social stigmas associated with such an open data-sphere drove dramatic and sudden shifts in the market place. As PP advocates worked overtime to provide updated handheld and cell phone applications about the latest products, the feedback loop began to reach politicians and corporate executives. Within the next several years, a series of much stronger new regulations passed with broad support through the U.S. Congress.

Drivers

Environment
Economic
Technology

Trends

Growth of Green Capitalism/Eco-entrepreneurs
Marketing trends –Consumer desire for origin story
Fully Networked Life /RFID technologies for tracking production chain

Key Constituencies

Conscious Consumers (Middle bracket, Gens X and Y)

4. Precaution U

The rise of technologically enabled youth networking meant that the student activists of the 21st Century arrived at universities more connected and self-aware than any generation in history. With so many issue oriented NGO's vying for their attention on so many different issues without a systemic approach, a culture gap quickly emerged between the new generation of activists and the existing social movements. National student networks rejected band-aid solutions and gravitated towards more fundamental solutions. A popular tool for this new generation was the PP.

PP advocates saw their opportunity and directed some of their movement resources towards supporting student organizing. In 2010, a student led campaign at Yale succeeded in getting their university to integrate the PP into their endowment management protocol as the next logical extension of divestment campaigns around environmental and social justice causes. The success of this strategy spurred interest in a national student network, which used the PP as a common focus for harnessing the institutional power of universities and their students for change.

Across the country students campaigned to get their Universities to adopt Precautionary investment and insure that their endowments were managed with a holistic sustainability outlook. PP-oriented campus groups focused on integration of the PP into campus life, creating models of what sustainable institutions should look like (alternative energy, local sourcing for the dining halls, living wages, health and wellness programs for all members of the community).

Students began demanding more university resources go into studying precautionary approaches. A few high profile militant actions such as the occupation of Chemical Engineering and Economics Departments drew attention to the issue. The movement mirrored the success of college students who demanded multi-cultural, queer, and women's studies programs at major universities in the 1970's through the 1990's.

By 2012, the PP had emerged as a legitimate interdisciplinary field of academic study, integrating business, environmental ethics, law, green chemistry, engineering, design, and futures work. High profile, competitive courses linked systems thinking with ecology, economics, biology, social policy and business management. Ongoing activism pushed for acknowledgement from the academy for this new area of intellectual exploration, and interdisciplinary precaution departments were endowed at several Ivy League colleges over the following years.

In 2014, the first "Multiversity" opened as an experimental higher education institution dedicated to exploring complexity, interconnectedness and systems thinking. The institution focused on creating a new type of social institution by integrating different models of education, with industry, community building, and permaculture.

A healthy exchange, between community based PP advocates implementing local policies and student activists, helped both networks learn from one another and share in each other's successes. As these PP student leaders graduated and moved into the realms of business, government, citizen activism and cultural production, they carried the PP with them.

Drivers

Perceptions, Beliefs, Attitudes, and Values
Demographic (Millennials in College)

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Trends

Acceptance of interdisciplinary, systems thinking and frameworks in academia
Growth of socially responsible investing/financial activism
Student Activism

Key Constituencies

Professors and Academics
Student Activists
Institutional Investors (Administrators)

5. “ Safe Kids, Safe Country”

By the late zeroes, awareness about environmental health hit a tipping point and instead of downloading Mozart-for-Baby songs, young parents were demanding information about how to protect their newborns from exposure to toxic chemicals. PP advocates mainstreamed the idea of PP babies with checklists for your “PP child-proof” nursery, a children’s book about PP concepts using an Owl character, a line of baby care products branded as “made with Precaution.” Parenting books and seminars emphasized the PP as a framework for decision-making. PP advocates working with progressive educators also produced a widely taught elementary schools curriculum.

As the PP became popular (and thus profitable) in the home makeover world, it became a popular marketing hook. Just as Western awareness of *Feng Shui* gave rise to a global network of “consultants” and others, like interior decorators who added *Feng Shui* to their services, the PP gained similar status, thus mainstreaming the concept as a new level of home security, serenity, and safety. PP advocates provided technical support to companies who wanted to promote these types of services, and by 2012 infomercials depicting “How to redo your children’s nursery’s the PP way!” were pod-casting to target constituencies.

In 2013, a specific case of toxic poisoning involving a young girl (9 year old Elizabeth Pariis) attracted popular attention. Working with the young victim’s family, PP advocates stepped in to demand a shift in chemical policy. The young girl’s story became the rallying cry of the PP movement in much the way that the unfortunate story of a young child abuse victim motivated the passing of “Megan’s Law.”

Educational work by PP advocates targeting Hollywood health consultants (personal trainers, life coaches, beauty professionals, etc.) laid the groundwork for Hollywood’s adoption of the PP as a chic new trend). Hollywood opinion leaders got involved and PP advocates got a chance to do some celebrity outreach and organizing. A popular celebrity couple came out as infertile and squarely attacked the chemical industry, thereby becoming another face of the PP movement. Their story was quickly made into a Hollywood blockbuster.

The increased public discussion of children’s health in the home opened up a space for U.S. nationalists (both hawks and traditionally isolationist conservatives) to speak out about the rise in learning disabilities as an issue of international competition. In a widely quoted speech, a high profile cultural conservative said, “the minds of America’s youth are our best weapon to maintain America’s role as a superpower.” PP advocates reached out to these conservative precautionaries and found some specific shared agenda items.

The PP created a framework for very different constituencies to find common ground (and common sense) in supporting the health of children and a toxic-free home and school environment. By 2016, a strange bedfellow’s coalition of right-wingers and Hollywood liberals challenged the chemical industry enough that toxics/chemical policy reform was an issue claimed by many sectors of the political spectrum.

Candidates at all levels in the 2016 elections endorsed Elizabeth’s Law – which mandated a precautionary approach to chemicals policy and government incentives for the growing Green Chemistry industry. Over the next two years, as different versions of the law were adopted federally and in a number of state legislatures, PP advocates linked the law to a wider conversation about public health, the environment, and national priorities.

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Drivers

Perceptions, Beliefs, Attitudes, and Values

Economic (globalization and decline of U.S. education system)

Trends

The sick herd (esp. rising infertility rates and learning disabilities)

Increased awareness of Pollution

Key Constituencies

Young parents (or want-to-be parents)

Home decorators

Teachers and education thinkers

Parenting experts

Hollywood trendsetters (health consultants)

6. Comida y Agua Por El Pueblo

The Great Crash of 2011 changed a lot of things. With the U.S. economy in deep recession, oil prices at \$100 a barrel, and changing weather patterns breeding uncertainty, it seemed that everywhere one looked there was evidence of the U.S. decline. The suburban landscape was dotted with parked SUV's with for sale signs that their unemployed owners could no longer afford to drive. The cities experienced "fresh lines," as transportation disruptions caused occasional shortages of fresh produce. The dark side of the "on demand" economy emerged, where what once might have been a minor disruption, now caused major impact. While 1,000 channel multi-media access remained common, viewers chose between endless coverage of all the bad news, or from many different flavors of escapism and denial. Alternatives – particularly positive ones – were nowhere to be seen in the mediascape.

Many communities began to slide down towards a more desperate level of existence and culture of fear. A nihilistically tinged politics of generational animosity emerged within the youth – blaming the power holders (their parent's generation) for their shortsighted greed and damaging the world. An increasing acknowledgement of obvious mistakes made by previous generations was little help to the real situation. Debates about solutions were consistently stalled and clouded by entrenched corporate interests who were co-opting the debate with misinformation and bought-and-paid for science.

PP advocates, acting at all levels of government through their decentralized networks were able to publicize the PP as a key evaluative tool in this debate. The nascent PP movement had for more than a decade brought together solution oriented radicals, and was able to provide a wealth of alternatives that had been catalogued and implemented at local levels as things crashed. Winning the debate was easy. Winning the power to implement the changes was not.

Economic problems stemming from a slow down in the global economy (and the Peak Oil mass hysteria (real, imagined, and designed) encouraged the new localism. Erratic food prices turned community gardening into a huge trend. Localization activists who combined work to transform food systems with community building and grassroots democracy work revived "Victory gardens". They were aided by online networking technologies that linked communities doing similar work horizontally.

PP advocates played a key role in maintaining community balance against hysteria and social break down by harnessing the old War on Terror's "readiness" meme and claiming it for the precautionary principle. PP advocates succeeded in publicizing a new more holistic definition of "security" that went beyond narrow militaristic action to address concerns of health, well-being and sustainability.

The PP became a container for emerging "readiness" networks that were preparing to address climate disruption and other related local impacts of future uncertainties with real actionable methods of preparation. These networks played many roles, from sharing information on local sustainability to putting political pressure on national decision makers to address the systemic problems of fossil fuel addiction. The PP helped to name the strategy of confronting fear-inducing uncertainty with "*preaction*". The message to a public increasingly bombarded with images of climate driven disasters leading to total social break down became: Don't be scared into a victim role, apply the PP in your community and start getting ready to weather the storm.

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Water was a defining issue of the era. As a parched Southwest U.S. struggled through a multi-year drought, towns emptied swimming pools, closed up golf courses and the government issued “water stamps” for the poor. Water was rationed and conserved for agricultural use in the Midwest and Central Valley of California. In step with larger trends to privatize water, companies capitalized on the crisis to aggressively market bottled water, while securing 100 year monopoly water rights to pure sources in bogus contracts. Regular people had to purchase bottled water to drink, and residents of cities like Los Angeles and Phoenix were forced to pay high water fees for city water for household use. Pure water (from a heavily branded “authentic” source) became an uber-status symbol and expensive water bars became the trendy spot for the wealthy to congregate.

PP advocates worked in alliance with low-income water rights groups, and with watershed restoration groups. Alliances were formed to sanction water as a human right at the local level, building a ground-up movement (“Agua por la Vida!”) in the west that by 2016 was running mainly Latino candidates on water-rights tickets. El principio de la precaución was a central plank in the platform. Industrial agriculture, with its excessive water use and ecological illiteracy, became a target for the growing movement. PP advocates had to toe a difficult line, advocating conservation while also condemning privatization. PP advocates underwent some nasty splits over the issue of their relationship to free-market ideologies, but aside from a few sectarians, the movement continued to grow and expand with a deeper base in the Latino populations of the parched Western U.S.

Drivers

- Economic (globalization)
- Environmental Change
- Demographics

Trends

- Economic instability (U.S. financial bubble continues to grow)
- Rising energy prices/Growth of Peak Oil meme
- Growth of Latino population as percentage of U.S. total population
- Increasing Economic impact of Global Warming
- Resource conflicts (water)
- The New Localism

Key Constituencies

A recession would affect almost everyone (although to widely differing degrees) but the likely constituencies for PP work are the networks of people actively involved in grassroots economic transformation, community self-reliance, etc.

- Water Rights groups/ Southwest community based organizations
- Leaders in Latino political arenas

7. PP as a Spiritual/Ethical Beacon

A key to the success of the PP movement was their involvement with one of the major cultural developments of early 21st Century U.S. cultures – the backlash against religious fundamentalism. Beginning with the emergence of what was called the “Religious Left” and “Spiritual Progressives” as a visible constituency in the 2008 elections, progressive people of faith from many traditions began to build stronger social change networks. By 2010, as the Republican Party split between crusading Christian nationalists and small government conservatives, the Religious Left was beginning to grow into a movement powerful enough to attract the attention of politicians in both major parties.

PP advocates made a successful early effort to translate the core values of the PP into a number of different faith-based discourses, and spread the ideas through the various denominational networks of the emerging movement. One famous article, which used Biblical parables to explain how Jesus used the precautionary principle, was reprinted in over 10,000 church newsletters around the country.

By 2012, they had successfully framed an ecumenical response to the ecological crisis through the Judeo-Christian Biblical concept of “stewardship.” This incorporated the precautionary principle and provided local PP advocates with great new allies, as the grassroots memberships of various national organizations began to work more closely together. The PP proved to be the perfect coalition-building tool since it provided a common platform for traditional science-based advocacy and values-based faith voices.

Historians of the period have often observed the importance of the infusion of optimism and hope which the various faith traditions brought to many secular environmental health activists. They brought the words of a popular saying, “Even when the data says you can’t be optimistic, you can still be hopeful, if you have faith.”

By 2014, the faith-based networks were openly questioning the moral direction of corporate capitalism and U.S. imperialism, and building alliances with other social change movements to demand fundamental change. Despite significant cultural conflicts between different traditions, the broad alliance was able to dramatically affect the popular debate about how to deal with the overlapping ecological and public health crises. PP inspired religious networks spread the notion of humility in the face of climate disruption, and in the process opened up more space for a new language of values-based social change. There was an overwhelming messaging offensive on “forgiveness,” emphasizing that the way to forgive ourselves for wrecking “God’s creation”, was to work together at restoration.

PP advocates tapped into the growing popularity of yoga with outreach, including a book of daily meditations on the PP and education about the movement that successfully banned PVC yoga mats. By 2012, PP advocates had recruited some of the celebrity Yogis to write and speak on the PP as an embodiment of their practice.

Another PP meme campaign tapped into the growing pan-Asian influence on global popular culture. The famous Taoist parable about the three doctors (the most famous of the doctors explains he is actually the least skilled because he has to cure sick people rather than the more skilled doctors who use effective precaution so nobody in their villages ever gets sick) got a pop culture treatment as Dr. Precaution. The cartoon icon of the bearded Taoist sage as Dr. Precaution popularized the PP to a wide set of multi-cultural youth as a popular web avatar and cultural brand. The meme tied into the growing popularity of acupuncture as affordable precautionary health care. An aging Jay

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Leno, just months before his shift to satellite VR broadcast that marked the end of the broadcast television era, made a famous joke that “Movie stars wearing the Dr. Precaution shirt now had to forgo plastic surgery.”

Although the rapture meme continued to spread and Christian fundamentalists continued to be a significant force through 2025, the competing apocalyptic sects and trends were overshadowed by the Religious Left principle of “de-voking the apocalypse.” Hard working faith-based constituencies did this primarily by rolling up their sleeves and doing the hard work of building locally based sustainable alternatives.

Many people called for a new “wisdom culture” of which the PP was a core lesson. At the end of the twenty-teens, the PP was seen as both common sense, and as a guardian against future catastrophes. Ecological collapse became a mirror for many other social problems. The growing academic field of precautionary studies exploded as institutions of all sorts sought common sense solutions to deal with uncertainty. Governments increasingly turned to systemic thinkers, emerging from the Ivy League PP programs to help transform the dominant institutions and begin undoing the damage of the Age of Excess.

Drivers

Perceptions, Beliefs, Attitudes, and Values
Environmental Change

Trends

Increasing visibility of Ecological Collapse
Popularity of organized religion in the U.S.
Diversification of religious beliefs (post-modern pluralism)
Yoga studio as the new “gym”
Increasing pan-Asian influence on global youth culture

Key Constituencies

Religious leaders
Ethics opinion leaders
Congregations and Faith Based communities
The Yoga Industry (magazines, industry associations etc.)
Counter Cultures

8. PP has its Day in Court

By 2015, the PP was at the center of a massive class action lawsuit for reparations against chemical companies. When the case was finally settled, nearly a decade later, the chemical industry was almost bankrupted, paying out billions to over 630,000 cancer patients and survivors who joined the suit. Perhaps more significant than the monetary payout figures, were the aspects of the settlement which dictated the transformation of the industry towards a Precautionary approach and Green Chemistry.

Through out the twenty-teens, the Cancer Crusade, as it came to be called in the media, drew attention to the legal applications of the PP. The principle emerged as a central part of “commons” legal and political strategies. Partially driven by land-use decisions in the face of eco-refugees and a growing desire to localize food production, and partially driven by work in the intellectual production/creative commons realm (hip hop/post-modern culture), the concept of the commons was re-popularized.

Actions were occurring in many different sectors of society. The “digital levelers” of the open-source movement challenged the corporate control of the data sphere and continually assaulted the capitalist definition of intellectual property with creative digital disobedience and mass reproduction of copyrighted materials. While the virtual worlds were full of militant creative commons actions, the physical world was greeted by “Nu Diggers” actions in which eco-refugees occupied private golf courses and converted them to permaculture food production and community recreation space.

PP advocates aligned themselves with other strategic organizing opportunities designed to create crises of jurisdiction in the U.S. legal system. By supporting small farmers, grassroots democracy activists and local communities upheld their right to create bio and nanotechnology free zones, and PP advocates played a key role in building a grassroots movement to challenge elite control of the law.

Although at first the courts sided with property rights over the rights of living beings, the multi-year legal strategy served as a platform to educate people about the lack of democracy. PP advocates played a role in exposing the flaws of the U.S. Constitution (particularly the role of the contract and commerce clauses in maintaining elite power) and helped build momentum for systemic challenges. By 2015, a growing network of communities openly broke with the courts and used the PP as a legal basis for actualizing the rights of nature and curtailing the rights of corporations.

In several places, the crisis of jurisdiction almost turned violent when county police were dispatched by community votes to prevent federal authorities from bringing dangerous nuclear waste shipments through their county. Effective planning and networking by PP advocates allowed for mass mobilizations to defend local democracy and the PP. This forced the federal government to back down.

Starting in 2012, a native led multi-cultural alliance campaigned to get the Seventh Generation Amendment into the U.S. Constitution. PP advocates had been working closely with native governments for years and worked out comprehensive plans for how the PP could help implement a Seventh Generation Amendment. PP advocates helped to build strong coalitions to support a new wave of native sovereignty struggles, combining confrontational grassroots tactics with well-funded legal strategies.

As local PP organizing and solution-based activism spread in the face of an ongoing federal gridlock, numerous movements (climate refugees, environmental health

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movement, peace and justice activists, small business associations) latched onto the PP as a way to name the needed paradigm shift in society. By the 2020 elections, the broader movement demanded change in the form of sweeping reforms to the economic and regulatory systems. Voting systems instituted widespread local autonomy and ecological restoration projects. In an effort to prove to the public that they were thinking long term and big picture about the ecological crisis, (and to minimize of the appeal of the new popular Seventh Generation party) both Democrats and Republicans adopted the Seventh Generation Amendment to their platforms.

Drivers

Environmental Change
National and International Governance (Law)

Trends

Cancer Clusters
Post-tobacco class action law
Environmental refugees and Internally Displaced Persons (IDPs)
Growing copyleft and creative commons movement

Key Constituencies

Native Governments
Law students and progressive lawyers
Directly affected communities in toxic areas

9. Generation Gestations

The twenty teens were marked by one of the greatest demographic shifts in U.S. history as the baby boomers transitioned into retirement. One of the PP movement's greatest successes was to harness the power of the mass Boomer retirement with a generational aspiration around legacy. What kind of world are we leaving for our children? The question started as an expression of guilt, grief and despair but soon became the rallying cry for action. As the healthiest, most able bodied generation of retirees ever and with more disposable wealth than any generation in history it didn't take long for those extra hours of free time to turn towards movement building. With a little support from groups promoting the PP a loose network of localized "grandmother councils" had soon sprung up across the country. While health and health care were paramount self-interest issues, their reach quickly expand to promote a holistic "wellness ethic" which was part PP implementation, part community building and part direct confrontation with corporate polluters. Many of these groups coalesced to form an environmental health focused, militant off-shoot of the AARP that flexed its political muscle nationally in a wave of "Senior Strikes" targeting the pharmaceutical, chemical and fossil fuel industries.

The Boomers easily became a dominant force in local politics particularly in the "Yogurt Cities" – the smart growth urban retirement Mecca's that provided cosmopolitan flavor and fresh air. The desire to reconnect and be close to children and grandchildren put Boomers within a day's drive to their kin, and (unlike the Fort Lauderdale golfing paradises that the WWII generation chose) offered diverse cultural expression, Whole Foods style markets, and civic engagement channels. Boomers left the suburbs and mega-cities seeking peace and quiet with access to amenities. They became a key driver of the New Localism – a lifestyle trend that re-centered on regional agricultural systems and subcultures (a response to Peak Oil, and a craving for the Oppie dream of fresh, local, organic everything.) The PP was a central idea and core value of this generational movement.

By 2015, the Millennials were 15-35 years old and although they were increasingly shaping the U.S. culture their generation had largely avoided what they perceived as the partisan gridlock of politics. As part of what the sociologists had dubbed the "Easterning of the West," Asian youth culture took the Millennial generation by storm. From Korean fast food to Thai hip-hop to the Chinese pictogram inspired text-chat that had become the common language of global youth culture, East Asia was the epicenter of global culture. Thus the Millennials were more likely to participate in forums about Singapore's new digital commons than they were to pay attention to the seemingly irrelevant machinations of Washington DC.

Historians often cite the coming together of these two different generational forces as a key turning point in shifting the US from its self-destructive path toward the global politics of restoration that defined the rest of the 21st century. In 2016 the Turtle Island Federation of Grandmother's councils convened the historic Covenant of the Generations to connect the political energy of their "elders networks" with the globally networked power of the Millennials. As a broader dialogue began across generations and cultures the PP became a unifying principle to inform common action. Galvanized by the impacts of climate destabilization and watching mega-fauna go extinct in high definition VR pod casts these dialogues became an unprecedented mobilization of people power and resources towards systemic change. These "Covenant Groups" combined Boomer money and political clout with the global peer-to-peer networks of the Millennials and allowed for new types of truly global action. Not only were the new Covenant groups able to organize quickly and globally but they also redirected mass culture towards new

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institutions such as Eco-eBay and virtual currencies that were tied to ecological accounting. Before long new information technologies to assess the ecological footprint of almost all consumer choices had become the norm and the politics of restoration were at the center of almost all governmental agendas. This unique alliance created by the Covenant of the Generations would last through out the 2020's (outliving many of its original visionary Boomer founders) and leaving us with the model we still have today of retirement as a time of service to future generations.

Drivers

Demographic
Environmental Change
Technology
Perceptions, Beliefs, Attitudes, and Values

Trends

The Boomers re-define retirement (Yogurt Cities)
Increased awareness of Pollution
Rising energy prices/Growth of Peak Oil meme
Rise of global Asian youth culture
New Localism
The Millennials Grow up/Screenagers start to shape culture
Visibility of Mass Extinction (Large Mammal Die-off etc.)

Key Constituencies

Retiring Boomers
Health Care workers
Local government in Boom retirement areas
Millennials in the U.S. and Asia

10. Peak Oil and The End of the World As We Know It

A. The Shadow Side

Despite being widely predicted by scientists and global social movements, the *Collapse* of the early 21st Century happened much quicker than the corporate bureaucrats and myopic politicians expected. The ever-increasing spiral of energy demands by global industries and consumers combined to push global ecology into a steep downward spiral. An increasingly frustrated global community demanded that the United States, (still barely ahead of China as the greatest producer of greenhouse gases), take drastic measures to reduce its carbon output. But lacking strong government leadership the “non-negotiable American life style” proved hard to redirect and energy usage increased beyond the 50-70% predicted at the dawn of the millennium. Despite alternative energy innovations, corporate decision makers pushed to make up the short falls of oil by expanding coal usage and the over all ratio of fossil fuel usage to green alternatives remained constant.

By 2014, as the Gulf Stream suddenly halted and the West Antarctic Ice Shelf began rapidly disintegrating, temperatures plunged in Europe and ocean levels began to rise globally. It was no longer a question of how or why it happened, but rather what to do and how to act immediately to stem the rapid path towards global collapse.

The majority of the human population, even the most jaded and skeptical were ready and willing to take a stand as the reality of the situation sank in, but the politicians failed to act and squabbling NGOs, and grassroots groups couldn't agree on a plan. Many solutions were pushed forward as the correct path to follow, but there was simply too much information and too much institutional inertia from special interests to get a coordinated action plan passed by the global community.

Inside the U.S., for many boomers, it was easier to believe in the fundamentalist religious rhetoric than to try to decipher scientific global solutions. Gens X and Y remained skeptical. The Millennials floundered for a foundation to make sense of it all. World leaders and governments rose and fell in the face of economic chaos stemming from major upheavals in the global economy and the subsequent collapse of the global finance markets. In place of reason, impatience and desperation caused things to quickly devolve into irrationality and rage. Accusations by the younger generations of blame of their elders led to calls for a violent uprising against the ideas and archetypes of the status quo. Nihilism became the dominant political force of the era.

Ultimately the warnings had been ignored for too long and the awakening inside the U.S. had been too slow in coming. Certainly the misinformation campaigns and cooptation of science by corporate interests played a role in preventing the warnings being heard. Regardless of the obstacles however, U.S. social movements failed to communicate a vision of alternatives and actions that could overcome the cynicism and inertia of the fragmented and individualist consumer era. U.S. popular culture's overlapping scientific, ecological and economic illiteracy made truly informed public debate almost impossible and the proposals for strong government action became bogged down in sectarian fights between special interests.

By 2020, local governance had collapsed in large areas of the planet as massive influxes of coastal refugees and the break down in global transport led to food and water shortages. Historic, ethnic and class rivalries rapidly bubbled to the surface. The Trans-Himalayan nuclear exchange (its exact origins still lost in controversy and mystery) set the apocalyptic tone for the next decade as violent unrest, famine and social breakdown spread.

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B. Precautionary Action Pulls Us Back from the Brink

Avoidance of the above outcome through the Precautionary Principle could look something like this:

Starting with the Mad Mothers Sit-in during the 2008 Iowa Caucuses, the PP was recognized as the voice of “irate common sense” that guided communities towards health, sustainability and justice. Although the movement was grounded in local work, by 2010 it became a powerful voice in the global networks addressing the growing climate crisis. Through annual awareness campaigns promoting the Precautionary Principle as applied to energy consumption and resource development, the public became familiar with the value of resource management and the ecological consequences that were at stake for their communities and the planet as a whole. The PP’s multimedia portal gave real-time updates on temperatures and conditions around the planet with an alert system that mapped critical ecological zones and most probable causal forces affecting them. The effect of this sophisticated communications effort allowed people to actually sense what was happening without being there, and to mobilize when necessary to act.

As the effects of global warming began to create more and more disruption, the global network of PP activists was well positioned to articulate holistic scenarios of transformation. Popular rage at the *status quo* was effectively channeled into massive pressure for grassroots democracy and systemic changes. By 2016, a Marshall Plan on global sustainability had been launched and the Pentagon was re-directing its efforts to installing solar panels and windmills across the suburban landscape. The challenges of the ecological crisis would continue to push humanity’s creativity and collective coordination to the limit until well into the second half of the 21st Century. However, it was the critical period of the twenty-teens that would earn the name the *Great Turning* to mark the point when the new awareness of a global civilization based on reverence, care, democracy, diversity and planetary wellness began to be collectively realized.

Drivers

Environmental Change
Science and Technology
Perceptions, Beliefs, Attitudes, and Values

Trends

Climate Change and Disruption accelerates
Energy (conventional) demands continue to escalate 50-70%
Energy Alternatives fail to deliver 2.5-8%
The Millennial Cognitive Gap (i.e. systemic inability of global cultures to make rapid, reasonable and informed decisions due to the fracture and overload of networked information.)

Key Constituencies

Millennials
Ethical consumers
Concerned Boomers
Countries most severely affected by climate change

ABOUT SMARTMEME

The *smartMeme* Strategy and Training Project was founded to support struggles for justice, peace, democracy and an ecological future utilizing story-based strategies. Our focus is to promote *a culture of strategy*, and support grassroots movements in the task of creating fundamental social change in the current cultural climate of the US.

SmartMeme is a non-profit collective of long-term organizers, strategists, trainers and communications professionals. Through our writing, training, communication work, strategic consulting and action organizing we combine grassroots movement building with strategies to inject new ideas into the culture. We're a one-stop-shop for strategic consultation, messaging, communications and design, and we link these services with a deep understanding of grassroots organizing and social change.

SmartMeme helps grassroots groups magnify their impact by linking traditional organizing and movement building skills with values based messaging, narrative concepts and creative action. The project applies meme theory - the study of how memes spread and replicate. A meme (pronounced meem) is "a contagious information pattern," an idea that "has taken on a life of its own." Memes are units of self-replicating cultural transmission (i.e. ideas, melodies, symbols) that spread virally from brain to brain, encapsulating larger frames and stories.

We are people who believe in the power of organizing, and the power of the stories we tell to change the world for the better. We believe deeply in the political power of imagination and the strategic importance of thinking big. Visit us at www.smartmeme.com.