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Contemporary Environmental Typologies: *Renewing the New Environmental Paradigm Scale*

Based on Bernstein, J. (2017). Renewing the New Environmental Paradigm Scale: The Underlying Diversity of Contemporary Environmental Worldviews. *Dissertation Submitted to the University of Hawaii at Manoa.*

The New Environmental Paradigm scale

Most widely used measure of pro-environmental attitudes worldwide[1]

Dunlap and Van Liere, 1978: NEP vs. DSP

Unidimensional; 5 sub-scales, 15 questions, 1-5 Likert ratings

Critiques

- Reliability[2]
- Validity[3]

Alternatives

- Unidimensional[4]
- Multidimensional: ”Thought exercises”[5] or otherwise problematic[6]
- Environmental Attitudes Inventory (EAI)[7]

1. Hawcroft 2010
2. Milfont & Duckitt, 2010; Hawcroft & Milfont, 2010; Albrecht, Bultena, Hoiberg, & Nowak, 1982; Geller & Lasley, 1985
3. LaLonde and Jackson, 2002; Chatterjee, 2008; Gooch, 1995; Schultz & Zelezny, 1998; Kopnina, 2011; Lundmark, 2007
4. Ellis & Thompson, 1997; Thompson & Barton, 1994; Dobson, 1998; Nash, 1982; Steffen, 2004; Devall, 1980; Nadasdy, 2005
5. Merchant, 1980; Dryzek, 1997; Nisbet 2014
6. Kellert, 1987; Kellert, 1985; Esbjörn-Hargens, 2009
7. Milfont & Duckitt, 2010

New Environmental Paradigm Scale

Belief in an inherent balance of nature	The balance of nature is very delicate and easily upset
	The balance of nature is strong enough to cope with the impacts of modern industrial nations
	When humans interfere with nature, it often produces disastrous consequences
Existence of fundamental limits to growth	We are approaching the limit of the number of people the earth can support
	The earth is like a spaceship with very limited room and resources
	Despite our special abilities humans are still subject to the laws of nature
Anti-anthropocentrism	Plants and animals have as much right as humans to exist
	Humans were meant to rule over the rest of nature
	The earth has plenty of natural resources if we just learn how to develop them
Rejection of human exceptionalism	Human ingenuity will insure that we do NOT make the earth unlivable
	Humans have the right to modify the natural environment to suit their needs
	Humans will eventually learn enough about nature works to be able to control it
Possibility of an impending ecological crisis	The so-called “ecological crisis” facing humankind has been greatly exaggerated
	Humans are severely abusing the environment
	If things continue on their present course, we will soon experience a major ecological catastrophe

Problem Statement and Research Questions

NEP insufficient; Critique insufficient

Research Questions

1. Which themes differentiate the worldviews of contemporary environmentalists?
2. Can environmentalist worldviews be grouped in ideologically coherent ways?
3. Does the existing New Environmental Paradigm scale capture the breadth of contemporary environmental worldviews?

Methodology

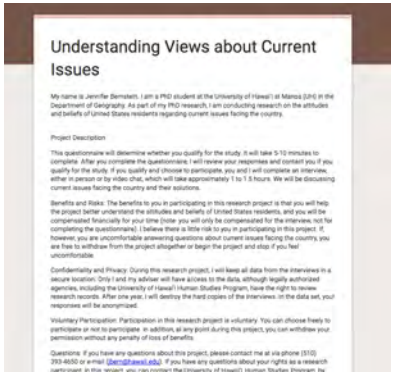
Sampling Approach: Non-probability; Purposive; Maximum variability

Recruitment

Two stage data collection

1. Quantitative, Likert-style questionnaire
2. In-depth Repertory Grid Interviews: Topic, Elements, Constructs, Ratings

Content analysis


Understanding Views about Current Issues

My name is Jennifer Bernstein. I am a PhD student at the University of Hawai'i at Manoa (UH) in the Department of Geography. As part of my PhD research, I am conducting research on the attitudes and beliefs of United States residents regarding current issues facing the country.

Project Description

This questionnaire will determine whether you qualify for the study. It will take 5-10 minutes to complete. After you complete the questionnaire, I will review your responses and contact you if you qualify for the study. If you qualify and choose to participate, you and I will complete an interview, either in person or by video chat, which will take approximately 1 to 1.5 hours. We will be discussing current issues facing the country and their solutions.

Benefits and Risks: The benefits to you in participating in this research project is that you will help the project better understand the attitudes and beliefs of United States residents, and you will be compensated financially for your time (note: you will only be compensated for the interviews, not for completing the questionnaire). I believe there is little risk to you in participating in this project. If, however, you are uncomfortable answering questions about current issues facing the country, you are free to withdraw from the project altogether or begin the project and stop if you feel uncomfortable.

Confidentiality and Privacy: During this research project, I will keep all data from the interviews in a secure location. Only I and my advisor will have access to the data, although legally authorized agencies, including the University of Hawai'i Human Studies Program, have the right to review research records. After one year, I will destroy the hard copies of the interviews. In the data set, your responses will be anonymized.

Voluntary Participation: Participation in this research project is voluntary. You can choose freely to participate or not to participate. In addition, at any point during this project, you can withdraw your permission without any penalty of loss of benefits.

Questions: If you have any questions about this project, please contact me at via phone (510) 393-6650 or e-mail (bern@hawaii.edu). If you have any questions about your rights as a research participant in this project, you can contact the University of Hawai'i Human Studies Program by

1	Carbon tax	Cap and trade	Moratorium on carbon emissions	Investment in energy efficiency	Geoengineering	Green building	Alternative transportation systems	Wind and Solar energy	Direct action	5
Economic										Technological
Private sector										Public sector
Personal										Impersonal
Requires behavioral change										Business as usual
Top down										Bottom up
Gradual change										Immediate change
Global										Local
Production side										Consumption side

Sample Description

N = 22

Demographics

- Gender: Male (12), Female (10)
- Age: 19-24 (2), 25-34 (9), 35-44 (7), 45-54 (1), 55-64 (1), 65+ (2)
- Ethnicity: White (15), Hispanic (3), AfrAm (2), Asian (1), Biracial (1)
- Education: >High School (2), Some college (3), College (6), Post-graduate (11)

"Environmentalism"

- How important is environment: Important (6), One of the most important (16)
- Trade-offs: Environment vs. Economy (1-5): Both Equal (3), 4 (10), Environment (9)
- Environmentalist?: No (6), Yes (16)

Cluster Analysis of Pre-Screener data

Kmeans clustering; items with p = >.250 eliminated; one-way ANOVA & Bonferroni's post-hoc test

Final solution: 4 items (p<.001), 2 iterations for convergence, well-distributed cluster membership

Groups

1. Pragmatic Reformers (n=5)
2. Activist Greens (n=9)
3. Ecomodernists (n=3)
4. Ecofatalists (n=5)

Descriptive only of sample

Cautions

Question Item	F	Sig.
How important is…people making small changes in their daily lives	17.27	.000
Almost everything we do in modern life is harmful to nature	9.12	.001
We will experience a major ecological catastrophe if society continues on its present course	26.91	.000
Technology causes more environmental problems than it solves	23.97	.000

Sub-Group Descriptions: *Pragmatic Reformers* (n=5)

Young to middle age (80% > 44 y/o)

Caucasian (80%)

Believe in planetary boundaries

- "Earth has limited room/resources" ($M = 3.80$, $SD = .447$); "Approaching the maximum number of people earth can support" ($M = 3.80$, $SD = .477$)

Apocalyptic

- "Major ecological catastrophe if society continues on its present course" ($M = 4$, $SD = 0$)

Pro-technology

- "Environmental problems will eventually be solved through better technology" ($M = 2.80$, $SD = .447$); "Technology causes more environmental problems than it solves" ($M = 1.60$, $SD = .548$).

Sees positive environmental change happening in multiple ways

- i.e. shopping decisions made by individuals ($M = 2.6$, $SD = .894$)
- And at multiple scales (individual, grassroots, global, esp. national ($M = 4$, $SD = 0$)

RepGrid Analysis: *Pragmatic Reformers* (n=5)

Elements: Moderate

- Green Technology (M = 1.60)
- Policies/regulations (M = 1.40)
- Reduce resource consumption (*M* = 1.20)

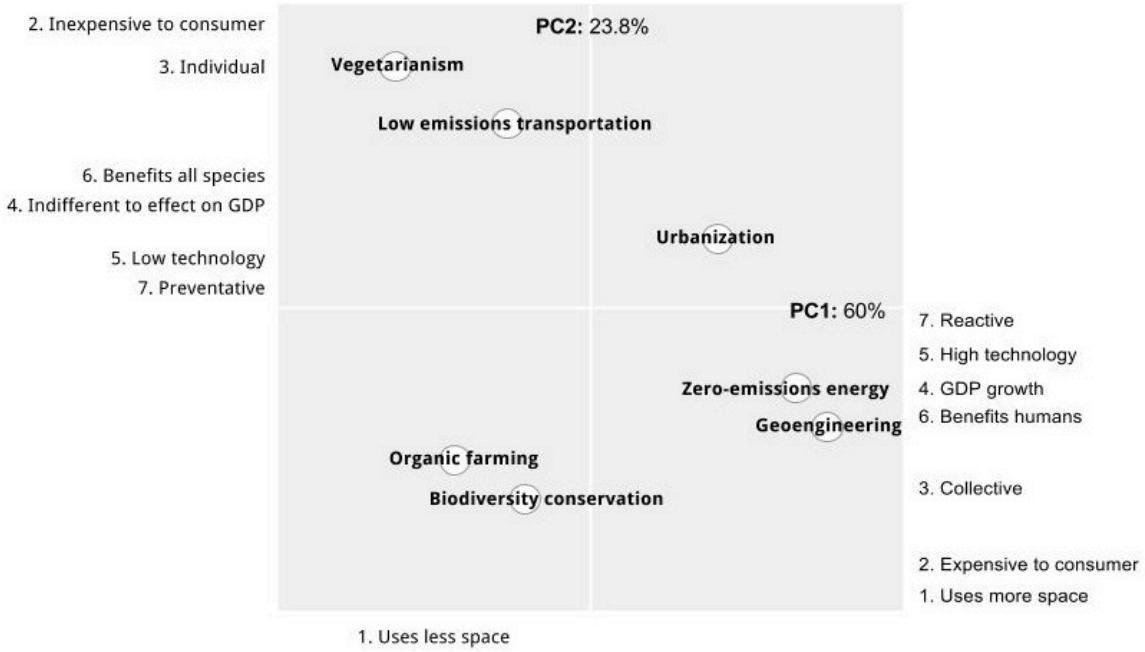
Constructs: Moderate

- Economics (*M* = 1.20)
- Social change (*M* = 1.60)

Respondent 3

	Vegetarianism	Low emissions Transportation	Urbanization	Zero-emissions energy	Organic farming	Biodiversity conservation	Geoengineering	
Uses less space	1	1	2	4	4	5	3	Uses more space
Inexpensive to consumer	1	1	3	5	5	4	5	Expensive to consumer
Individual	1	3	3	3	4	4	5	Collective
Indifferent to effect on GDP	1	3	5	5	2	2	5	GDP growth
Low technology	1	2	3	5	1	2	5	High technology
Benefits all species	1	1	2	2	1	1	4	Benefits humans
Preventative	1	1	1	1	1	1	5	Reactive

64%, 71%, 79%, 82%, 75%, 79%, 89%, 68%



Sub-Group Descriptions: *Activist Greens* (n=9)

Older; Diverse (6/9 Caucasian); More female than male (5/9)

See nature as fragile

- "Everything in modern life is harmful to nature" (*M*= 3.44, *SD* = .527)
- "Nature at harmony if human leave it alone" (M = 3.33, SD = .866).

Believe in planetary boundaries

- "Earth has limited room and resources" (*M* = 3.89, *SD* = .333)

Apocalyptic

- "Major ecological catastrophe if society continues on its present course" (*M* = 3.89, *SD* = 0.333).

Anti-technology

- Technology culpable for environmental degradation (*M*= 3.33, *SD* = .500).
- Technology will not solve environmental problems (*M*= 2.22, *SD* = .972)

Favor grassroots action more than other groups (*M* = 3.22, *SD* = .441)

Repertory Grid Analysis: *Activist Greens* (n=9)

Elements

- Policies and regulations (M = 1.78)
- Reducing Resource Consumption (M=1.22)
- Individual political lifestyle decisions (*M* = 1.20)
- Education/Awareness (M=1.22)

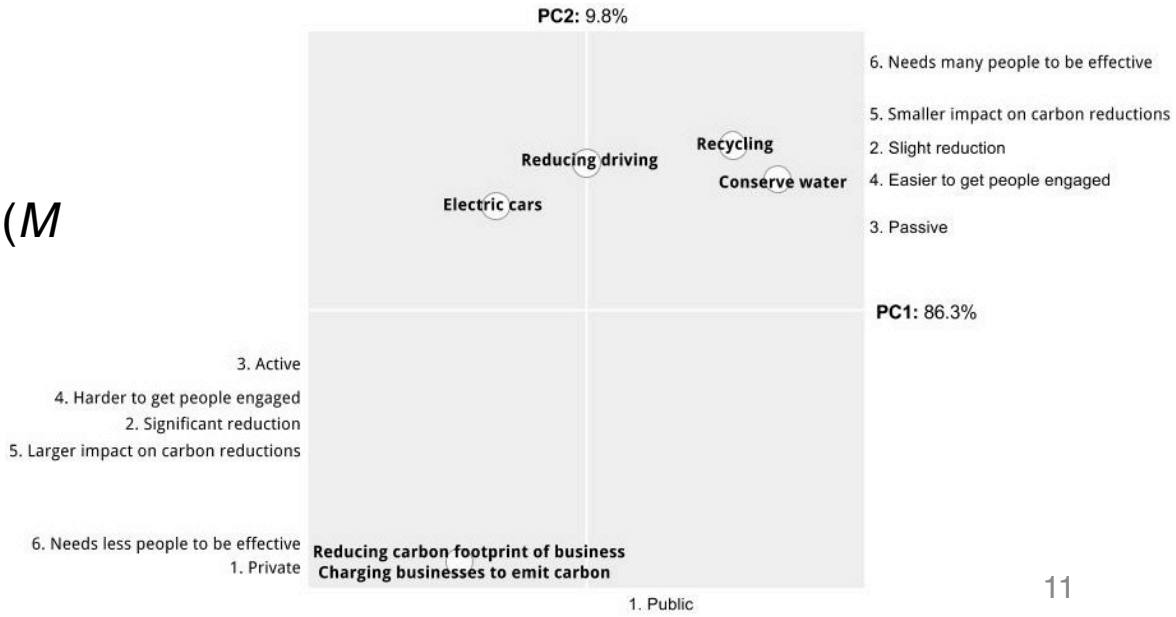
Constructs

- Time (*M* = 1.66)
- Attitudes/values/behaviors (*M* = 0.89)

Respondent 19

	Charging businesses to emit carbon	Reducing carbon footprint of business	Reducing driving	Electric cars	Recycling	Conserve water	
Private	1	1	3	3	3	3	Public
Significant reduction	1	1	2	2	4	5	Slight reduction
Active	1	1	1	4	5	5	Passive
Harder to get people engaged	1	1	2	4	5	5	Easier to get people engaged
Larger impact on carbon reductions	1	1	4	3	5	5	Smaller impact on carbon reductions
Needs less people to be effective	1	1	5	5	5	5	Needs many people to be effective

92%
75%
75%
100%
54%
75%
75%
96%



Sub-Group Descriptions: *Ecomodernists* (n=3)

Young to middle age (25-34); Caucasian; Educated

See nature as resilient

- "Nature at harmony if human beings would just leave it alone" (*M* = 1.33, *SD* = .577)
- "Everything in modern life is harmful to nature" (*M* = 1.33, *SD* = .577).

Not reaching planetary boundaries

- "We are approaching the maximum number of people the earth can support" (M = 1.67, SD = 1.15),

Optimistic

- "Major ecological catastrophe" (M = 2, SD = 0)

Pro-technology

- "Environmental problems will be solved through better technology" (M = 3, SD = 1.73)

Large scale action

- Reject effectiveness of individual behavior (M = 1.33, SD = .577); grassroots action (M = 2, SD = 0)

Sub-Group Descriptions: *Ecomodernists* (n=3)

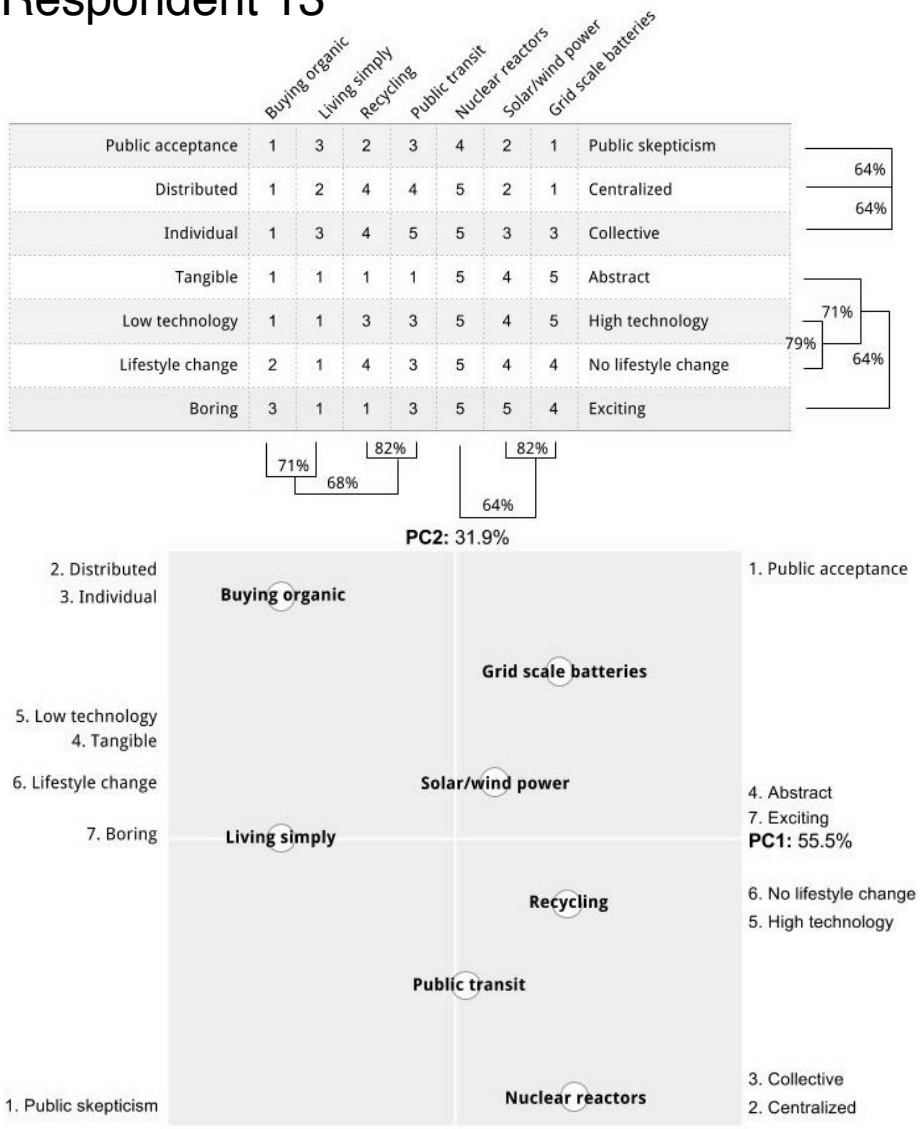
Elements

- Green technology (M = 3.67)
- Adaptation/planning ahead (M = 0.67)

Constructs

- Technology (M = 1.67),
- Degree of difficulty (M = 2)
- Degree of upheaval (M = 2)

Respondent 13



Sub-Group Descriptions: *Ecofatalists* (n=5)

44 or younger

Ethnically diverse; Highly educated

Believe in planetary boundaries

- "Earth has limited room and resources" (M = 3.20, SD = .837)

Anti-technology

- "Technology causes more environmental problems than it solves" (M = 3, SD = 0)

Individual behavior paramount

- "People making small changes in their daily lives" (M = 3.82, SD = .548).
- National laws and policies (M = 3, SD = .707)
- International agreements (M = 2.60, SD = .548)

Sub-Group Descriptions: *Ecofatalists* (n=5)

Elements

- Reducing resource consumption (*M* = 2.0)
- Decreasing traditional car dependence (*M* = 1.20)
- Recycling (*M* = 0.60)

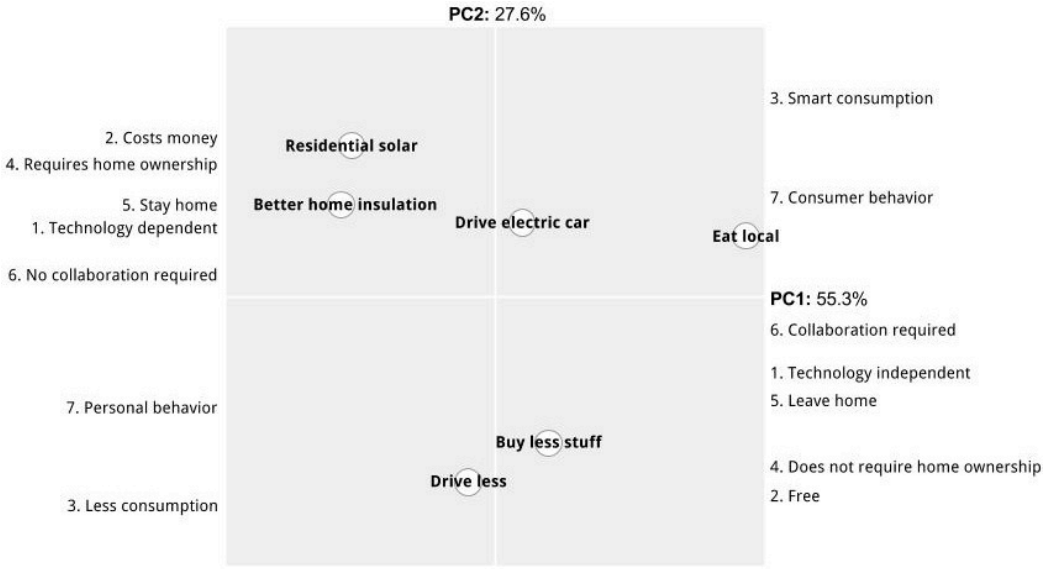
Constructs

- Economic issues (*M* = 3.20)
- Social change (*M* = 1.60)

Respondent 14

	Drive electric car	Residential solar	Better home insulation	Drive less	Buy less stuff	Eat local	
Technology dependent	1	3	4	4	5	5	Technology independent
Costs money	1	1	2	4	5	3	Free
Smart consumption	2	1	2	5	5	1	Less consumption
Requires home ownership	3	1	1	5	5	5	Does not require home ownership
Stay home	3	1	1	3	3	5	Leave home
No collaboration required	1	1	1	3	2	5	Collaboration required
Personal behavior	3	2	2	1	3	4	Consumer behavior

67%
67%
75%
89%
71%
82%



Research Questions

1. Does the existing New Environmental Paradigm scale capture the breadth of contemporary environmental worldviews?
2. Which themes differentiate the worldviews of contemporary environmentalists?
   - "Nature" less important than hypothesized; Technology more important than hypothesized; Scale critical in attitudes towards social change
3. Can environmentalist worldviews be grouped in ideologically coherent ways?
   - 4-part typology

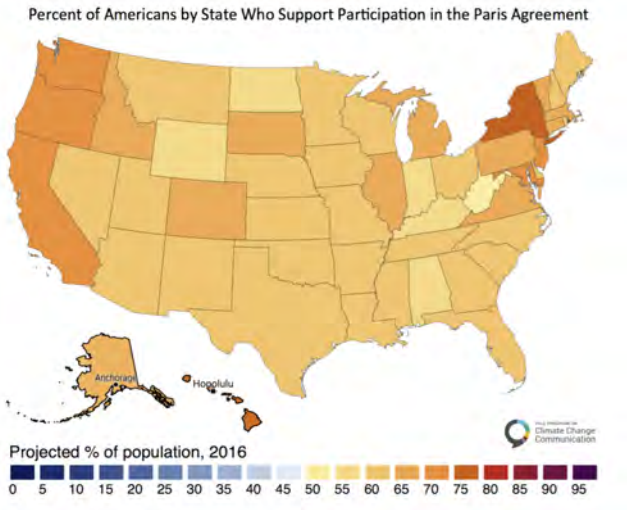
Conclusions and the panel theme…

Research Considerations

Further Research

The BIG questions

- How do we draw a larger, more inclusive circle?
- How do we “engage successfully”?
- Challenge- and “opportunity”?



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