A TALE OF TWO VIEWS ON BEHAVIORAL POTENTIAL

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WHERE ARE THE PEOPLE?
(USUAL ANSWER)

Individual Minds & Actions
WHERE ARE THE PEOPLE?

- Mental Models
- Computational Models
- Vocabulary
- Statistical Representations & Metrics
- Individual Minds & Actions*
- Data Collection & Access
- Culture
- Social Worlds & Interactions
- Physical Worlds, Technology Design
- Politics, Market Actors
- Historical Change
- “Basic Needs”

*Usually about energy, environment, money, comfort, and social inclusion narrowly conceived
BEHAVIOR ≠ PEOPLE
Is the term "energy efficiency" holding us back?
THE MYTH OF POTENTIAL

http://www.n2growth.com/blog/the-myth-of-potential/
not wrong ... but narrow

how does the model get in the way?
Static: interactions, evolutions missing
Can hardly see variability or diversity
Average misses everybody, sometimes cruelly so
Focus on “correct behaviors” narrowly conceived
Misses actors’ points of view
Boring
Usually log-normal
PICOS DE AVEs

pato
gaviota
aguila
piquituerto
chetocabra
avoceta
pájaro carpintero
papagayo (loro)
flamenc
kiwi
espatulo
pelícano
VARIABILITY, VARIETY, DIVERSITY, DYNAMICS ROADKILL

Models & Accounting What-Ifs

Data

Metrics

Visions

Goals

Programs

Plans

Mental Commitments
(it ends with the prisoners killing the returnee who has seen the light)
I. ENERGY UPGRADES

BEFORE

AFTER
MODELING CORRECT TECHNOLOGY FOR AN “AVERAGE” HOUSE

ENGAGING HOUSEHOLD AS INDIVIDUALISTIC VIA A HUMAN CONNECTOR (& CUSTOMIZED USE ASSUMPTIONS)
HOUSEHOLD ≠ AVERAGE HOUSEHOLD
PERSON ≠ MECHANICAL PERSON
* California Energy Efficiency Strategic Plan calls for 100% ZNE residential new construction by 2020. The definition of ZNE (2014) includes ZNE-ready (highly efficient but without on-site renewables) homes.
If you build it ... will they come? if so, what will they do when they get there? will the “technology” work as planned? what will happen with the extra energy? does the home work okay for the occupants?* will you be sorry you didn’t build something else? 

* Did programmable thermostats work well at first?
IMAGINING PEOPLE WILL CONFORM TO A TECHNOLOGICAL VISION IS (RISKY)

MAJOR CHANGES TO THE ENERGY SYSTEMS OF A HOUSE ->
MAJOR CHANGES TO A HOUSE ->
CONSEQUENTIAL CHANGES TO LIFE
III. IDEALISM VS. WORLD

Artist: David Meridor (https://lebbeuswoods.files.wordpress.com/2010/01/lwb-utop-11.jpg)
IV. INTERVENTIONS, REACTIONS, NON-LINEARITY, RIPPLES & THE REST
Technology and behavior aren’t separable

Technological ideals are often superficial

Interactions matter and are hard to see

Nothing is only about energy (and things change all the time)
EE IS NOT SO SMART*

Now what?

* “You are not so smart” is the name of a radio/publishing franchise by David McRaney, “exploring self-delusion.” Everybody self-deludes; there is nothing special about EE on this score.
Assumptions about people are made up

We use “averages” but there are no average people or houses

Efficiency & energy use are not (necessarily) linear in behavior

We don’t have (or don’t know of) good tools to deal with variability, diversity, and uncertainty. (If we did, then what?)

We don’t check our work with real world long-term empirical data, or not very much

Evidentiary protocols don’t mesh well with understanding and accounting for people

We don’t want to say anything negative about EE

THE TROUBLES (DO YOU AGREE?)
We don’t have enough data to know, say, or do.

We’re doing more good than harm (aren’t we?)

I need the money.

Complexity doesn’t sell.

Complexity doesn’t pay.

If only we could get people to …
WE DON’T HAVE TO BE STUCK

Measurement sometimes gets in the way
Programs aren’t the only thing
Better “data” & rounder analysis
More questions and more honesty
Look outside your model too
Understand the limitations of your evidence
More imagination, less fantasy
Not perfection but can we sail this ship another way?
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