

Panel Session Notes

Session V: Sustainable Development:

Moderator: Peggy Carr PhD – professor Landscape Architecture UF

Panelists

Hal Knowles – PhD Candidate, background in construction management commercial, and residential, residential community primary focus past two years, deep interest in connections between social psychology, organizational leadership, science, and systems ecology- generalist by nature, sees relationships better than objective things

Steven Lachnicht – County Planner for Alachua County Growth Management department under a transformation in local community towards mixed use multi modal design, pushing against traditional norms in terms of past development, interested in changing the culture of how we do future development

Rick Hirsekorn

Paul Zwick PhD – Regional Planning Professor for U.F. interested in the interface between urban planning and environmental planning, background in construction management, PhD in systems ecology, claims he is clearly schizophrenic, interested in sustainability, smart growth, but REALLY interested in how urban planning can be the best solution to the problem in terms of environment

Fred Merrill – urban planner Sasaki

Notes by: Aaron Wiener

Before we consider the challenges for sustainable development, are changes in climate and variability in sea levels. What do see as the major obstacles to sustainable development in different scales: regional, city, neighborhood, site, within the individual structure and finally within that structure regarding materials and finishes?

- Fred Merrill – 3 levels of answers
 - a. Outdated policies need to be changed they encourage sprawl – movement to slowly change regulations currently happening
 - b. He was on the planning board in his own town – getting people in his own town to change was a major problem

- c. As a society we have gotten lazy, we have to get smarter and change our behavior – can't consume like we have in the past – maybe we need incentives
- Dr. Paul Zwick – public is lost
 - a. Very few people know what it is scientists really do
 - b. General public thinks “ this isn't going to happen” – he believes some of this is due to the business community and their short term goals
 - c. We need to change how we think about things, but we also as scientists need to be better at explaining to the public what it is were talking about and build the confidence of the general public into the science community
- Rick Hirsekorn- 1st define the question
 - a. Communicate better, make people more aware of what it is were talking about- to be sustainable is not to move back to agrarian society
 - b. Sustainability is all about making balanced decisions
 - c. Start with children
 - d. No constraints for green technology start at the individual home more complex the further out you go – start at the basics were not too late
 - e. Use expertise of the scientists for children to have a life that is equal or better than our own
- Steven Lachnicht
 - a. Acceptance of the idea of climate change has been an obstacle due to many of the regulations that were implemented in the 50's and 60's
 - b. Not In My Back Yard - NIMBY's a challenge
 - c. Fortunate to have UF in our community, more challenging in other communities
 - d. Patterns of development not working – more about placement, one acre lots a problem - can't fix a lay out of land without major restoration efforts
- Hal Knowles - agree with Rick
 - a. Start at a more fundamental level, with yourself.
 - b. Materials- bio mimicry look at the way natural selection works – prune what doesn't fit and reinforce what does
 - c. Individual structure level – act now, big households, inspiring time personal decisions- car, house, weddings-how can we make those decisions more sustainable?
 - d. Site- cultural conditions and living arrangements tend to be more of a detriment than a benefit – we need to integrate diversity everything should not look the same.

- e. Neighborhood – lack of true community, we have more in common in spite of the talking heads on TV
- f. City Community – inspired by Steve and thankless job public servants
- g. Regional – political ranker controls too many of our decisions
- h. Our bodies harbor 100 trillion micro-organisms that's 10 x as many cells as we have human cells, we are more of an ecosystem or a nations state than an organism, and we also have over 100xthe genes than non-human cells in our body. The answer is not trying to understand our genes, but trying to understand the relationships between these things that create these systems
- i. Expand our compassion of what the world is – non human mouths
20:53
- Fred Merrill – inadequate job of taking advantage of science
 - a. Science and engineering needs to get into the mainstream planning practices
 - b. A lot of potential for planners to explore in relations to science and engineering
 - c. NIMBY very real phenomenon –
 - d. Growth is going to occur – approx.. 310 million to 350 million in the next 20 years in the U.S.
- Dr. Peggy Carr

Across the board – goal, to increase density in urban areas will result in many benefits. What you think are either obstacles or ways we can convince the public that dense urban life can actually be a very rewarding life? Many of us have grown up in Florida in a suburban setting, how can we convince Floridians to give up the one acre lot?

- Steven Lachnicht
 - a. Surplus of subdivision lots
 - b. People that invest in the subdivision lifestyle are the baby boomers
 - c. Younger people like more dynamic communities
 - d. University cities are models for development everywhere
- Rick Hirsekorn – educate and send people in groups on educational missions into cities
 - a. Personally, a baby boomer grew up in the suburban sprawl mentality lived three years in London with no car and no yard, but also having all the transportation infrastructure, parks nearby, businesses, and now living in NYC (“London on steroids”) with no car, I don’t miss it, my life is a lot richer

- b. Give more people the opportunity to live in dense cities they could carry the flag forward and spread it to others
- Dr. Paul Zwick – do this with a story
 - a. Did a presentation on increased density and transportation alternatives in the panhandle of Florida – one thing I remember my presentation wasn't that effective, because a lady said to him “your right we need to stop sprawl, but I don't want to increase densities and I want height restrictions” he realized there was no connection between his presentation and what the lady understood.
 - b. I'm not sure that we have the capabilities at this particular time to convince the general public in the United States that the one acre lot is not what they really want.
 - c. Just recently processed 9 million property parcel records in FL, every county added vacant platted land that is unnecessary.
 - d. Hamilton County asked to come up with a land use plan – population projection for 25 years was 2500 people. That could be nothing more than a apartment complex, but they had over 10,000 vacant parcels of platted land. This is unnecessary and continuing to add vacant parcels.
 - e. Something is wrong with the market. Somebody is making incorrect decisions on where the platted parcels should be, we can't even use what we have. Real estate decisions are being made out of context. I don't know the answer, how can the market produce that much over capacity.
- Fred Merrill – part of the answer is education
 - a. Many people don't know any different – we have to expose people to a more urban lifestyle.
 - b. Agreed with Paul, I don't have the answer either...conundrum
 - c. Political leaders have to have to the will to implement more sustainable patters.
- Hal Knowles– comment on Paul's comments
 - a. To often we worry about how are we going to convince people to live in dense urban areas – how are we going to assist land owners on how to do constructive productive things with their land.
 - b. The last land use is urbanization – once you do that that is pretty much all that you got left.
 - c. The future is redevelopment, re-envisioning cities
 - d. big best field first – produce the higher yield on investment
 - e. Were far enough along in evolution, we have picked the best places to have urban developments, so lets make the best out of the spots we

picked. Creating things is choosing what not to destroy – integrate this into urban development.

- Steven Lachnicht – we’ve lost sight of why regulations are in place
 - a. Why do we have minimum lot sizes? No justification for it
 - b. We eliminated them in Alachua, small step to increasing density
 - c. Let mixed use happen
- Peggy *any follow up questions??*

- Teddy (graduate student in audience)
 - a. What do you see the role of technology mitigating problems at all these different scales? Revit, GIS,
- Dr. Paul Zwick – paradigm

“Geodesign” next evolution for GIS – trying to deal with spatial problems in the context of scale. Use these technologies to predict what might be a good decision at a particular scale could be an atrocious decision at another scale.

1. Example – concurrency on roads, not in favor of
 2. Some of the most exciting places we have are some of the most dense places we have
 3. My major fear is that we don’t know how to deal with things and not create unintended consequences – technology is the only way we will be able to deal with this problem
 4. Using the technology is your challenge, we (our generation) built the GIS, its your job (the younger students) to figure out how to use it
- Fred Merrill – smart cities, MIT Sensible Cities, a lot of new research
 - a. Shared bike pool, happening more and more
 - Hal Knowles – technologies are tools – ethically neutral
 - a. Sometimes we become slaves to what their output is telling us
 - b. Question your tools, and analyze
 - Fred Merrill – city has a central nervous system in it
 - a. Technology can regulate the central nervous system
 - b. Technology can drive efficiency
 - Question from crowd – unidentified subject–

What are the best solutions on how we implement these kinds of ideas locally? Subject from Polk County which is the seventh most obese community in all the country.

- Peggy – At UF we have worked on alternative scenarios.

One of the ways for us to communicate to the public is to develop alternative futures that compare future lifestyles that they might be able to have.

- a. Alternative lifestyles with alternative scenarios can help lead them to policy choices that are much more informed.
 - b. Disjointed Incrementalism -A lot of decisions are made without knowing the implications of those decisions, we can't anticipate the accumulated long term effects
 - c. Alternative scenarios let the citizens of any community understand that there are options
- Fred Merrill- starts with land use policies
 - a. Change policies to encourage what you want to have happen
 - b. Easy to say, real hard to do
 - c. We don't have a solid answer, maybe find smaller ways to deal with this
- Steven Lachnicht – its embedded in our zoning
 - a. Look at the 5 year output
 - b. Break away from the conventions from the 50's and 60's
 - c. Keep the citizens engaged
- Hal Knowles – insanity= doing the same thing over and over again and expecting a different outcome, that's what we're doing
 - a. Experience from my own life story- one car family (wife and two children under five), takes his daughter school in a cart behind his bike, Steve rode his bike to this meeting and he is wearing a suit,
 - b. Obesity- Florida is beautiful, the food is amazing, I eat grass fed pastured meats, I eat fresh fruits from a CSA that UF created, I lost 40 lbs from doing this, I commute by bike,
 - c. Installed solar PV in house – if you bought solar right now in Gainesville you could purchase a system for just over \$1200, with a 30% federal tax credit, and tucked it into a 30 year mortgage at a 3.5% interest rate you would owe approx. \$55-60 a month to pay for the system that would generate \$90 a month in electricity, we don't have to wait for the future it is here right now
- Fred Merrill – Florida has a few large private land owners
 - a. They are in a position to change the future
- Dr. Peggy Carr

We realize that we are operating within a dynamic system, part of the change that is definitely predicted is the likelihood of severe climate change and in Florida we are going to be particularly vulnerable to rise in sea levels. How is this going to complicate the goal of sustainability, or will it provide the impetus that we need?

- Rick Hirsekorn - work in NYC with largest utility in the US
 - a. Climate Change predictive work
 - b. Storm Sandy complicated the issue
 1. Should we build a barrier to keep a coastal wave from the shore?
That's not the question, with the predictive sea level rise... The question is how do we use a more natural and more native alternatives, like additional dune structures on the beaches? How can we plan for this, and use technologies to make dense cities more resistant to sea level rises?
 2. Feel that the storm was a wakeup call for people to do something
 3. Climate change models are a precondition
- Dr. Paul Zwick – Just in Florida, conservative estimate 1 meter of sea level rise about 1.5 million people affected
 - a. The nonlinear effect of a storm surge after a 1 meter sea level rise is even more devastating, it might change 7-8 miles inland
 - b. The effects are more important than the why, were going to be dealing with this issue for the next 100 years
 - c. We don't do a very good job of looking to the future
 - d. Favorite quotes, “All models are bad, some models are useful” – trick which models are useful and make decisions on those- that's your generations biggest problems.
 - e. These are fundamental changes to the way we live
 - f. We know were going to get sea level rise.
 - g. We are going to have unintended consequences and we don't know the answer – don't know what's going to happen 100 years from now
 - h. Some people believe that we should not tell them we are facing a really big problem, because we can't do anything about it... if we don't tell them then they really won't do anything about it
 - i. Major challenge of the next 50-100years
- Hal Knowles – precision that we are desiring and trying to analyze is an illusion even at the most simple level
 - a. Within the level of a particle you can only guess with in a 50/50 shot of its position and momentum, the more precise you know about one thing, the less precise you know about another
 - b. Human body more of an ecosystem/nation than an organism – we are like cells inside the earth – the earth is an organism – this is our

warning sign. We're operating out of tune; let's embrace it, it's necessary.

- c. Instead of paralysis by analysis we should all start reacting, stop worrying and do something
- Steven Lachnicht – coincidental time
 - a. Aging Infrastructure and Climate Change- opportunity to do something to build differently
 - b. Florida needs to get off the growth addiction
- Audience Michael Volk PhD – adjunct professor UF
 - a. Hardening the infrastructure in NYC, what is the feasibility of this in response to sea level rise and translating that to Miami?-directed to Rick
- Rick Hirsekorn – prioritizing with what we can afford to do with respect to time
 - a. 5 boroughs in NYC 14 major waste water plants with 96 pumping stations,
 - b. Thankfully drinking water was not affected by Sandy it comes from the north, but waste water is a big deal.
 - c. We're looking at what the sea level rise will be and how it will affect the waste water systems. NYC is reprioritizing what they need to do and the probability of storms like Sandy occurring again.
 - d. Sandy knocked out 46 of the 98 pump stations.
 - e. We're only working with the Water Companies to come up with a plan in hardening their facilities, other infrastructures are also working in conjunction also...
 - f. There isn't an unlimited amount of \$\$\$, \$60billion came to New Jersey for Sandy Relief, legislation used it to fund prior commitments not related to the storm
 - g. 2 things: reprioritization of capital improvements to make things more resilient, and new human response plans when they haven't hardened things enough
- Fred Merrill – everything is interconnected, just like ecology.
 - a. Make plans that reinforce change
- Rick Hirsekorn – response -Huge conversation and controversy, dealing with people on coast line in NY/NJ... help people rebuild or help them relocate
 - b. New Orleans, first time, lots of lessons to learn
- Dr. Kirk Hatfield from audience- Frequency of storms will be increasing, maybe that will drive the change more rapidly...

- Dr. Peggy Carr – closing question

What can the University of Florida, as one of the major land grant universities do to position itself to address the challenges over the next twenty to fifty years in this sector and provide the science needed for sustaining economies and natural resources?

- Hal Knowles – Rick spot on lessons learned
 - a. The academy needs to look into public private partnerships
 - b. Help everybody recognize the public sector and private sector are necessary and bridge the gaps between them
 - c. live where you learn (Fred quote), spin it learn how you live
- Steven Lachnicht – involve the law school
 - a. Legal political dynamic that needs to be integrated with the science
- Rick Hirsekorn – integrated decision making
 - a. Encouraged by younger, smarter people
 - b. Instill to look at integration, what is the question, what are we trying to solve?
- Fred Merrill – UF unique agriculture, engineering, medicine, design, extension program
 - a. Other states don't have that- develop best practices and pump them out
 - b. Shame on all of us if we don't do it
- Dr. Paul Zwick – all universities have fictitious walls between departments, we need to integrate to do proper analysis
 - a. A solution can be accomplished a lot of different ways
 - b. Fly problem in China, emperor ordered everyone in China to kill 10 flies, 10 billion people a lot of dead flies- it's not always technology, sometimes structure- don't kick the can, get real solutions
 - c. Integrate different students from different majors- often learns more from students
 - d. We'll find answers, not all will be good and some will be difficult