
UCF Forum

11-19-2014

It's a Small World After All – and We're All Connected

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STARS Citation

Bernard, Alaina (2014). It's a small world after all – and we're all connected. UCF Today, 2014-11-19. Retrieved from <http://today.ucf.edu/small-world-connected/>

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It's a Small World After All – and We're All Connected

By Alaina Bernard

UCF Forum columnist

Wednesday, November 19, 2014

We've probably all had the song "it's a small world" stuck in our heads after visiting Fantasyland at Walt Disney World. This simple song highlights how we all are connected, and was created to promote the message of international peace and inclusion of diversity. Walt Disney sped up the tempo from the original version and made it more cheery, but it is arguably a simple message that we continue to strive for decades later.

But there is more to that song than most realize.

Have you ever played "Six Degrees of Separation," in which you find connections between yourself and a famous individual, such as Kevin Bacon or Barack Obama? Think about it for a moment and I am sure you will discover that you know someone who knows someone who is connected to someone famous.

This concept is actually more than just a game or song, and has been studied by scientists for the past 50 years. Called "small-world networks" – the idea that there are patterns to connections and that those patterns impact the way the overall systems respond – has been heavily studied by disease specialist, food-web ecologist and engineers.

We experience this concept daily, such as when we use an online search engine, travel through airport hubs when flying, drive along roads or highways, socially interact, or connect parcels of land in nature. For example, on the UCF campus, we recently completed a project to connect conservation lands on the east side of campus through a small corridor of green space that provides animals a place to travel between larger tracts of land. This simple project supports the larger idea that we need to create connections to sustain the natural world as we rapidly develop.

In the natural world we continue to break these connections, which greatly impacts the ability for species that we coexist with to move. Habitat fragmentation, an example of a human-caused disturbance, is the reduction of large habitats into many small isolated habitats. Fragmenting these natural lands greatly changes the ability of plants and animals to move into and out of previously connected areas, or have homes large enough to survive.

This would be similar to closing the road between your work and home, or your house being divided by a large impenetrable wall.

In the catastrophic events of 9/11, air travel became nearly impossible when large airports, such as in New York, were closed down. The airline system became rapidly impacted, affecting travelers globally. When our relied-upon connections were broken, travel became almost impossible until the airline hubs were restored.

The same impact can be seen in the natural world. The [U.S. Fish and Wildlife Service](#) estimates that the 48 contiguous states have lost about 55 percent of their wetlands in the past 200 years, and that we're now losing about 60 acres every hour nationally. Florida alone has lost 9.3 million acres of this important ecosystem.

Wetlands are nature's way of holding water, which allows filtration and other important functions prior to it seeping into our aquifer. The loss of this system, which would be comparable to closing airplane hubs, has a direct impact on humans. However, our failure to see this connection could impact water quality and availability in the near future.

So why is it so hard for us to develop policy and support for conservation initiatives that would promote maintaining these vital connections? In the recent elections, the approved Amendment 1 thankfully supported the concept of purchasing lands for conservation or recreation in Florida. However, it did not address the need to create or maintain the connections between these systems.

Our failure to plan sustainable development that would support and balance the needs of human and natural systems alike, could result in an overall crash of our resources. An example of this is clearly seen in the story of Easter Island, documented by scientist and Pulitzer Prize-winning author Jared Diamond. Centuries ago, tribes of the small island in the South Pacific Ocean competitively used natural resources, resulting in an overall

depletion of forests, which ultimately led to tribal warfare and near extinction of the human population on the island.

Author Aldous Huxley once said: “That men do not learn very much from the lessons of history is the most important of all the lessons that history has to teach.”

We need to start prioritizing the natural resources needed to sustain life and provide sustainable approaches to maintaining or creating vital connections. What we do now will impact generations to come, and our failure to apply these simple concepts could result in an overall collapse.

So I invite you to learn from the lessons of our past, make a new connection to the future, and remember that this is a small world after all.

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