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Circular Logic

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CIRCULAR LOGIC by Michael Lewyn

A month or two ago, I had a dinner engagement on a street in Mandarin. As the crow flies, this street is no more than 1/5 of a mile from my apartment. Yet I had to walk over a mile to get there. How come?

Because of a dominant feature of suburban street design: the cul-de-sac (a fancy name for dead-end street). In most of Jacksonville, residential streets are cul-de-sacs: that is, these residential streets are connected with a nonresidential street, but rarely connect with each other. This system is encouraged, if not mandated, by Sec. 654.111 (b) of Jacksonville's City Code, which states

"Local streets shall be so laid out that their use by through traffic will be discouraged."

As a result, to get to most Mandarin residential streets, I have to go out of my way to San Jose Blvd. (the main neighborhood commercial street), then walk a while on San Jose, then go on another residential street, which connects to a cul-de-sac or two. The map above shows how a proliferation of cul-de-sacs could lead to even more absurd results: East Cumberland Court (just east of the neighborhood park) is just a few feet north of Panamint Court - yet to visit a friend on Panamint, you would have to go north several blocks, then east on Sierra Avenue several more blocks, then north on Cascade several more blocks!

Because cul-de-sacs artificially lengthen walking distances, people have to drive (or, if they are children, be driven) to neighbors' houses, even if those houses are just a few hundred feet away.

By contrast, Riverside and downtown Jacksonville have a grid street system: every street connects with every other street. As a result, walking in these areas is a lot easier: if you want to get from point A to point B half a mile away, you usually only have to walk half a mile.

Grid streets also benefit drivers by giving them more than one or two streets to choose from. In a grid-dominated neighborhood such as Riverside, no street is indispensable: if there is a crash on one major street, drivers can use other streets.

But where (as in Mandarin) most streets are not connected to each other, all traffic is funneled onto one or two major streets, thus increasing congestion. For example, in parts of Mandarin, San Jose Blvd. is literally the only north-south street heading towards downtown. As a result, San Jose can be a very unpleasant street to drive on during rush hour. And if there is a crash on San Jose, the entire neighborhood might shut down.

The multiplicity of travel options provided by a grid system also benefits bikers: where bikers can use residential streets to reach other neighborhoods, they can ride on streets where car traffic is slow enough to make biking a non-suicidal act. By contrast, the commercial streets that dominate suburb-like neighborhoods such as Baymeadows and Mandarin are designed for fast car traffic, and are thus highly dangerous for bikers, bike lanes or no bike lanes.

In sum, cul-de-sacs make walking, biking and driving inconvenient. As a result, some cities have moved to ban cul-de-sacs in new subdivisions. This sort of rule makes sense for

nonresidential streets. For example, there is no reason for a neighborhood library to be on a cul-de-sac (as is the case in Mandarin) because libraries and businesses should be as accessible to as many people as possible. Instead, nonresidential streets should be on a grid: there should be one at least every half mile, so drivers can have a variety of options and pedestrians can comfortably walk from one to the other.

But applying a “no cul-de-sac” rule to residential streets might go too far: many homeowners understandably prefer cul-de-sacs because of the absence of “cut through traffic” on those streets (that is, traffic cutting through from one major street to another).

At the other end of the ideological spectrum, a libertarian approach might be to simply keep government out of the street-design business: under this approach, government would neither favor cul-de-sacs (as in Jacksonville) or restrict them. It seems to me that this result would clearly be preferable to the status quo, as it maximizes consumer choice while reducing at least some of the social harms caused by cul-de-sacs.

However, Americans’ property rights are generally not unfettered: government sometimes regulates land use to prevent the situation of “individual rationality, collective irrationality”: that is, where it makes sense for individuals to do X, but if lots of individuals do X, we all lose something. The prevalence of cul-de-sacs may be such a situation: if I live on the only cul-de-sac in the neighborhood, I have less traffic on my street (presumably a good thing) but still live in a basically walkable/bikable/drivable neighborhood. But if everyone else gets one, I have to suffer through all the disadvantages of cul-de-sacs as well: more traffic congestion because everyone has to drive on a couple of main streets, and reduced walkability as distances between houses multiply.

A third alternative is to create a middle ground between prohibiting cul-de-sacs and total deregulation. One way of doing this would be to allow cul-de-sacs in new subdivisions, but to create a quota limiting their number- for example, to provide that there be no more than one cul-de-sac per intersection. This rule might accommodate consumer demand for cul-de-sacs, but would ensure that there were enough interconnected streets to accommodate driving, walking and biking.

Another compromise is the “fused grid.” Under a fused grid street system, there is a grid of main streets and a set of cul-de-sacs branching off from those streets. But the difference between the fused grid and a cul-de-sac system is as follows: in the latter situation, there is nothing to connect one cul-de-sac to another, so walkers and bikers have to travel out of their way to reach other cul-de-sacs. By contrast, a fused grid “fuses” the cul-de-sacs with miniature parks or pathways designed for bicycles and pedestrians, thus allowing nondrivers to go from one house to another. (See attached picture 2) The advantage of a fused grid is that (unlike a numerical quota on cul-de-sacs) such a policy allows lots of cul-de-sacs while increasing walkability and bikeability.

The fused grid could even be applied to existing subdivisions, although not without some expense. Look again at the cul-de-sac in Picture 1. The area between some of the cul-de-sacs could be partially cleared, and a park or walkway could be placed between them, thus creating a walkable, bikable area between the cul-de-sacs. Such a fused grid system is not unprecedented

in the United States: for example, Peachtree City, Georgia, a very affluent suburb of Atlanta, has golf cart paths running between its cul-de-sacs, thus creating access for pedestrians and slow-moving vehicles such as bicycles and (of course) golf carts.