Obesity And Urban Sprawl: Is Fast-Food Location a De Facto Quality Of Service Determinant With Commuters?

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The working hypothesis of this study is that North Americans have been consuming more fast-food, in part because they are spending increasingly more time in their cars combined with increased food opportunity provided by the relatively recent proliferation of quick-service restaurants along freeways and roads. Research questions include: what is the contribution to caloric intake associated with automobile travel? does fast-food location become a quality of service determinant influencing commuter routing decisions? is drive-through food opportunity also a quality of service determinant? do transportation and comprehensive plan policies exist to address public health priorities in terms of the obesity epidemic? do planners need to develop proactive policies and restrictive zoning in regards to the quick-service food industry?

The planning profession was born at the turn of the 19th century due to a public health crisis associated with high population density and poor sanitation (e.g. cholera). The US Standard Zoning Enabling Act of 1926 was passed in order to "prevent the overcrowding of land, and avoid undue concentration of population". However, planners faced a new public health crisis - obesity, at the turn of the 20th century, due to the inverse of the original crisis - low population density associated with car-dependant urban sprawl. In the US the leading causes of death ranked by behavior is tobacco use, followed closely by poor diet/physical inactivity. The Ontario College of Family Physicians has pointed out in a recent research initiative that people who live in spread-out, car-dependent neighborhoods are likely to drive more, walk less, weigh more, and suffer from obesity and high blood pressure and consequent diabetes, cardio-vascular and other diseases, as compared to people who live in more efficient, higher density communities. Indeed planning research has demonstrated the health benefits of living in communities with a higher "walkability" index, often associated with “new urbanist” design. Overall the urban planning research is focused on neighborhood design and BMI. In other words, planners have examined the “exercise” side of the BMI equation, but not the diet side.

Recent work out of the Harvard School of Public Health indicates that there is a spatial relationship between the location decisions of fast-food outlets and proximity to schools, suggesting that children are purposely exposed to poor-quality food environments in their school neighborhoods. Further, poorer African and Latino American neighborhoods expose their citizens to greater fast-food opportunity, due to that food’s lower costs. Hence average BMI is greater and health lower in those marginalized communities.

As a first step towards examining the relationship between car travel, diet and obesity, identification of the perceived quality of service (QOS) of a commuter’s highway and road choices is important. The Highway Capacity Manual (HCM) identifies “level of service” (LOS) as a qualitative assessment of motorist and passenger perceptions of road operational conditions,
and LOS is presently the basis for determining overall QoS. LOS in the HCM is presently a quantitative traffic density model which is used to design billions of dollars worth of transportation infrastructure, hence it is important to understand the driver perceptions that underlie the concept. Until recently very little research has been conducted to examine non-quantitative lay-user perceptions of quality of service.

Three focus group sessions were facilitated and more sessions are planned in order to identify user perceptions of quality of service in terms of automobile commuting route choices and fast food location. Content analysis of Transportation Plans, Comprehensive Plans, and Zoning Bylaws and GIS spatial analysis is also planned.

References:


