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#14

Planning for all generations
Per una pianificazione multigenerazionale

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>

Living Next to a Transit Node: A Livability Audit of Age-Friendliness

Abitare vicino a un nodo di trasporto: valutare la qualità della vita per bambini e anziani

@ *Madeleine Galvin* |

This article seeks to determine how proximity to a major transit node affects livability for residents, especially children and elders. The results of this neighborhood analysis are relevant for planners interested in how Transit-Oriented Development (TOD) might impact neighborhoods, and how local communities might be safeguarded by good design and effective policy. This research attempts a holistic examination of a portion of the San Giovanni neighborhood of Rome by comparing two of its areas. A livability audit was used to judge these areas based on their physical quality and has indicated two main results: proximity to a major transit node jeopardizes livability for children and elders, and primarily benefits the active population, as well as those transiting through the neighborhood. Results from this neighborhood analysis are of interest due to the recent opening of the San Giovanni stop on the Metro C Line, and the expected increase in connectivity that will result from this extension. San Giovanni illustrates the promises and pitfalls of TOD, as its successful spaces are able to balance strong neighborhood communities in addition to hosting important transit infrastructure and citywide services. On the other hand, the neighborhood's failed spaces indicate what can go wrong when this balance is not found.

Introduction

San Giovanni is a dense, connected, central Roman neighborhood that has a number of characteristics of a Transit-Oriented Development, even though it was not originally designed to be a major transit node. As a result of these characteristics, the neighborhood experiences both the positive and negative effects that can arise from this type of development, as it is extremely well connected, but doesn't necessarily cater to the needs of its elderly and youth populations. In the effort to plan for a wide range of ages, it is important to explore how and why a Transit-Oriented Development could negatively impact a community, which is what this article seeks to achieve.

Conceptual Framework

Transit-Oriented Development (TOD) aims to maximize access to public transportation, create vibrant communities, and reduce automobile dependency (Dittmar & Ohland 2004). Often, TODs fail to satisfy all of these objectives, negatively affecting quality of life in a neighborhood. These shortfalls directly impact children and elders, as TOD often favors commuters of working age (Cervero 2004). This article explores how the negative impacts of TOD on a community can be mitigated.

Deni Ruggeri's *Field Audit for Measuring Livability* (2015) was used to investigate the impacts of TOD on this neighborhood. Issues of congestion and pollution, maintenance of public space, and presence of community services were identified as the most salient differences between the two areas. These findings were later confirmed in interviews with over twenty-five residents.

Lynch maps (1960) were used to determine the territorial range of the residents interviewed. This provided information on the mobility of differently aged residents, the presence or lack of quality services within the local area, and the role of transportation in accessing these services. These characteristics are direct features of livability, as mobility is often a result of physical characteristics, such as unbroken sidewalks and adequate crosswalks (Rosenberg et al. 2013), while services are often responsible for giving a neighborhood character and vibrancy.

San Giovanni History and Statistical Background

San Giovanni is just outside of the Aurelian Walls, to the southeast of the historical center. It was originally planned in the 1909 *Piano Regolatore di Roma*, which gave it some of its original residential character. In the 1962 master plan, the city was laid out in an intensely developed transit network that created eighteen different centers around Rome (Morassut 2005). For its infrastructural characteristics and its central location, during the remainder of the 20th century, the neighborhood was overlaid with over nine different bus lines, as well as an extension of the Metro Line A, which transformed San Giovanni into one of these centers. These transit developments have changed the nature of the neighborhood and created a significant node of connectivity at the Porta San Giovanni. Thousands of people pass through this node every day to get from the Roman periphery to the city center, creating a large influx of transient users to San Giovanni. As mentioned above, this neighborhood analysis is comprised of two study areas; a primary area that is adjacent to a transit node, and a secondary area that is further away, providing a basis for comparison. These areas have a much higher population density than the city itself, with an average of 20,910 residents per square kilometer in 2011 compared to an average 2,032/km^2 for the entire city. In addition, these areas have experienced much quicker population growth, averaging 4.8% in the 2011 ISTAT data, while the city grew comparatively slowly at 2.8%. The dense and fast-growing population of San Giovanni is primarily concentrated along Via Gallia, a bustling hub of commercial activity connecting the two areas.

The eastern edge of the study area, which is formed by the Via Magnagrecia, connects to two high volume arterial roads in the southwest, the Cristoforo Colombo and Marco Polo, and the Via Prenestina to the east. As such, this edge has become a highway in disguise; it diagonally links these auto arteries and creates issues of heavy traffic in the neighborhood.
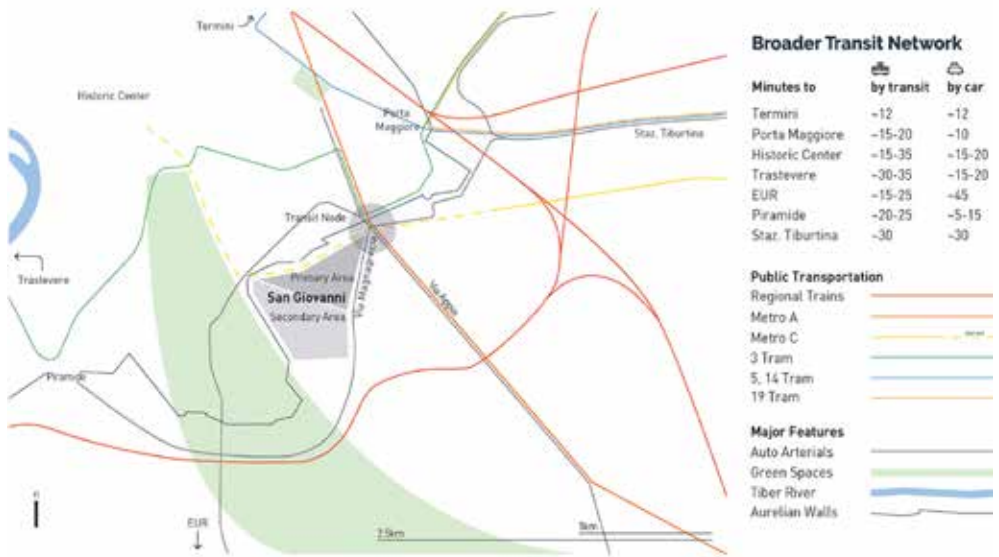
Broader Transit Network

Minutes to	by transit	by car
Termini	~12	~12
Porta Maggiore	~15-20	~10
Historic Center	~15-35	~15-20
Trastevere	~30-35	~15-20
EUR	~15-25	~45
Piramide	~20-25	~5-15
Staz. Tiburtina	~30	~30

Public Transportation
Regional Trains
Metro A
Metro C
3 Tram
5, 14 Tram
19 Tram

Major Features
Auto Arterials
Green Spaces
Tiber River
Aurelian Walls

Fig.1_ Broad Transit Map of the Connectivity in San Giovanni, map made by Raphael Laude.

Methodology
This analysis was conducted in three overarching steps. The first consisted of research on San Giovanni's origins, planning, and development to under-stand the neighborhood as it is today. This included an assessment of its physical character and a walkability survey of its sidewalks and intersections, as well as historical research, all done in February 2017.

The next portion of the analysis consisted of a service inventory. Data for this was collected from Google Earth and the Roma Capitale website. On-site research and interviews with residents and shopkeepers helped revise and substantiate this data. Individual services were then mapped based on their target audience, which was either community members or transient users. Interviews took place over the span of March and April of 2017.

Finally, the livability audit, Lynch maps, and resident interviews were used to determine how livability of an area impacts children and elders' patterns of movement in their neighborhood and come to conclusions about how transit developments have impacted the San Giovanni community.

Livability Audit
In conducting the livability audit (Ruggeri 2015), the twenty-eight questions were answered at ten different places in the neighborhood, five in the prima-ry area and five in the secondary area. These questions were divided into six different categories that reflected the physical quality of the neighborhood. The places for the audit were chosen to parallel each other in both areas to provide the most accurate possible results. The specific spaces audited were piazzas, residential intersections, schools, main transit streets, and markets. Averages for both the primary and secondary areas and the total possible livability scores were calculated.

Quality	Score	Total Possible Score
Imageability	1.68	4
Transparency	1.7	3
Enclosure	1.45	4
Human Experience	1.3	4
Vitality	1	2 2/3
Connectivity	0.533	2 2/3

Livability audit results for the primary area of San Giovanni

Quality	Score	Total Possible Score
Imageability	2.14	4
Transparency	2.15	3
Enclosure	1.45	4
Human Experience	1.65	4
Vitality	1.33	2 2/3
Connectivity	0.733	2 2/3

Livability audit results for the secondary area of San Giovanni

The most prominent result is that across five of the six categories analyzed, the livability of the secondary area is higher than that of the primary. While the built form is similar across the two areas, there was a greater sense of safety, maintenance, and "eyes on the street" in the secondary area of San Giovanni. For children and elders, this is particularly indicative of their comfort level in the public spaces of their neighborhood. In addition, the quantity of street-based social and commercial interaction was much greater in the secondary area. The livability of the primary area was greatly affected by the poor maintenance of their only designated public space. This has caused the space to often be empty, or only used for unsavory activities.

Over twenty-five interviews were conducted with residents, local shop own-

ers, and community leaders to get their insights on San Giovanni. From these interviews, a variety of themes became apparent. These can be divided into congestion, maintenance of public space, and a shift in community services.

Congestion

Traffic was by far the most commonly mentioned issue in the interviews. Generally, this subject came up when asked if residents liked their neighborhood or thought that anything needed to change. Most people were happy with their neighborhood and described it as tranquil, but disliked the heavy flow of traffic, particularly at intersections and along the Via Magna Grecia. Some elderly residents expressed their desire to take the bus, but they said it would be too slow given the amount of traffic on the major roads that the buses often take.

Heavy traffic also tends to reduce the mobility of children and elders more than other age groups. In a study by Giles-Corti et al, it was found that congestion and a lack of intersections impacted whether children felt safe and comfortable walking to school on their own, even when the school was in their own neighborhood (2010). This is particularly significant in the primary area, which is bounded by several heavy traffic corridors. These have also negatively impacted the air quality around the Via Magna Grecia. Smog in the area is bad for families with young children, and is often most pronounced during the mornings and late afternoons when people are commuting to work by car.

Public Space

Public space has been found to be instrumental in creating strong communities because if it is maintained well, it can increase the frequency of human interaction and provide residents with a common gathering space (Pretty et al. 2003). There is a definite lack of public space in the primary area of the San Giovanni neighborhood, due primarily to the construction of the Metro

Medical Services ●
Café, Restaurant ●
Grocery Store ●
Produce Market ●

Line C along the Aurelian Walls. This construction has overwhelmed the area, causing a build-up of trash around its edges, which used to be green spaces. The one public space that remains is poorly maintained and usually full of trash and broken bottles.

In contrast, the secondary area has a well-kept public space along the Aurelian Walls that provides an engaging outdoors environment for people of all ages. This is a result of the work of a community-based group, the *Comitato Mura Latine*, which has protected and advocated for this space. In addition, the *Comitato* has improved the quality of the sidewalk space by implementing a program with local schools in the secondary area to create murals for the exterior of the community market. This has brought art to the streets of the neighborhood and has created a desirable space for public interaction.

Fig.4_ *Services Map of San Giovanni, map made by Brooke Shin.*

Shift in Community Services

The mental and physical health of elders is dependent on their ability to participate in social, economic and civic affairs (WHO 2002). Elders, who generally have more limited mobility, must rely on their neighborhood to provide opportunities for this type of inclusion. The primary area of San Giovanni lacks spaces in which elders can meet informally to receive the social benefits that they need. Longstanding services that have provided this opportunity for social interaction, such as community markets, are swiftly being taken over by commercial enterprises, such as B&Bs, hotels, and clothing shops. This is due to the primary area's proximity to the transit node at the Porta San Giovanni, which has attracted numbers of transient people, such as tourists and commuters, and increased the demand for commercial services, which often do not satisfy the needs of the child and elderly residents.

Conclusion

The primary area's proximity to the transit node at the Porta San Giovanni has had detrimental effects upon the surrounding community. Residents and users of this area have expressed on multiple occasions their desire for certain transit-related aspects of the community to change. Their testimonies aligned with the physical assessment of the livability audit. The three recurring and most detrimental themes that became apparent during the analysis include congestion, maintenance of public space and a shift in the service mix. City planners must actively work to counteract these issues with more efficient design and policy changes. The concentration of traffic on high-volume corridors, such as the Via Magnagrecia, should be addressed with more a strategic distribution of the public transit load by way of dedicated bus lanes. Community organizations that have shown their dedication and effectivity, such as the Comitato Mura Latine, should be allowed to host events that strengthen the community, as well as implement larger infra-

structure that increases the quality of the park. In addition, the municipality can augment community service provision by providing rent-free space for neighborhood events. Although this might decrease municipal revenue at first, this investment in children and the community will pay off in the long-term. While these policy measures have significant and complex considerations, they have potential to ameliorate the consequences of transit proximity that severely decrease neighborhood livability for children and elders. The short-term challenges of implementing these suggestions can be significant, but the potential repercussions of inaction on behalf of these vulnerable populations are far more severe.

references

Cervero R. 2004, *Transit-oriented Development in the United States: Experiences Challenges, and Prospects*, Federal Transit Administration.

Dittmar H. & Ohland G. (eds) 2004, *The New Transit Town: Best Practices in Transit-Oriented Development*, Island Press, Washington D.C.

Giles-Corti B., Wood G., Pikora T., Learnihan V., Bulsara M., Van Niel K., Timperio A., McCormack G. & Villaneuva K. 2010, "School site and the potential to walk to school: The impact of street connectivity and traffic exposure in school neighborhoods", *Health & Place*, vol. 17, pp. 545-550.

Lynch K. 1960, *The Image of A City*, Harvard University Press, Cambridge.

Morassut R. 2005, "The Piano Regolatore of 2003", *Mapping the City from Bufali to the Piani Regolatori*, UCL Department of Italian, London, p.

Pretty GH., Chipuer HM., Bramston .P 2003, "Sense of place amongst adolescents and adults in two rural Australian towns: The discriminating features of place attachment, sense of community and place dependence in relation to place identity", *Journal of Environmental Psychology*, vol. 32, no.4, pp. 401-409.

Rosenberg DE., Huang DL., Simonovich SD. & Belza B. 2013, "Outdoor Built Environment Barriers and Facilitators to Activity among Midlife and Older Adults with Mobility Disabilities", *The Gerontologist*, vol. 53, no. 2, pp. 268-279.

Ruggeri D. 2015, *The Study of Perceived Livability at the Transit Stop*, National Institute for Transportation and Communities.

WHO 2002, *Active Ageing: A Policy Framework*, UNFPA, Geneva, booklet.

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