

## The Arnstein Gap: Twenty Years On, What has Changed?

Keiron Bailey, Ted Grossardt

(Dr. Keiron Bailey, Associate Professor, University of Arizona, Research, Innovation and Impact, BioSci W 232, 1066 E Lowell St, Tucson, AZ 85712. kbailey@arizona.edu)

(Dr. Ted Grossardt, Principal, VOXPOPULI LLC, tedgrossardt@gmail.com)

#### 1 ABSTRACT

At REAL CORP 2006 authors Bailey and Grossardt introduced the Arnstein Gap. Pioneering the use of Arnstein's Ladder of Citizen Participation (1969) as a direct gauge, they measured the perception of two key levels of public involvement – the experienced and the desired – using anonymous real-time polling in planning at professional forums and open public meetings in the U.S. Since beginning this protocol in 1999, Bailey and Grossardt had already amassed a database spanning numerous meetings from which they adduced four principles of public involvement. By aggregating these data and mapping the difference between the two measurements, they illustrate a predictable difference between experiences and expectations for specific groups, as well as between groups such as planners and citizens. Beacuse this difference is measured directly using Arnstein's ladder this is defined as the Arnstein Gap. In the following years, including at subsequent REAL CORP conference (2007) as well as in various journals (e.g. Bailey and Grossardt 2010, Bailey et al 2011, Bailey and Grossardt 2015), the authors continued building the Arnstein database and conducting measurements in a number of US states as well as internationally in countries ranging from Japan, Singapore and New Zealand, to Romania, and Costa Rica and Colombia. Since 2005 other researchers have adopted this framework and applied it during their work, adding to the knowledge base (e.g. Wood 2015, Weymouth and Hartz-Karp 2019, Weymouth et al. 2020).

This article summarizes this work across the temporaral perspective of twenty years and a strongly international geographical range, spanning more than twenty-five countries where such measurements have been conducted. This review in combination with extensive raw stakeholder data obtained by the authors at numerous planning forums, shows that the key Arnstein Gap measurement remains remarkably consistent across time, and that although there are variations in the baseline perceptions of public involvement, depending on local planning experiences, methods, and outcomes and leading to variations in the documented magnitude of the Arnstein Gap from almost four rungs at maximum (Romania, Colombia) to less than two rungs at minumum (Vienna), the desired level of "partnership or level six on the Ladder, is remarkably consistent. These easily-obtainable data present significant implications for planning professionals in both the theory and practice of urban planning. For example, professional assumptions about citizen expectations and perceptions of public involvement may not be shared by the citizens, and that effective planning in the face of a large documented Arnstein Gap ( > 3 rungs) presents different challenges and requires a different set of methodologies and practices than in cases where the measured Gap is smaller.

Keywords: Methodology, Planning, Citizen Participation, International, Arnstein Gap

## 2 THE ARNSTEIN LADDER

Sherry Arnstein's seminal paper "A Ladder of Citizen Participation" published in the Journal of the American Institute of Planners (Arnstein 1969) is one of – if not the single – most influential article(s) in the field of planning. Arnstein characterized proportions of expert to citizen control over planning using an eight-step ladder as a heuristic, with each rung from Level 1 to Level 8 corresponding to increasing proportions of citizen control with corresponding reduced proportions of expert control. She applied descriptive terms to describe each Level on the Ladder, from "Manipulation" through "Therapy" and "Consultation" all the way to "Citizen control." This formulation is widely regarded as simple and efficient in terms of characterizing binary decision control proportions (e,g Contreras 2019).

#### 2.1 Limitations of Ladder

Arnstein (1969:217) was cognizant of the limitations of this heuristic. "The justification for using such simplistic abstractions is that in most cases the have•nots really do perceive the powerful as a monolithic 'system,' and powerholders actually do view the have-nots as a sea of 'those people,' with little comprehension of the class and caste differences among them." The authors have almost never encountered any public confusion about the terminology used by Arnstein at open public meetings, however, in scholarly



circles there has been more debate about both the intelligibility of the scale and the value-laden descriptors. For instance, Fung (2006:67) argues that Arnstein's Ladder "improperly fuses an empirical scale that describes the level of influence individuals have over some collective decision with normative approval." If so, this means different things to different people and it is not clear where such normative approval is centered.

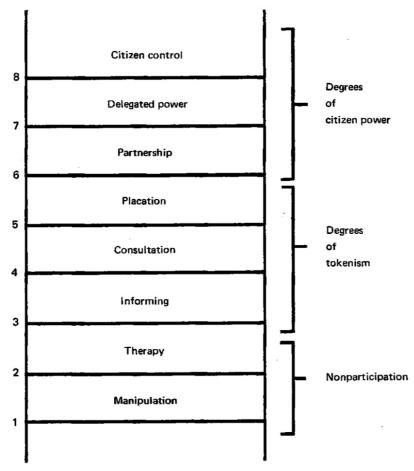


Figure 1. The Arnstein Ladder (Arnstein 1969).

### 2.2 Impact of Arnstein's Ladder

During the subsequent fifty-plus year period the professional impact of her work has become increasingly evident in the profession and beyond, via planning syllabi, training workshops, repeated scholarly efforts to enhance and extend the concept (Connor 1988, Karner et al. 2019), and the use of the Ladder by researchers in cognate fields to characterize public involvement (Flinders and Dommett 2013, Nandigama 2020). By February 2025, Google Scholar listed 35,444 citations for her paper. This scholarly impact places Arnstein in elevated company among social scientists broadly writ; David Harvey's 1974 classic "Population, Resources and the Ideology of Science" registered 849; Alan Sokal's 1996 parody "Towards a Transformative Hermeneutics of Quantum Gravity" 2,219 cites. Arnstein's citation impact is greater than even books by renowned authors such as Being Digital (Negroponte 1995) at 12,582 and Manufacturing Consent (Herman and Chomsky 1988) at 13,577. For perspective, Constitution of Society (Giddens 1984) registered 72,849 cites and A Theory of Justice (Rawls 1971) shows 121,450.

#### 2.3 Origin of the Arnstein Ladder database

In the late 1990s, authors Keiron Bailey and Ted Grossardt encountered Arnstein's work, with its intuitive graphic and its highly communicable heuristic of a simple ladder representing degrees of power sharing in planning between experts and citizens. The authors were surprised despite numerous claims regarding its applicability (e.g. Cunningham 1972, Kroutil and Eng 1989, Maier 2001 and many more) and efforts to adapt (e.g. White and Langenheim 2022), that no direct use of Arnstein's formulation as a measurement appeared to have been made by researchers. Over the next five years, the authors used Arnstein's Ladder initially to measure public perceptions of the existing levels of public involvement in various transportation

and urban planning projects. This was achieved by showing participants the Ladder, asking them directly at open public meetings at what Level they believed public involvement was conducted and using electronic polling to record their valuations anonymously and in real tme. We then showed the participants their own aggregated data and compared this with data from previous meetings. It became evident from the tenor of the citizens' contributions and post-meeting discussions that this initial measurement only captured a portion of what was important to project sponsors and engineers tasked with creating this infrastructure.

### 2.3.1 <u>Establishing common ground</u>

Being confronted with various unsupported and often-contradictory assertions about what citizens wanted from public involvement, ranging from "there is a need for planners to advocate for citizen control of the planning process in all contexts" (Silverman et al. 2020:4) to Mayor Cabaldon, quoted by Ehrenhalt (2018) "Public meetings take up huge amounts of time and rarely produce anything of genuine value," and every position in-between, as well as what planners should do to deliver the putative level, the authors seized upon the obvious; why not keep the Ladder graphic in front of the audience for another few moments, and ask them what they felt would be an ideal level of public involvement? The first few occasions presented a surprise; an almost-complete unanimity in the view that Level 6, "partnership," was ideal. This result was repeated across different projects and different States with what seemed remarkable consistency. The difference between the bar charts of the two polls, the perceived and aspirational Ladder levels, was consistent in sign if not always in magnitude. This pattern became sufficiently established that by 2005 the authors could predict confidently what citizens would poll for the aspirational level. Repetition of this poll at professional forums yielded further insight, in that there were some groups whose perceived Level was higher than the citizens' mean, characterized as "professional conceit" (Bailey et al. 2011).

#### 3 THE ARNSTEIN GAP

Similarly to Arnstein's own goal of creating a simple and accessible indicator, it occurred to the authors that beyond characterizing the magnitude of the difference between participants' current experiences and their desires, this difference could itself serve to mobilize better participatory planning in a measurable way; i.e. closing, or at least reducing, the measured gap within the realistic context of the project at hand becomes a goal of the public involvement process. Reflecting on the increasing number of these data sets, the authors formulated the thesis regarding the difference; the Arnstein Gap.

In 2006 the authors introduced the Arnstein Gap at the CORP Geomultimedia conference (Bailey and Grossardt 2006). Over the subsequent two decades the authors have worked on a number of planning and infrastructure projects in the US as well as attending numerous professional conferences and hosting workshops in the fields of planning, transportation and environmental management in more than twenty-five countries. The authors have amassed the largest Arnstein Ladder database in publication, with numerous articles detailing Arnstein Gap measurements in projects from nuclear plant visioning (Grossardt et al. 2010); context-sensitive bridge design (Grossardt et al. 2007); transit-oriented development (Bailey and Grossardt 2007); integrated transportation and land-use planning (Bailey et al. 2011); environmental justice work (Bailey et al. 2012); and many more.

In search of what Connelly et al. (2021:5) term "good translation" between academe and professional planning domains, this article reviews almost twenty years of research to detail national and international consistencies in Arnstein Ladder levels, to examine what has changed since the original presentation in 2006 and what durable lessons may be learned, as well as point to future research in planning.

### 3.1 Internationally Consistent Features of the Arnstein Gap

# 3.1.1 <u>Desired Arnstein Ladder Levels</u>

The desired Arnstein Ladder levels remain remarkably consistent, with more than 96 percent of all respondents selecting Level Six across more than eight thousand responses in twenty-four different countries since 2005. This is consistent across international contexts. For example, the chart below shows the results of Arnstein Ladder polling conducted in Hachioji, Japan in 2019 and Auckland, New Zealand in 2023.

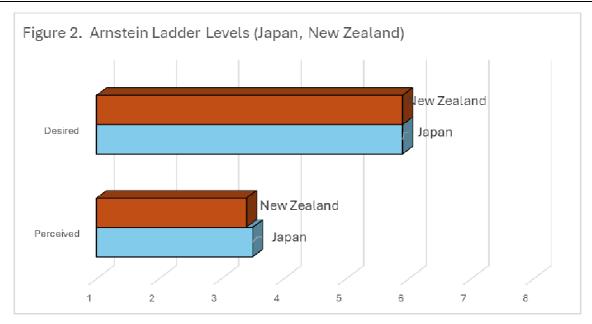


Figure 2. Arnstein Gaps in Japan and New Zealand

These results are consistent with previous forums in Argentina, Australia, Brazil, Bulgaria, Canada, Colombia, Costa Rica, Hong Kong, Netherlands, Peru, Portugal, Romania, Singapore, Spain, Taiwan, and United Kingdom. While sample sizes have varied, these levels can be predicted with sufficient confidence globally that, for example, one seminar participant in New Zealand (2023) remarked "Thank you for sending over the result as you expected and explained in the lecture. It feels like magic even with such a small sample and large margin of error."

### 3.2 Highest Perceived Levels and Smallest recorded Arnstein Gap

The polling conducted by the authors at CORP in Vienna in 2007 remains the only set obtained from Austria and includes approximately sixty respondents from two forums. The mode response was Level Four with few at Level Three or lower. The mode response for desired level was Level Six although there were some at Level Five. Nevertheless, this set generated interesting discussion because this represents both the highest perceived Ladder level we have measured in any of these open polls and the smallest Arnstein Gap, of just over two Levels.

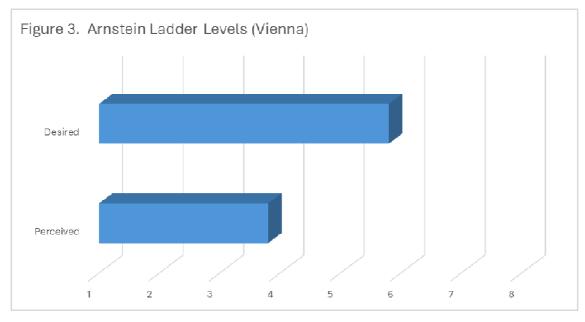


Figure 3. Arnstein Gap in Vienna

Although it would be a reach to link this small sample data set directly to the title of "World's Most Livable City" bestowed on Vienna repeatedly by the Economist Intelligence Unit (EIU 2023), the potential

connections between smaller Arnstein Gaps and higher citizen perceptions of urban functionality and environmental quality merit closer investigation.

# 3.3 Highest and Lowest Perceived Levels

Most forums have generated results with mean perceived levels between 2.8 and 3.4. Results of less than 2.8 are unusual. At the forums in Bucharest (Academy of Economic Sciences) and Bogota (Universidad de los Andes), both numbering approximately fifty attendees of whom some were students and faculty and some were professionals and planning officers, the means were 2.2. The mode response was Level Two and there were few of Level Four or above. When shown the international data sets and asked for reasons for their valuations, respondents noted authoritarian regimes and in the case of Bucharest, a crisis of perceived civic capacity rooted in either direct experience of, or family communication about, the Ceausescu era and the legacy (Ianos et al. 2017). In Bogota there was a measure of agreement that the results were consequent to the approach of a specific Mayor. It is worth noting that institutional provisions and high-level mandates for participation do not appear to bear any relationship to the observed Arnstein Ladder levels. The 1991 Colombian Constitution enshrines participatory rights to an uncommon degree globally and citizens are demonstrably prepared to exercise these rights (Shenk 2022).

The lowest perceived Arnstein Level from a professional group was the set obtained from the U.S Department of the Interior in 2011, where the professionals' perception of the Level of public involvement was lower than the citizens and from where the Gap to the normal desired Level Six was relatively large. A discussion was held using other Arnstein data sets to facilitate understanding, and the participants explained that all field managers had spent several years in regional offices before rotating to DC headquarters, and that the context of their work on highly-contentious land management issues, undertaken in partnership and sometimes conflict with sovereign native nations, mitigated against unrealistic beliefs or wish fulfilment regarding the quality of citizen involvement.

### 3.3.1 <u>Lowest recorded Perceived Levels in project meeting</u>

The lowest Ladder levels at any individual forum were obtained at Paducah, Kentucky, during the authors work on the Paducah nuclear plant's end-state visioning process. There were few participants, less than ten, but everyone polled Level One (Blandford et al. 2011). This discovery prompted a methodological reevaluation for the public involvement process, with knowledge gaps being addressed by a game-show event prior to scenario evaluations being conducted. The profound overall lack of confidence cannot be solved by a set of planning meetings, no matter how well-designed and conducted, but every action has the potential to increase attendance and thereby increase the quantity of stakeholder-sourced data. In this case a snowball effect was observed with increasing attendance at later meetings as well as high satisfaction scores from those who attended. Similar effects have been observed in other projects conducted by the authors.

# 3.4 Challenges in measuring Ladder levels

Outside of the authors' work, others have applied the concept (AbouAssi et al. 2013). Weymouth and Hartz-Karp (2019) conducted a detailed investigation in urban planning projects in Western Australia. Wood (2014) attempted to conduct such polling during a Kansas City streetcar project. He discovered that "While both parties expressed an early eagerness to contribute to this project and to find ways to improve the city's public participation strategies, complications soon arose. The Streetcar project staff requested that I rephrase the questions relating to past transit proposals to more explicitly imply that the city had always taken public participation as seriously as it did in 2014, a notion I knew from my research to be patently untrue. Later, city officials were shown a copy of the original survey, and they asked me to change the wording of Arnstein's Ladder so as to not "give participants the idea that their government could ever be less than democratic," or in other words, to remove the lower half of the Ladder from the survey. I objected to both of these requests on ethical grounds, and was told that without approval from the city government, I would not be permitted to conduct a survey during one of their public meetings. Consequently, the overall direction and research questions of this thesis had to be adjusted, and a new survey approach had to be undertaken. I found these attempts at censorship troubling but also informative, especially considering the original intent of this thesis was to examine the ways city planners can influence public opinion."

The authors have not experienced exactly what Wood describes but we have certainly encountered reluctance from project management and sponsors to conduct such polling a priori. In our case after early



results were published, working with civil engineers resulted in more rapid agreement to poll because the value of published data and the data-driven methodological connection between Arnstein Gap measurements and selection of public involvement methods to reduce the chances of project failure and/or mass rebellion became clear to project sponsors and managers (Grossardt et al. 2008).

### 4 THE T- AND C-WORDS IN PLANNING

The word "trust" is often used in planning research and workshops to characterize a desirable process quality and even sometimes as a direct goal of public involvement (Laurian 2009). The artificial presumption – even appropriation – of intimacy by functionaries in a publicly-funded process is problematic for many reasons. The authors fundamentally disagree with such terminology. Planners are not friends of, or in an emotionally-reciprocal relationship with, the citizens and stakeholders whose public meetings they run and whose monies pay for the projects. Planners can conduct effective public meetings with inclusion, respect, and a measure of agreement on outcomes as well as agreement to disagree on valuations.

"Consensus" is another often-used (Innes 2004) and problematic term (Woltjer 2000, Kaza 2006). What does this mean, and to whom? Who should be silenced or excluded in pursuit of such definition?

Reducing the Arnstein Gap is not a matter of building "trust" or achieving "consensus." It is a matter of delivering good quality public involvement, increasing stakeholder confidence in time and resource investment, and thereby facilitating the universally-aspirational partnership between citizens and professionals that delivers useful planning products such as safer, more efficient, more environmentally sound urban systems and spaces. Yet the Arnstein Gap remains the same, and there is work to do.

### 4.1 Beyond "trust"; reducing the Arnstein Gap

Arnstein (1969:224) addresses the complexities of Level Eight, citizen control, thus: "Among the arguments against community control are: it supports separatism; it creates balkanization of public services; it is more costly and less efficient; it enables minority group 'hustlers' to be just as opportunistic and disdainful of the have-nots as their white predecessors; it is incompatible with merit systems and professionalism; and ironically enough, it can turn out to be a new Mickey Mouse game for the have-nots by allowing them to gain control but not allowing them sufficient dollar resources to succeed."

Citizens may recognize these ideological and practical difficulties and, as the data show, strongly and consistently prefer Level Six i.e. Partnership (Grossardt and Bailey 2018). The authors' extensive results are supported by the small number of other studies that have performed similar direct Arnstein Ladder measurement, e.g. despite survey difficulties, Wood (2014:82) found that 74 of the 87 respondents in a Kansas City streetcar project selected "partnership" as the desired level, and Weymouth and Hartz-Karp (2019:6) found that "The WA [Western Australia] city-region's community assessment of the current level of participation with their government very closely resembled the findings by Bailey et al. in the US."

But if Level Six is so universally desired by citizens and professionals, as all the data suggest, what is preventing this confluence of interests? Arnstein (1969:222), in her own exemplification of Level Six of her Ladder, proposed: "In most cases where power has come to be shared it was taken by the citizens, not given by the city." While this phrasing may convey the revolutionary tenor of the late 1960s, the authors are sympathetic to this view based on what they have observed during polling at hundreds of meetings and how fear of citizen control – a goal neither planned nor desired during these processes – has sometimes contaminated experts' willingness to listen and include citizen valuations.

If Level Eight, citizen control, is a goal specified by almost nobody, and if as Wang and Chan (2020:1) observe; "the Arnstein gap can seldom be filled in cases where there are divergent interests and differentiated power"; then the thorny question of how participatory planning processes acknowledge and handle inevitable power differentials without seeking or moving for citizen control is central to improving the quality of participation from the near-universal lower Levels to the universally-desired Level Six, Partnership.

### 5 CONCLUSION: THE ARNSTEIN GAP, TWENTY YEARS ON

Evidently, the Arnstein Gap did not appear at the moment the authors characterized it. Arnstein's original article was motivated in the first instance by her own considerable skepticism of the efficacy of public involvement she observed and experienced in the 1960s, with her narrative capturing differences between



professional and citizen expectations and practices. Reflecting on Arnstein's Ladder thirty-eight years after its publication, Mees and Dodson (2007:35) observed "Meaningful public participation in urban planning remains an elusive goal despite decades of rhetorical commitment by decision-makers." The authors' near-two decades of Arnstein Ladder data collection since then reinforces this point. What Krek (2005) termed "rational ignorance" of citizens i.e. intelligent individuals logically electing nonparticipation because of perceived input/output process investment imbalances and lack of process utility, remains a daily practice all over the world. This is despite enormous celebration during the last fifteen years of the potential of social media, online participation platforms and other technologically-driven data-collection methods that promise to revolutionize participation, always with the chimera of more fidelity under the umbrella promotion of rather vague democratic ideals.

The Arnstein Ladder database prompts useful deductions regarding planning desiderata and practice; for instance, these data show that complete redistibution of decision-making power (Level Eight) is neither desired nor – therefore – useful in delivering improved planning processes (Tritter and McCallum 2006), but these data also show that the perceived Levels are invariably substantially lower than participants desire. Moreover, because these data show that both professionals and citizens aspire to the same Level Six, Partnership, (Bailey et al. 2011), there is no irreoncilable difference between experts and citizens' desires. Closing the Arnstein Gap is desirable for almost all stakeholders. This suggests the apparently-daunting complexities of immutable power dynamics may be addressed effectively using a methodological approach.

What is needed to reduce the persistent and pervasive Arnstein Gap is closer methodological attention to what Weymouth and Hartz-Karp (2019) term "participatory interventions" in planning processes. By applying this logic during an ongoing regional process, they were able to document a reduction in the measured Arnstein Gap to approximately two Levels or less. They concluded: "These results indicated that the Arnstein gap applied in Australia and America, across regional areas and over time, and that participatory interventions could potentially narrow the gap." (Weymouth and Hartz-Karp 2019:7). To that end, stakeholder-driven performance frameworks for public involvement that set transparent, measurable goals for participation, address the needs of different stakeholders, and within which specific participation methods can be identified, utilized, and sequenced, can maximize overall performance (Bertelsmann Foundation 2010, Bailey and Grossardt 2015, Grossardt et. al 2019).

#### 6 REFERENCES

- AbouAssi, K., Nabatchi, T.; and Antoun, R. Citizen participation in public administration: Views from Lebanon. International Journal of Public Administration Vol. 36, pp. 1029-1043. 2013.
- Arnstein, S. "A Ladder of Citizen Participation," Journal of the American Planning Association, Vol. 35, No. 4, pp. 216-224. 1969. Bailey, K. Addressing the Arnstein Gap in structured participatory planning. University of Auckland School of Architecture and Planning, 6th December 2023.
- Bailey, K. and Grossardt, T. Addressing the Arnstein Gap: Improving Public Confidence in transportation planning and design through Structured Public Involvement (SPI). In Schrenk. M. (ed) Proceedings of the 11th International GeoMultimedia Symposium 11:337-341. Vienna, 2006.
- Bailey, K. and Grossardt, T. Culture, Justice and the Arnstein Gap: The Impact of Structured Public Involvement on U.S. Transportation Infrastructure Planning and Design. Proceedings of Real CORP 2007, p. 283-290. Vienna, 2007.
- Bailey, K. and Grossardt, T. Towards Structured Public Involvement: Justice, geography and collaborative geospatial/geovisual decision support systems. Annals of the Association of American Geographers Vol. 100, Issue 1, pp.57-86. 2010. https://doi.org/10.1080/00045600903364259
- Bailey, K., Grossardt, T., Ripy, J., Toole, L., Williams, J. B., & Dietrick, J. Structured Public Involvement in Context-Sensitive Large Bridge Design Using Casewise Visual Evaluation: Case Study of Section 2 of Ohio River Bridges Project. Transportation Research Record Vol. 2028, Issue 1, pp.19-27. 2007. https://doi.org/10.3141/2028-03
- Bailey, K., Blandford, B., Grossardt, T., & Ripy, J. Planning, Technology, and Legitimacy: Structured Public Involvement in Integrated Transportation and Land-Use Planning in the United States. Environment and Planning B: Planning and Design Vol. 38, Issue 3, pp. 447-467. 2011. https://doi.org/10.1068/b35128
- Bailey, K., Grossardt, T. and Ripy, J High-performance public involvement: frameworks, performance measures, and data. Transportation Research Record Vol. 2499, Issue 1, pp. 45-53. 2015. https://doi.org/10.3141/2499-07
- Bertelsmann Foundation. Vitalizing Democracy through Participation. Bertelsmann Stiftung, Gutersloh. 2011.
- Blandford, B., Ormsbee, L., Grossardt, T., Anyaegbunam, C., Hoover, A., Bailey., K. and Ripy, J. Community Visions for the Paducah Gaseous Diffusion Plant Site. Kentucky Research Consortium for Energy and the Environment. Lexington, KY. 2011. http://works.bepress.com/ben\_blandford/16/
- Connelly, S., Vanderhoven, D., Rutherfoord, R., Richardson, L. and Matthews, P. Translating research for policy: the importance of equivalence, function and loyalty. Humanities and Social Sciences Communications Vol. 8 Issue 10. 1057/s41599-021-00873-z. 2021.
- Connor, D. A new ladder of citizen participation. National Civic Review Vol. 77, Issue 3, pp.249-257. 1988.



- Contreras, S. Using Arnstein's Ladder as an Evaluative Framework for the Assessment of Participatory Work in Postdisaster Haiti. Journal of the American Planning Association Vol. 85, Issue 3, pp. 219–235. 2019. https://doi.org/10.1080/01944363.2019.1618728
- Cunningham, J. Citizen Participation in Public Affairs. Public Administration Review Special Issue: Curriculum Essays on Citizens, Politics, and Administration in Urban Neighborhoods, Vol. 32, pp. 589-602. 1972.
- Ehrenhalt, J. When Citizen Engagement Becomes Too Much. 2018. https://www.governing.com/archive/gov-citizen-engagement.html
- Flinders, M., & Dommett, K. Gap Analysis: Participatory Democracy, Public Expectations and Community Assemblies in Sheffield. Local Government Studies, Vol.39, Issue 4, pp. 488–513. 2013. https://doi.org/10.1080/03003930.2012.751023
- Fung, A. Varieties of participation in democratic governance. Public Administration Review Vol. 66 (Suppl. 1), pp. 66–75. 2006.
- Giddens, A. The Constitution of Society: Outline of the Theory of Structuration. Polity Press. Oxford, UK. 1986.
- Grossardt, T. and Bailey, K. Public participation in transportation planning: Theory, Process and Practice. Elsevier. 2018.
- Grossardt, T. H., Bancroft, R. G., & Wormald, D. Bridging the Quantitative-Qualitative Divide in Public Participation: A Learning Model Approach. Transportation Research Record Vol. 2673, Issue 1, pp. 481-490. 2019. https://doi.org/10.1177/0361198118822280
- Harvey, D. Population, Resources and the Ideology of Science. Economic Geography Vol. 50, Issue 3, pp.256-277. 1974.
- Holum, M. Citizen Participation: Linking Government Efforts, Actual Participation, and Trust in Local Politicians. International Journal of Public Administration, Vol. 46, Issue 13, pp.915–925. 2022. https://doi.org/10.1080/01900692.2022.2048667
- Ianos, I., Sorenson, A. and Mreciu, C. Incoherence of urban planning policy in Bucharest: its potential for land use conflict. Land Use Policy Vol. 60, pp. 101-112. 2017.
- Innes, J. Consensus Building: Clarifications for the Critics. Planning Theory, Vol. 3. Issue 1, pp. 5-20. 2004.

https://doi.org/10.1177/1473095204042315

- Karner, A., Brower Brown, K., Marcantonio, R., & Alcorn, L. The View From the Top of Arnstein's Ladder: Participatory Budgeting and the Promise of Community Control. Journal of the American Planning Association, Vol. 85, Issue 3, pp. 236–254. 2019. https://doi.org/10.1080/01944363.2019.1617767
- Kaza, N. Tyranny of the Median and Costly Consent: A Reflection on the Justification for Participatory Urban Planning Processes. Planning Theory Vol.5, Issue 3, pp. 255-270. 2006.

https://doi.org/10.1177/1473095206068630

- Krek, S. Rational Ignorance of the Citizens in Participatory Planning. In Schrenk. M. (ed) Proceedings of the 6th International GeoMultimedia Symposium 10:165-169. 2005, Vienna.
- Kroutil, L. and Eng, E. Conceptualizing and assessing potential for community participation: a planning method, Health Education Research, Vol. 4, Issue 3, pp. 305–319. 1989. https://doi.org/10.1093/her/4.3.305.
- Laurian, L. Trust in Planning: Theoretical and Practical Considerations for Participatory and Deliberative Planning. Planning Theory & Practice, 10(3), 369–391. 2009. https://doi.org/10.1080/14649350903229810
- Maier, K. Citizen Participation in Planning: Climbing a Ladder? European Planning Studies Vol. 9, Issue 6, pp. 707–719. 2001. https://doi.org/10.1080/713666506
- Mees, P., & Dodson, J. Backtracking Auckland?: Technical and Communicative Reason in Metropolitan Transport Planning. International Planning Studies Vol. 12, Issue 1, pp. 35–53. 2007.

https://doi.org/10.1080/13563470701346568

Nandigama, S. Performance of success and failure in grassroots conservation and development interventions: Gender dynamics in participatory forest management in India, Land Use Policy, Volume 97,

2020. https://doi.org/10.1016/j.landusepol.2018.05.061

Negroponte, N. 1995. Being Digital. Vintage Books, New York. 1995.

- Shenk, J. "Extractive Projects and Participatory Democracy: Lessons from the Consulta Popular" in Environmental Governance for Peace in Colombia, eds. Ángela María Amaya Arias, Kristine Perry, and Erika Weinthal. Universidad Externado de Colombia, the Environmental Law Institute, and Duke University Press, Bogota. 2022.
- Silverman, R. M., Taylor, H. L., Yin, L., Miller, C., & Buggs, P. Are We Still Going Through the Empty Ritual of Participation? Inner-City Residents' and Other Grassroots Stakeholders' Perceptions of Public Input and Neighborhood Revitalization. Critical Sociology, Vol. 46, Issue 3, pp. 413-428. 2020.

https://doi.org/10.1177/0896920519837322

- Tritter, J. and McCallum, A. The snakes and ladders of user involvement: Moving beyond Arnstein, Health Policy, Volume 76, Issue 2, pp.156-168, 2006. https://doi.org/10.1016/j.healthpol.2005.05.008
- Wang, A. and Chan, E. The impact of power-geometry in participatory planning on urban greening. Urban Forestry & Urban Greening 48. 2020. https://doi.org/10.1016/j.ufug.2019.126571
- Weymouth, R. and Hart-Karp, J. Participation in planning and governance: closing the gap between satisfaction and expectation. Sustainable Earth Vol. 2, Issue 5, pp.1-15. 2019.
- White, M. And Langenheim, N. A ladder-truss of citizen participation: re-imagining Arnstein's ladder to bridge between the community and sustainable urban design outcomes. Journal of Design Research Vol. 19, Issue 1, pp. 155-183. 2022. https://doi.org/10.1504/JDR.2021.121067
- Woltjer, J. Consensus Planning: The Relevance of Communicative Planning Theory in Dutch Infrastructure Development. Routlege, London. 2000.
- Wood J. Selling Transit: Urban Planners and the Role of Public Participation in Kansas City's Transportation Planning Process, Graduate thesis, University of Missouri, Kansas State University, Manhattan, KS. 2014.



