

American Affordable Housing in 50 Years

When a distinguished but elderly scientist states that something is possible, he is almost certainly right. When he states that something is impossible, he is very probably wrong.

— Arthur C. Clarke, 1962

When predicting the future, science fiction authors have a better group track record than engineers, because their imaginations aren't hamstrung by too much learning. Instead of reciting what futurists think may be possible, authors' scenarios deliver what people will want¹ or fear,² and in so doing they consider not only the new tech but the human responses to it.

Science fiction as a literary genre was born as an after-effect of the explosive urbanization that accompanied the Industrial Revolution and urbanization's side effects: pollution, epidemic vulnerability, slums, crime and the atomization of agrarian society. While its proponents were storytellers first and foremost, they were also gurus and Cassandras, taking on social and political consequences of disruptive gadgetry. Technology driving future governance dominated Edward Bellamy's 1888 global phenomenon *Looking Backward* (socialized industry), H.G. Wells' 1895 *Time Machine* (racial segregation), Aldous Huxley's 1931 *Brave New World* (psychotropic drugs neuter violence), and Isaac Asimov's 1940s Foundation and Robots series (brains tame mobs). All these posited a technological elite rising to velvet autocracy, where their mores and values would rule, benignly disenfranchising the soma-sated hoi polloi.³

¹ Robert A. Heinlein imagined motion-detector light switches in 1938, Arthur C. Clarke foresaw communications satellites in 1949.

² Collectively Ray Bradbury's 1953 *Fahrenheit 451*, Philip K. Dick's 1968 *Do Androids Dream of Electric Sheep?*, John Brunner's 1969 *Stand on Zanzibar*, and William Gibson's 1984 *Neuromancer* now read like how-to manuals for modern America.

³ Bill Gates, Mark Zuckerberg and Jack Dorsey were unavailable for comment.

⁴ Those interested in my previous book-length foray into urban predictive science fiction should check out *Future Boston: The History of a City, 1990-2100*, Tor Books 1994.

⁵ Bracketed italicized text references seminal texts exploring these concepts.

⁶ Supreme Court cases have resolved that use of externally observable EHSI is not a search and seizure prohibited by the Fourth Amendment. EHSI reports are publicly searchable, like today's FCO scores, as well as correctable by the person involved.

⁷ Upgraded from homeowners' associations or stadium ticket licenses.

When thus I, as both a current affordable housing guru and a retired science fiction author,⁴ venture into half-century-hence prognostication, bear in mind that even if most of my specifics will be wrong, their anticipated sociological consequences will often prove right.



David A. Smith

Cities, Density and Vertical Health-Gated Campuses

1. Lighter, stronger building materials make cities go even more vertical, with average Floor-to-Area-Ratio (FAR) in megacity central business districts three times what it is now.
2. Multiple skyways (foot, electric scooter) between the tallest structures create three-dimensional 'health communities' where leaving is optional and exceptional. [*Future Boston*⁵]
3. Most large buildings are energy- and health-hardened with generators, broadband fail-safes and health supplies.
4. Essential health and safety information (EHSI), as defined by federal statute, is automatically collected⁶ on entry or exit from any "health community."
5. Large vertical health-community campuses operate under Community Compacts—conditions of entry, activity, and exit⁷—governing everything from privacy and dress mores to permissible behaviors and spaces, as well as use of EHSI, which is harvested in real time throughout the vertical campus.

New Construction Dwelling Units

6. New housing is modular assembly, using a USB-for-structures approach: compatible footprints, wall-and joint-connections and internally customized design elements. [*Heinlein, Pandora's Box*]

7. Most room modules have at least one non-load-bearing wall that is programmable to move, allowing rooms to change size, layout and use. [Le Corbusier, *Five Principles*]
8. All building systems run through intra-wall duct highways continuously patrolled by micro drones that handle diagnostics, repairs and replacements. These can be auto-controlled or human-directed, as with hospital surgery now.
9. Renovation and upgrades are usually done via swap-out/swap-in new modules, the originals being returned for component recycling.
10. Energy is more expensive in real terms, and usage is dynamically managed and dynamically priced.

Monitoring, Privacy and Customization

11. Every room has a sound-activated video screen connecting to individual AI-bots (users choose the bot's avatar and voice, including loved ones) to handle routine tasks. Bots become tutors, nannies and companions. [*Robot and Frank, Marjorie Prime and Her*]
12. In-building screens are virtually everywhere and link to the resident's personal bot, so the journey from morning bedroom to building egress is virtually accompanied by a guide throughout. [*Robot and Frank*]
13. At least one room in every unit has immersive video walls [*Bradbury, Fahrenheit 451*] with you-are-there resolution, allowing for most social encounters to be purely virtual. [*Asimov, The Naked Sun*]
14. Telehealth and health bots have reduced in-person medical care to five percent of 2020 volume.

Operations and Resident Services

15. Most goods delivery is robot-to-robot from store/warehouse to mailbox/porch dropbox.
16. Most maintenance activities are handled by autonomous bots.

17. Bots befriend elderly aging in place and provide mental stimulus, social connectivity and electronic home-health-aide support for geographically distant offspring concerned about mother.

Affordability

18. Affordable housing includes multiple tenure options, including limited equity ownership, shared equity/appreciation, co-operative and rental.
19. Affordable-housing ownership tenures use formula-based buy/sell prices to yield the seller household a return on equity akin to a like-term mutual fund, and to give an incoming buyer payment-to-income (PTI) affordability matching the previous household's entry PTI.⁸

Policy and Law

20. Municipalities are the dominant node for housing policy. Federal policy covers interest rates and capital markets; state law sets broad inclusionary housing targets; and municipalities have master plans with quantitative targets and significant federal/state financial incentives or penalties.
21. Two-dimensional zoning is defunct (repealed or ignored), as are most forms of use zoning. Subject to disturbing-the-peace laws, any information-based business is grandfathered into all pre-existing forms of zoning.
22. Zoning restrictions by family configuration are likewise defunct.
23. Inclusionary affordable housing is mandatory through all municipal districts whose FAR is 2.0 or more. Except for special-needs populations, affordable housing should be interspersed alongside market housing and unidentifiable from the outside.
24. Property inheritance law allows fractional or divided interests to be transferred among family generations. [*Vonnegut, Tomorrow and Tomorrow and Tomorrow*]

And one final prediction: Guru column number 754 is published using TCA's proprietary David Smith Auto-Author WAGNER⁹ Generator™. **TCA**

⁸For the buy-sell economics to smooth out, most municipalities will maintain an affordability trust fund out of general revenues. Cf. Singapore's Housing Development Board.

⁹Wild-Ass Guess Not Easily Refuted.