6

Housing, system and principles

"*How can the new tools available to the architect bring people together - not only inhabit, but to change, augment and ultimately create the environment around them?*"[1]
Carlo Ratti

"*There is no completely rational space,*
no completely adequate place, and the alternative between topia and utopia no longer defines our possibilities."[2]
John Rajchman

"*Housing scarcity in the Netherlands is no longer a matter of long waiting times for a suitable house, but a rat that gnaws at the autonomy of the citizen. The failing housing policy of the last decades forces an increasing number of Dutchmen to choose between several evils: homelessness, a goodbye from the city and the social environment, moving in with family, divorces, postponing, etc. Practices that throw the free individuals of the 21st. century back to the circumstances and culture of a hundred years ago*." (transl.mp)

Erdal Balci, de Volkskrant Jan. 28th. 2019

---

[1]Ratti, C. (2015). *Open Source Architecture*. Thames & Hudson.
[2]Rajchman, J. (1988). *Constructions*. MIT Press.

As emphasized in the introduction: these texts "build" on the situation of housing in the Netherlands and, in particular, where it concerns the numbers, this will of course not always be fully comparable or in line with other European countries. Nevertheless, I believe the main principles do not vary that much insofar it involves the theory and practice of building housing behind.

First, allow me to present a few illustrative numbers and elementary statistics.

Recent research concludes that in the Netherlands, today, all together some 7.740.000 houses are realized: this number is divided into single-family houses (about 65%), apartments, and a minor number of other typologies. The majority is built after World War 2 – some 6.2 million. Around 450.000 houses are built before 1905, hence, over one hundred years old. The average "age" of our houses built after 1900 is 38 years[3]. With an overall population of almost 17 million people, less than half of our housing is rented; about 70% from housing corporations and about 20% from other owners/investors. Slightly more than half of our housing is owned; its total number is increasing.[4] The total number of rented housing is decreasing for years now, including the share of corporations.

A greater number of tenants want to (re)move compared to owners; also there is a major discrepancy between those who wish to move and those who, in the end, actually do. In particular, those who wish to buy experience increasing difficulties in finding what they wish or need, with a clear emphasis on the larger cities in the west[5].

The number of people moving to another house is increasing since the last 10 years; motives being primarily – 34% – the house itself. Other reasons such as environment, work, family, or study are far less important. 3.2 million households indicate that they wish to move within 2 years' time; in 2009, this number was 2.1 million. The complete building sector contributes to about 4.5% of the GDP, and roughly 40% of this number concerns housing. Works in the sector cover around 60% newly built and around 40% renovations. About 6% of all buildings – 71 million m^2 – is empty, 27% of which – 11.5 million m^2 being about 19% of all – concerns office buildings.

---

[3] https://www.cbs.nl/nl-nl/nieuws/2000/04/woningen-gemiddeld-38-jaar-oud
[4] https://vois.datawonen.nl/jive/jivereportcontents.ashx?report=home_new
[5] https://www.pbl.nl/sites/default/files/cms/publicaties/verhuiswensen-verhuisgedrag.pdf

Recent research[6] states that between 2018 and 2030, the number of houses will increase by 770.000 (i.e., 930.000 newly built minus 159.000 demolished), and, by 2030, shortage will be decreased to 200.000.

At the same time, the houses we build will be a reality for at least 120 years, sometimes even more[7]. The average occupation period is 7–10 years, implicating that whatever we build is an inadequate answer to a question unknown. Since nobody will seriously pretend to know what the world will look like in, say 25 years, it seems quite pretentious to continue building houses the way we do in preparation for a lifetime of more than a century. The system of providing and building certain prescribed types of houses is also one cause of the lack of adaptability; i.e., there is no flexibility and no option for real change. The entire system is envisioned to function within a process of changing locations/places, i.e., we start in small apartments and move on to single-family houses to "end" again in a small apartment, with minor variations in between; all together a flow system that too often functions poorly. In the Netherlands, we, therefore, often speak of a "housing career," referring to the various houses we occupy and their periods of inhabitation: we move, on average, about seven times in our life and this number is increasing over the decades. Although I have indicated that I will proceed from the situation in the Netherlands, it is interesting and illustrative to refer briefly to the one in Belgium where, historically, the ownership is envisioned at 70%, leaving only 5%–10% social housing and a minor percentage of private rented housing. A recent initiative to seriously address this situation could well result in a lawsuit before the European Committee of Social Rights[8].

Back in 2012, a group of organizations consisting of consumer organizations as well as real-estate developers concluded in their "Housingmarketplan" (Woningmarktplan, Wonen 4.0) that "the current housing market no longer meets today's requirements"; briefly:

- The market is not flexible enough; preferences of consumers/inhabitants are not sufficiently taken into account.
- Too much costs and too much risk.
- Loss of prosperity; not enough choice and not enough chances for "starters."
- Not enough market forces on the supply sides; not enough demand driven.

---

[6]Gopal, K. et al. (2019). Socrates 2019 , scenarioverkenningen van de woningmarkt in 2030.
[7]https://www.vastgoedactueel.nl/nieuws/'levensduur-woning-minimaal-120-jaar'
[8]https://www.mo.be/interview/vlaams-woonbeleid-naam-beleid-niet-waardig

Needs and numbers

In a Dutch daily newspaper, the current housing situation was recently qualified as a "drama"; without neglecting or downsizing the existing real problems for many people in obtaining a house, I still consider this a somewhat unduly phrasing. It is primarily a real drama for those – by now about 40.000 and counting – who are forced to live "on the streets" for whatever reason since we fail to accommodate others besides the ones fitting the traditional citizens/inhabitants profiles. Building housing is, due to its implications for society and the environment as well as (local) government, therefore also a most relevant political issue. Illustrative is also Article 22.2 of the Dutch Constitution: "Promotion of sufficient housing is the object of government concern."[9]

The current shortage is estimated between 331.000 (Rijksoverheid, 2020) and 315.000 houses (Rabobank, 2020), depending on the definition of this shortage. The usual way of defining is to compare the number of households with a registered address to the existing number of housing. The overall number is also influenced by the fact that many young people tend to stay with their parents, given the lack of adequate housing as well as people living on recreational sites – around 70.000 — which is, in fact, lawfully not allowed but sometimes tolerated.

The Dutch government states these days that about 20.000 houses need to be replaced each year due to their neglected/outdated condition and about 75.000 houses need to be built each year to answer the demand. Organizations that are devoted and/or committed to building communicate a higher number. At the same time, this number will decrease up to 2030 to an average 20.000; the average household size will have been decreased from 2,3 persons in 2005 to 2,1 persons in 2030. With the life-time of a house in mind – at least 120 years — it implies that what we estimate, plan, and built now most probably will no longer be an adequate answer in 50 years from now. This is also influenced by the fact that between 2040 and 2050, the Dutch population no longer will increase significantly.

According to research, the emphasis in building should be on owner-occupied homes and medium-priced rental homes. The costs, however, of building houses have since 2015 increased by 27% and, in 2018 alone, by 9%; to a large extent, the result of additional regulations concerning topics like technology and

---

[9]https://www.denederlandsegrondwet.nl/id/vgrnbtnluowp/artikel_22_volksgezondheid

sustainability. Recent (Dutch) statistics[10] show that our newly built housing was, in the third quarter of 2019, about 38% more expensive compared to the same quarter five years ago. The average price of a newly built house is now approximately €325.000 (May 2020); together with the possible mortgage percentage therefore only in reach for the ones who either have (sold) a house or otherwise have external finances. This more or less excludes "starters," also the category that is usually in no need or position (yet) for a one-family house but primarily for some form of rented space to live independent, to be extended/adapted when the personal situation requires change. This again is caused by the fact that what is delivered is a complete and finished house, not a framework for further (personal) infill. To a large extent, this is caused by (building, technology, and sustainability) regulations together with the "principle" of selling/providing an individual house with all functionality "needed" instead of sufficing with its preconditions, thus leaving the ultimate choices to the inhabitant.

Again, the entire situation of our housing requires a flexible approach as well as a flexible system to be able to adapt to unknown future demand and social developments.

System

The current system, in practice after World War 2, consists of mainly two processes: the "rented" social housing supplied by housing corporations and the "owned" housing supplied by project developers. A minor amount of housing is built as a private project, i.e., without both parties mentioned above, as well as a minor number of CPO-projects. After World War 2, about 60% of housing was "free rent"; last year, in 2019, this was reduced to 10%. The entire situation caused one journalist in a Dutch newspaper to conclude that "*the Dutch housing market is as bad as a medlar*"[11] (transl.mp). In this, he joined a number of expert writers who criticized the current situation for a variety of reasons. Bottom line, however, is the fact that, for decades now, the way we organize and build our housing is subject for fundamental critique, for a variety of reasons. Additionally, we fail to provide proper housing for groups of people who do not seem to fit into the traditional system: e.g., last year in the Netherlands alone about 40.000 (registered) people were

---

[10] https://www.cbs.nl/nl-nl/nieuws/2019/51/koopwoningen-bijna-6-procent-duurder-in-november
[11] https://www.volkskrant.nl/economie/de-nederlandse-woningmarkt-is-zo-rot-als-een-mispel~beb21df4/

homeless[12], with an increase of 74% between 2009 and 2015. (Note: the estimated number in all of Europe is about 410.000 people sleeping on the streets of European cities and 3 million homeless all together.[13]) This, of course, is not primarily caused by a lack of traditional housing first, but it is the consequence of the lack of elementary shelter/housing options provided within the current system of our built environment. Given the UN Declaration of Human Rights — i.e., everybody has the right to a roof over his/her head — this situation is most tragic and most of all in fact unnecessary (see also later in this chapter).

The building chain consists of a series of partners: the owner of the lands, the municipalities, the project developer, the architect, the builder/(sub)contractor(s), and — ultimately at the far end of the entire process — the inhabitant. Where it concerns the rented (social) housing, it is the corporation that is "responsible" for developing, building, and maintaining these houses. It seems relevant to mention the current attitude by some municipalities as well as project developers to wait – given the shortage on the housing market – and allow the price of land (the total amount of which will, without envisioned future extensions offshore, remain the same) to increase. Together with the increasing costs[14] of building housing the way we continue to do, this implies that for many people who wish to buy their first house ("starters"), it has become practically almost impossible to obtain one. It comes as no coincidence that, e.g., in Germany, we notice a recent statement by (SPD-politician) Kevin Kühnert that houses should only be owned by the one who lives in it[15]; a statement recently adopted by the cities of Amsterdam and Utrecht, mainly though for houses yet to be built. Parallel with this, there is the increasing topic of what is often called "Generation Rent," a plea for a thorough rethinking of the principle of ownership of housing in favor of its rent/use.

Illustrative for the existing policy and current problematic situation is a recent statement made by the CEO of one of the largest Dutch building companies: "*we simply have to develop and build houses first, before we can sell them*" (transl.mp), implicating that developing and building houses is still considered a (commercial) market system and thus reserved for third parties, not for a participating

---

[12] https://www.cbs.nl/nl-nl/nieuws/2016/09/aantal-daklozen-in-zes-jaar-met-driekwart-toegenomen

[13] http://www.home-eu.org/homelessness/

[14] Recent research concluded that the increase of costs is due, e.g., to innovative technological demands.

[15] https://www.focus.de/politik/deutschland/kommentar-kuehnert-macht-sich-mit-sozialismus-ideen-laecherlich-und-erweist-spd-baerendienst_id_10657766.html

inhabitant. Houses are considered a commodity; it is a process as well as a product completely disconnected from its user. It is, therefore, illustrative and encouraging that an increasing number of people is searching for other solutions besides the traditional ones, i.e., they take the initiative to organize themselves in cooperation or associations of inhabitants that plan/design/build their own housing project. Today's reality, however, is that current regulations, bureaucracy, and, in particular, the necessary plot of land create a barrier between good intentions and ultimate result: there is simply no level playing field.

As early as 2004, John Habraken concluded in an extensive STT-report: "*Not one of the parties that take care of the process of building housing sees any advantage of delegating design competence to the inhabitant. As long as there is a shortage of housing there is no pressure to admit the user. With this the shortage is in fact institutionalized.*"[16] (transl.mp) What is created and still in use is a system in which the inhabitant – be it the first or any next — has no real and lasting influence on what is one of the most vital and important (pre)conditions or entities in his/her life, i.e., the house. What is subject to market values, rented, or sold is some physical entity: a house, not its framework for a home. What is rented or sold has become part of a market with its own dynamics, with its own "(neo)liberal values," as well as its own lack of human values.

Habraken argued much earlier in 1972: "*if we wish to restore just the human relations in the housing-column, but do not wish to exploit the technological options of today, we only leave the way to the past, a way we cannot go.*"[17] (transl.mp) Extrapolated by me nearly 50 years later: the technological options of building our housing today seem to be restricted to the builder; the inhabitant is left with ways and means that serve cosmetic and/or comfort issues. The "way we need to go" is one that brings real innovation into the design and production process as well as in the building process, resulting in an innovative product that answers the needs of inhabitants; not only the first but also up to the last during the lifecycle of the building. This is outlined in, e.g., Habraken's "Open Building" theory[18] and presented in more detail in various texts and projects over a longer period of time. For those who still believe that this entire issue and discussion is a recent/new one, remember and (re)read what the Dutch Ministry of Housing, Spatial Planning and Environment (liquidated in 2010) wrote already more than 25 years ago in 1994:

---

[16] van Well, M. (Ed.). (2004). *Beter bouwen en bewonen*. STT. (p.264)

[17] Habraken, N. J. (1972). *de dragers en de mensen*. Scheltema & Holkema. (p.129)

[18] https://www.habraken.com/html/introduction.htm

"Can the new, varied demand for houses be met? Yes, among other things by flexibly renovating houses, every living requirement can be answered. The essence of flexible construction is the simple changeability of the layout and equipment of the home. Flexible building is also designing the layout of houses and the dimensions of the individual rooms so that flexible use of spaces is possible. (..) Architects and builders already have (re) construction methods available that make it possible to market a changeable home product. This includes forms of Open Building: separation of carrier and built-in systems and disconnection of the installations from other components. (..) From a technical point of view, nothing stands in the way of a flexible (re)construction approach."
Flexibel Bouwen, VROM, 93160/a/1-94, p.3–4. (transl.mp)

Something, however, obviously still is "in the way," given the actual status of what is acknowledged and encouraged in the above report; apart from only a few innovative solutions such as Wikihouse (an open-source prefab system) and Solid (prefab system for individual housing), it is the structure and content of the building chain as a whole, together with extensive rules and regulations that serve as a permanent barrier in itself as well as for its ultimate "clients"; i.e., inhabitants.

In a recent extensive article[19] in the Dutch daily NRC, Peter Boelhouwer argues that it is time for a 6th "Spatial Planning Note" (6e Nota Ruimtelijke Ordening); what we need is a new, broad spatial vision from the National Government, not only for housing but also including energy issues, nature/water management, etc.; a plea parallel to what the Dutch Chief Government Architect Floris Alkemade argues in his latest publication[20].

As said in the introduction, this text is by no means to be considered or qualified as a scientific study; it is an attempt to register and align the various technological/digital and social developments, stir up the already ongoing discussion, and cause an exchange of innovative thoughts, ideas, and initiatives that will bring fundamental change, optimistic as this may sound. A large supply of reports from various (inter)national research institutions frame and illustrate the situation, focusing on digital innovation, social/human behavior, or clean numbers. All assume that the ways and means used to facilitate our housing will/should be equal

---

[19]https://www.nrc.nl/nieuws/2020/04/16/hoe-de-overheid-zelf-de-woningnood-creeerde-a3996946
[20]Alkemade, F. (2020). *de Toekomst van Nederland*. Thoth.

to what they are now and have been so far since World War 2. The entire process is one of supply: depending on the expected and/or calculated numbers of (future) citizens, we envision, realize, and maintain a market-oriented – read commercialized — system that leaves the inhabitant aside and in the shades. Some building companies do realize that this inadequate situation can and will not last; they shift to other additional ways of ensuring their future "business" as usual but remain part and parcel of the same rigid, traditional system. It is therefore all the more illustrative that in the Netherlands NEPROM – The Association of Dutch Property Developers — in their recent report states that "*worries that, in light of the future, we do the right things. Are we together alert enough on where we should/have to go to proceed with the built environment. We lack a shared image of the future, not in the sense of a blueprint, but of a beckoning perspective*"[21]. (transl.mp)

One could question if, lacking a "shared image of the future," the goal and work of project developers could be in serious need of a fundamental discussion first on what it means to have a home, inclusive of what this represents or resembles in the networked future. After all, we build for a century at least; as argued before, it seems quite pretentious to add housing to the environment without even an educated guess on what the future will look like in 25 years. It is this "beckoning perspective" that needs to be thought, defined, and properly discussed, in particular, in the widest possible sense: which is the artificial (built) environment that we desire to inhabit, what is the position of the inhabitant, and which is the role technology has in this entire process? What is the role/position of each participant in the chain to ensure that — within a flexible system that serves the inhabitant — all participants needed will be able to function adequately as well as economically and sustainably responsible.

A most relevant issue in this entire discussion is the question "where to build what," i.e., depending again on the – moreover debatable — number of housing to be realized, there is a difference between building outside or inside existing urban areas. A recent Dutch report[22] by the independent think-tank DenkWerk emphasizes that their report "*focuses primarily on (spatial) possibilities to increase the supply of houses (..) towards 2050*" (transl.mp), arguing that only 35% of newly built housing can be realized within urban areas. The latter contradicts research[23] by Netherlands Environmental Assessment Agency (PBL) in 2016; they concluded that about 80% of the need for new housing could be realized within today's cities/urban structures (within a high-growth scenario until 2050). One could, therefore, question the expressed urgency

---

[21] https://www.neprom.nl/downloads/neprom/Thuis_in_de_toekomst_Eindrapport.pdf (p.25)
[22] DenkWerk. (2020). Klein land, grote keuzes - ruimtelijke ordening richting 2050.
[23] Duinen, L.van, B. R. & E. B. (2016). Transformatiepotentie: woningbouw in de bestaande stad.

for building "anywhere," in particular, outside cities in rural areas, let alone the traditional attitude of the "supply of houses" instead of rethinking this principle. The DenkWerk report also states that more control of the central government – instead of the local one — is needed to continue the spatial development; a statement heavily debated within the (local) institutions. The actual situation in the Netherlands in which envisioned/planned housing (and many other projects) is rejected because of problems concerning CO_2 may result in favor of both Rabobank and PBL-studies; what is essential, however, is that project developers as well as (local) governments stop deciding for others — read involved and participating citizens — on where and how they wish to live and start including (future) inhabitants in this process.

Over the years, an accompanying item/discussion was the envisioned reuse of abandoned buildings; often, empty office or utilitarian buildings. In the Netherlands, roughly 16% of office buildings is unoccupied[24]; a difference is made in periods of their vacancy. The part that concerns structural vacancy, i.e., unoccupied for longer than three years, is about 65%. The bulk is situated in — the periphery of — the three major cities and is often the property of (real-estate) investors. Recent study by Rabobank[25] first concluded that the focus of realizing the housing demand should be with the transformation of areas and buildings; second, $2.1-2.5$ million m^2 office space can be transformed into housing, and with an average surface of 70 m^2, about 35.000 houses can be realized.

Other system, same product

A recent report[26] by ABN-AMRO Bank illustrates other options for building: it – at last – emphasizes the possibilities for modular building (in general) and adds that if the percentage of using this method increases, the amount of housing could rise to 146.000 extra houses by 2030. These developments involve, e.g., a more industrialized process to prefabricate our complete housing, i.e., create/build a house in the factory in large elements, transport these to the building site, assemble and finish with its façade and roof. This, however, is *process* innovation, not *product* innovation. The final product is by no means — other than its production method — a different or even improved result compared to the traditional product. If the (in itself justified)

---

[24]https://www.clo.nl/indicatoren/nl2152-leegstand-kantoren
[25]https://economie.rabobank.com/publicaties/2017/juli/kantoren-omvormen-tot-woningen-transformatieatlas-nederland/
[26]https://insights.abnamro.nl/2019/12/modulair-bouwen-levert-40-procent-extra-woningen-op/

result of this "innovative" process is lesser costs of producing, it is the manufacturer/building company that profits, not the inhabitant. Responsible, innovative, and adequate systems of modular building in which the inhabitant profits will need to include options to easily adapt and modify common areas, housing plans, and details.

Sometimes now, building/project developers take the initiative to include the *first* buyer/inhabitant to the process of their *first* newly built house. Buyers is provided the option of choosing between predefined variations of interiors, including kitchen, tiles, carpets, etc., defined according to a presumed character, preferences, and/or lifestyle of the inhabitant in his/her home. The arguments communicated are that people have become more prosperous and demanding, and people do not wish to think about the basics of their house and also are supposed to be unable to distinguish a screw from a nail, afraid to pick up a hammer, and incapable of using a drill or a brush. Question here is whether this is true – I do not know of any research made in this – and, more important, whether the project developer is the appropriate self-appointed entity to answer and fulfill these questions and expectations. After all, when the first owner/inhabitant has moved within the 7−10 years' time, the next inhabitant will have other choices, other tastes, other preferences, etc., i.e., another life. It means that the principles of flexibility and circularity are dismissed from the beginning, discarded after the first inhabitant and therefore never become fully integrated from the start. Providing housing as a framework for homes means providing the (common) structures and resilient facilities for housing, not the building of individual entities that represent only an economic value subject to all anomalies of the market.

Urban economics

This entire range of causes and consequences illustrates the (sometimes conflicting) range of starting points, e.g.:

- Housing, as argued in the previous chapter, is an element within architecture; by realizing this, we add physical objects to common space. At the same time, we create an artificial distinction between what is privately owned and what is commonly used.
- Housing has a lifetime of about 120 years. It is utilized by a series of various inhabitants over this period, which implies that it serves as an integrated part of the built environment.

- Housing will (almost) always rely on infrastructure (water, electricity, sewer systems, etc.) facilitated by the community; again, therefore, part of the (built) environment.

Both raise the question of whether housing, in general, should be subject to discussions of ownership vs. rent; i.e., an element that is such an integrated (artificial) part of the environment may well be no one's or anyone's property. Depending on the country, the situation of ownership vs. rent varies of course, but if we focus on the Netherlands, there is – since decades — the continuing emphasis on ownership, argued by the supposed advantages of personal security, less financial risk, and the feeling that one's house is one's property. Also, there is the issue of quality as is argued by Marja Elsinga and Joris Hoekstra: "*Housing quality is an important determinant of housing satisfaction. The better the quality of the dwelling, the more satisfied the occupant of this dwelling is expected to be*"[27]. Given the fact that housing is a basic human right, a justified consequence would be that the difference between ownership and rent should not be expressed in quality of the built environment; providing the framework for housing should be envisioned and realized independent of its use.

As former UNHCR Special Rapporteur on adequate housing Raquel Rolnik analyzes[28], since in 2008 the EC issued their "SGEI" (i.e., "Service of General Economic Interest") social housing — therefore be based on a maximum income-limit — in, e.g., the Netherlands is considered a means of government-subsidized housing and was supposed/ordered to be brought in line with other European countries[29]. After objections from Dutch organizations devoted to building social housing and a (legal) discussion of many years, the end result was/is that for several hundreds of thousands families, their housing was not "market-valued" and as such became far too expensive for many. In general, on the larger scale: "*the mercantilisation of housing (..) deeply undermined the right to adequate housing around the world. The belief that markets could regulate the allocation of housing, combined with the development of experimental and 'creative' financial products, led to the abandonment of public policies that regarded housing as part of social commons.*" (ibid., p.21)

---

[27]Elsinga, M., & Hoekstra, J. (2005). Homeownership and housing satisfaction. *Journal of Housing and the Built Environment, 20*(4), 401–424. http://doi.org/10.1007/s10901-005-9023-4

[28]Rolnik, R. (2019). Urban Warfare. Verso. (p.51)

[29]https://www.housingeurope.eu/resource-487/european-court-objection-housing-associations-to-sgei-decision-manifestly-unfounded

From the UN website[30]:

- Half of humanity – 3.5 billion people – lives in cities today and 5 billion people are projected to live in cities by 2030.
- 95% of urban expansion in the next decades will take place in developing world
- 883 million people live in slums today and most of them are found in Eastern and South-Eastern Asia.
- The world's cities occupy just 3% of the Earth's land, but account for 60%−80% of energy consumption and 75% of carbon emissions.
- Rapid urbanization is exerting pressure on fresh water supplies, sewage, the living environment, and public health
- As of 2016, 90% of urban dwellers have been breathing unsafe air, resulting in 4.2 million deaths due to ambient air pollution. More than half of the global urban population was exposed to air pollution levels at least 2.5 times higher than the safety standard.

The Dutch Sustainable Finance Lab (DSF) calculated[31] that over a five-year period, between 1996 and 2001, the total value of Dutch houses doubled, therefore demanding much higher mortgages for those who could buy and − accordingly – good business for project developers as well as bankers or other suppliers of loans involved. Also, increasingly, houses are bought for renting out, causing more shortage and higher prices. In his article[32], DSF chairman and economist Rens van Tilburg adequately illustrates the problem and refers to two-track answers (proposed by economist Josh Ryan-Collins), i.e., solutions focused on the banks/financial sector and solutions focused on the housing market and taxes. Since I am no economist and these texts focus primarily on (the architecture of) our housing as such, I will limit myself to the latter, with the addition that one element in this seems worth further rethinking. Van Tilburg concludes that the most fundamental – but hard to achieve − solution is to return the land to the community which will − in part − reduce the costs of building in the first place. This brings another – in many ways − connective element to the foreground, also

---

[30] https://www.un.org/sustainabledevelopment/cities/

[31] https://sustainablefinancelab.nl/wp-content/uploads/sites/232/2014/07/SFL-rapport-Een-schuldbewust-land.pdf

[32] https://decorrespondent.nl/9691/waarom-zijn-huizen-zo-verrekte-duur-en-nog-9-vragen-en-antwoorden-over-wonen-in-nederland/1894992889702-c3dd73d4

because both are closely intertwined and could be the basics of a fundamental shift in providing housing. Like "the Economist" argued on January 16th 2020 in their article: "Home ownership is the West's biggest economic-policy mistake": "(..) *housing policies have made the system unsafe, inefficient and unfair. Time to tear down this rotten edifice and build a new housing market that works*."[33] The obvious parallel with the Balçi-article at the beginning of this chapter seems worth noting here.

Changing systems, shifting roles

One of the main important principles of rethinking and realizing other ways of building and supplying housing was/is the concept of a split between infrastructure or main structure and infill (see Habraken or Leupen, Constant, and the Metabolists). The "*essence of the concept*," in Carlo Ratti's words "*is the separation of the individual from the collective, of the part that changes frequently from what is more stable*"[34]. Earlier, John Habraken and, later, Bernhard Leupen in the Netherlands argued for this same principle, and for good reasons: "*To make a home that can withstand the influences of time, this home must be able to accommodate all kinds of possible future forms of habitation and use*"[35]. This principle can be exercised in two ways. One is maintaining the separation between individual houses but abandon its specification within, i.e., no predefined plans; therefore primary functions only. Two, the more fundamental way is to abandon the separation completely and provide a main generic structure on a (much) larger urban scale to facilitate any plan or function (see, e.g., Constant's New Babylon).

It also seems a logical consequence to add the "stable" main structure to the community, for reasons of ownership, sustainability, maintenance, flexibility, and last, but not least, providing lasting freedom for its inhabitants. The question arising of course is if, and if so to what extent the community – be it state, city, or other – is the adequate logical entity to address these questions. As said, building housing is to a large extent also a political issue: in September 2019, it is the Dutch government that takes initiatives to speed up the process of building housing by granting a series of measures that should facilitate and "guarantee"

---

[33] https://www.economist.com/leaders/2020/01/16/home-ownership-is-the-wests-biggest-economic-policy-mistake
[34] Ratti, C. (2015). *Open Source Architecture*. Thames & Hudson.
[35] Leupen, B. (2006). *Frame and Generic Space*. 010 Uitgeverij.

this. Whether this causes any real change in the way we envision, design and build remains a question: the parties addressed are primarily the same ones that are, in part, responsible for the current situation.

Again, the obvious option is a system of Open Building, e.g., as defined decades ago by John Habraken *cum suis* and, later, adequately described[36] by Stephen Kendall. Returning to the small gray book from the introduction, i.e., Habraken's "the support and the people" (1962), it is this most actual argument that again retains its value: "*A meaningful industrialization of housing only has a chance of success if the individual resident is given a full place in realizing his or her own home. No half participation and no reduction in industrial production, but a new relationship between producer and individual user in a new society: the end of mass housing*"[37] (transl.mp). It is this "meaningful industrialization" – provided, in part, with increasing technological possibilities – that offers all participants in the housing chain options for a role of design, maintenance, and reuse[38]. Since I will describe this further in Chapter 11, I will suffice here with its framework as described by Frans van der Werf: "*When it concerns the levels of change within the built environment the core question can be 'limited' to who decides, in what frame and about what?*"[39] (transl.mp).

Even the Dutch National Housing Agenda (Nationale Woonagenda, 2018-2021) states that "People want to give more and more substance to the way they live"; since our house serves as a framework for our home, the next chapter will discuss this ever-complicated issue.

---

[36] Kendall, S. (2015). NOTES on the History and FUTURE OF OPEN BUILDING and the OB Network. *http://Open-Building.Org/, 104*, 1–7. Retrieved from http://open-building.org/archives/Notes_on_the_History_and_Future_of_Open_Building_and_the_OB_Network.pdf

[37] Habraken, N. J. (1972). *de dragers en de mensen*. Scheltema & Holkema. (zie ook: https://openinbouw.nl/open-ontwerpen-en-gebouwen/

[38] Some years ago, Jan Rotmans stated in an interview in Bouwformatie (January 2015) that "as a builder you have to employ people that know people" (..) "what building company employs social-psychologists?" (transl.mp).

[39] Werf, F. v. d. (1993). *Open ontwerpen*. 010 Publishers.