

BEYOND THE CRISIS: TOWARDS A NEW URBAN PARADIGM

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PART 1

The Current Context of Crisis, its Roots and its Opportunities for Change

The Crisis We Are In

We live in the midst of a structural crisis that affects everything and everybody.

It is not the end of the world, but it is the end of one particular world, the world built in the last two decades on a card house of speculative global finance. The current crisis is not just economic. It is a social, environmental, spiritual and spatial crisis that has resulted in an economic collapse, and may usher in a number of ominous developments.

Furthermore, the urban dimension of the crisis is not peripheral, but central to the model of social and economic organization that led to the current massive default in finance, in consumption, in production, and in employment. Indeed, the trigger of the crisis was the crumbling of the housing mortgage market as a result of the high risk lending practices, the so-called subprime loans. Moreover, these unsecured mortgages were used as collaterals for other financial products, particularly for synthetic securities developed by financial institutions in a context of loose regulation and lack of transparency. Thus, when the real estate bubble burst and mortgage market started to default the crisis in housing finance spread to the entire financial system because of the over-exposure of lending institutions and their insurers. With the largest financial institutions in a state of technical bankruptcy that forced massive government intervention to bail them out, lending stopped for all practical purposes. And this is the root of the crisis because consumer demand has largely been fueled by easy credit, and consumer demand accounts, both in the U.S. and in Europe, for over two thirds of GDP growth. Current attempts to fix the financial system depend on restoring trust, because trust is the foundation of financial markets, both for lenders and for borrowers. But restoring trust requires establishing a new regulatory framework

that provides transparency and eliminates, or exposes, high risk financial practices, such as cds, cdos, and other exotic derivatives, while bringing under control the hedge funds that populate the world wide web of speculative investments. This is tantamount to say that the era of easy credit has ended. Not of all credit, but of credit provided on the basis of the artificial value of obscure securities based on shaky assumptions and unreliable warranties. Because this accounts for the largest share of capital made available for lending in recent years, the pool of capital is shrinking dramatically, as banks and financial institutions focus on cleansing their “toxic assets” and bringing their books in order, without giving up on their executives’ bonuses. Since credit is the main source of consumption, we are entering in a post-consumption society. Not in the sense that people cannot buy their groceries or drive their cars (although some are already there) but in the sense that living to work - to borrow - to consume has become an obsolete way of life.

Financial smoke and mirror strategies have been used to prop up everything from consumer confidence to real estate prices to their extreme. Entire metropolitan and suburban areas, especially along the sunbelt, were built as giant Ponzi schemes. These places never offered anything else other than the promise of profit. Profit to the developers and the banks first and foremost, and profit to the contractors, the builders, the loan brokers, lenders, real estate agents and home buyers and sellers. Other than the now busted promise of instant profit these vast spans of new homes sprawling in a boundless territory had no raison d’être. They brought no quality of life to the individuals that dwelled in them, yet downgraded the quality of the existing cities, diluted infrastructural resources and most of all, destroyed the environment.

Despite of the fact that according to the 2000 US Census there are slightly more single households than nuclear family households, a trend more pronounced in metropolitan regions, policy makers, politicians and urban planners have never dared to question the fundamental validity of the single family residence as the building block of the modern “city”. Although track developers still sell the 50’s idea of the

American Dream, most metropolitan Americans are too diverse to truly buy into that homogeneous image. So why has the system been so utterly resistant to new planning policies that would reflect more adequately the diversity and demographics of a place? The answer lies beyond the explanation of nostalgia in the realm of turn-key profit. To add true value to a place would necessitate knowledge of the place, the local culture and the environment, which would take time and care to find out. A one-size-fits-all zoning regulation on the other hand allows for a replicable formula of development everywhere, maximizing short term profit.

The good news is that this profit scheme has lost its validity, with the areas built according to the formula being the ones with the steepest drop in real estate value across the US. The bad news of course is the fact that the people who bought into it, often by lack of other choices, aren't spared from huge financial and personal tragedy. The other bad news is that we are left with the environmental hazard that these huge areas of suburban tract housing represent. Many of these formula-driven developments are abandoned and dilapidated only a few years after their completion due to the mass exodus of home owners that followed the mortgage crisis and due to the poor construction methods that require constant and persistent maintenance of the houses to keep them from falling apart.

While there is a general consensus that there is very little to lose in a seemingly bottomless drop of real estate values, the opportunity arises that we may enter a time for renewed experimentation. It may even be feasible that entire communities, especially the most financially damaged ones, would willingly adapt new urban policies to help them recover from the current multi dimensional disaster.

Urban Transformation and the Taming of the Economic Crisis

Urban policies have always been connected to the management of the transition from one economic model to another. The United States could only emerge from the Great Depression of the 1930s by the gigantic mobilization of resources that was required by World War II. The military industrial machine was the most powerful economic stimulus in the history of the country. But its effects started to vanish after the war ended. And so, something else had to replace this growth machine. This something else was the federal urban policy of the 1950s, more by serendipity than by design. The new mortgage policies established in the 1930s and deployed from the late 1940s onwards induced the dramatic expansion of the American suburbs. In turn this expansion was made possible by the Highway Act of 1956 that provided federal subsidies (up to 90% of the cost) for the construction of metropolitan freeways. Both the suburbs and the freeway program supported the expansion of the automobile industry. And the combination of mortgages and easy credit for the purchase of automobiles and household appliances favored the rise of the self-sufficient suburban single family dwelling, fully equipped for family life, and with a full time worker, the suburban housewife, to manage the unit and provide transportation and services for the family at large. Hollywood did the rest idealizing the fairy tale in a series of wonderfully reassuring movies. This was a most efficient machine of capital accumulation and social stability at the same time, a machine that created a large middle class in America, and improved the quality of life of millions of families for as long as the dream could be sustained. Gradually, the model, that even in its original version left out large segments of the American population, particularly among the ethnic minorities, evolved towards its demise. Starting with the disappearance of the full time suburban housewife that become also a salaried worker and who rebelled against its subordinate condition in an isolated household. The rest of the story is well known, as new forms of lending and investment, also supported by mortgage policies and real estate schemes, spiraled the system out of control, triggering

the current crisis.

As in the 1940s and 50s, economic recovery depends on major stimulus spending undertaken by the federal government and/or facilitated by government programs.

This ultimately means the restructuring of urban space, a new housing program, the construction and repair of physical infrastructure, and a new transportation system.

To this it must be added in our historical context an environmentally sustainable dimension to every one of the strategies of urban development and infrastructural construction. If these various policies converge towards a new urban model, as the previous policies created the suburban way of life, new forms of sociability may emerge associated to the new forms of urban space. Therefore, the management of the crisis and the production of a new city, better suited to respond to the challenges of the 21st century, may go hand in hand in a process of multidimensional social and spatial change aimed at superseding the multidimensional crisis we are in.

Under the current conditions of confusion and potential chaos, we believe in the power of ideas as levers of transformation. Thus, we want to contribute to the growing debate on which kind of city may better respond to the economic, environmental, social and functional challenges of the new world we are entering, reluctantly for most people and institutions, as a result of the bankruptcy of the economic and spatial model on which our lives have been based. More often than not in history, change happens because the old system cannot function any longer. However, change does not necessarily mean improvement. A shrunk model of capital accumulation in the urban environment may result in retrenched urban fortresses surrounded by marginalized settlements rather than in a redeployment of our ability to live together. And so, we want to propose a number of initiatives that could change the course of urbanization towards a sustainable city with a better quality of life. We do not indulge in utopia. The problems we are facing are too serious to play with dreams, in spite of the energizing value of dreams. We are identifying some of the decisive flaws of our

urban living, and suggesting a number of practical initiatives to induce the transformation of our built environment. Because of the tentative character of our elaboration, we have chosen to open a series of windows on a possible new urban world, rather than articulating a systematic urban vision. This stems from our conviction that transformation does not follow an orderly rationale but rather it results from multiple mutations in various dimensions of the urban system that, in their convergence, end up modifying the overall dynamics of urban space. For the time being, and for the sake of the argument, we are keeping in mind as a point of reference one particular type of urban form: the polycentric metropolis in the United States. The Southern California metropolis, with Los Angeles at its core, is archetypical of this urban form, and the fact that we live in Los Angeles certainly influences our approach. Yet, there is ample evidence that many sprawling metropolitan regions around the world share many of the same problems that we are addressing in this article. Furthermore, while specific spatial and social contexts call for specific policy proposals, we believe that the underlying principles of our urban intervention apply, with the proper adaptation, to most of the forms of human settlements on our urbanized, endangered planet.

Looking at urban forms and processes from the people's perspective, there are some basic needs and desires that cities should provide: a decent, affordable shelter; a healthy environment; adequate urban infrastructure; a communication/transportation system that ensures mobility and connectivity; personal safety and psychological peace of mind; access to health and education; a spatial form that facilitates sociability, anchored in public spaces throughout the metropolitan area; the capacity to satisfy a share of the basic needs without depending on commercial consumption, for instance, growing their own food within the territory of the metropolitan area (urban farming); the ability to express peoples' culture at large, placing art and culture at the heart of social practice; the integration between the built environment and the natural environment. We must add from the point of view of humankind and its future, the environmental sustainability of the metropolis, and of the earth's eco-system at large.

Of course, people also need jobs, and income, and a sound local economic development policy. However, we contend that while the current system is broken, both economically and spatially, the process of urban transformation we are suggesting may support a new model of economic growth based on true value, higher human creativity and a regulatory system that would maximize economic yields, including employment, while minimizing waste and speculation.

Two distinctly different problems arise at this point in urban history: Considering the failure of 20th century planning, what is the new way of creating meaningful cities? This approach assumes a clean slate as a starting point and may serve as a template for creating new patterns of spatial development in parts of the world engaged in building brand new metropolitan regions adjacent to current cities or in rare cases, in the middle of nothing.

Considering the global economic and environmental crisis however, the more urgent question and the one we will be addressing here is, how will we transform the failed 20th century city into a usable model for the future?

We will not cover in this article the whole range of issues that we have laid out. We will focus on specific urban functions to illustrate the kind of new urban strategies that could deal with the current economic crisis, alleviate the global environmental crisis, and induce new forms of urban life that would be people-centered rather than profit-centered.

A Rescue Plan for the Polycentric City: New Transportation & Landuse Policies

Moving People, Saving Energy, Cleaning the Air: The 21st Century Multimodal Transportation System

Functional cities and a functioning economy rely on timely and efficient movement of people, information and goods. The economic prosperity of a region is directly proportional to this matrix of movement. Especially in the new age of an idea based economy, the quality and number of connections created by people to people and people to information is an essential factor of productivity. The more quality connections a person can establish in an average day, the higher the chance of that person adding innovative value to the economy. The ease of dissemination and exchange of ideas is a key factor of an idea based economy.

On the other hand, an idea based economy will never outdate the need for transporting goods to the users. Whether they come in form of computer chips or vegetables, cities will always depend on efficient transportation of goods.

A regions economic well being is therefore completely dependent on its system of transportation. And the system of transportation is completely dependent on government intervention, as the infrastructure for the most part falls into public domain. The only exception is the transport of information in form of airwaves and cables, which is typically controlled by private corporations as it does not necessitate a large amount of physical space. Transportation of people and goods on the other hand requires a network of established physical paths throughout the region that only a governmental entity can control. Since governmental agencies are run by politicians who typically think in office-term time spans and usually lack the funds and the power to decide over entire metro regions, there have been few innovations in the transportation sector despite the incredible growth of cities worldwide. And because

of the scale of importance of transportation to the economic wellbeing of individuals and cities as a whole, huge numbers of people across the globe are making unreasonably high investments of time and money every day for their mobility, causing financial and personal depletion and a corrosion of social structures. Furthermore the current flaws in transportation have been a core contributor to pollution and global warming in all developing and developed regions. The problem of transportation is so far reaching, infrastructural and financially burdensome, that politicians worldwide have been scared to touch the subject until its dysfunctions have reached disastrous levels. At this point, only drastic interventions will be able to take large metro regions out of a downward spiral of gridlock, pollution and inefficiency.

In order to find solutions that fundamentally help cities out of these transportational dysfunctions rather than aggravating the current situation further the problem of people movement needs to be addressed from many angles. For one, it needs to be addressed on the level of infrastructural possibilities. Then it needs to address the quality of the individual carriages. And finally it needs to address the overall need and distance of travel.

Infrastructural Possibilities

Because infrastructure is the most financially and bureaucratically daunting of tasks, it has generally been the least explored. The propositions outlined in this article therefore may seem radical or utopian even. The truth is that they are no more radical and arguably more doable than any of the past great infrastructural interventions, such as the building of freeways, train and subway systems. In fact, they are the type of infrastructural investment tailored to assist regions out of the current economic, environmental and structural crisis on a long term basis. It is to be understood that no feasibility studies of the following proposals have been done at this point in time and that these types of proposals could only come into existence if people and subsequently the politicians were to subscribe to the ideas on a massive scale.



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Looking at cities across the globe, clearly the most miserably ineffective ones are the ones that rely on a single mode of transportation, usually the surface street catering to the automobile with the bus as its only alternative. Usually the cities that either exclusively or very heavily rely on surface street transportation tend to be the ones that have made little or no investments to make the surface streets safe for sharing by transportation modalities other than cars including motorcycles, bicycles and pedestrians. Incidentally these mono-transportational cities have the most gridlocked streets, and therefore the idea of removing lanes from an oversaturated system of streets to provide space for alternate surface transportation modalities would mean to aggravate the already deficient situation and would most likely gain little support from people or

politicians. In contrast, the cities that have at least two existing modalities, such as surface streets and a thorough subway or light rail systems already function exponentially better than their mono-transportation counterparts. Cities with dual systems are able to absorb higher urban densities without collapse and they provide residents with options that fit and include a more diverse range of social classes and personal circumstances. The higher urban density allows for people to live closer to work and the transportation options help people effectively avoid unnecessary financial and personal hardship over their mobility. This is a key factor in giving people and a city its competitive edge and providing its region with economic prosperity. The infrastructural interventions we propose here are a mere extension of this line of reasoning. They are



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the creation of a multi-modal transportation network. This new network is to be superimposed over the existing infrastructure, so not to inflict major additional cuts through the city and stresses on the existing structures, yet to provide an array of new options of transportation modalities to the city dwellers. In other words, existing cuts through the city fabric (major roads, freeways, etc) would now be utilized for multiple purposes, rather than the current mono-function, in a multi-tiered approach.

What is important about this proposal is that bicycles and similar low impact modes of individual transport are given their fair share. This means more than the creation of bike paths, because the distances to be travelled in most large metro regions, even with increased density, are still considerable. Therefore bicycles need safe, pleasant bicycle freeways where no traffic lights are hindering their speed of travel. In some instances, such freeways could be created on the ground along existing rivers and storm drains that already carve a car-free space through a city. In few cities, it may be conceivable to close an entire thoroughfare to traffic permanently and designate it a bicycle freeway with under and over passes getting traffic from one side to the other. In most cases though, this would be unfeasible. Rivers and storm drains do exist in most cities, and even thought

they could not take care of an entire network, they could for relatively small investments cover some grounds with the potential of added beauty of the riparian landscape, that in most cities would have to be reestablished out of the existing concrete channels. As ideas of reusing water channels for pedestrian use have been explored by others already see [L.A. river proposals](#) as example, we will not elaborate these proposals in further detail in this article but rather focus on and illustrate the multi-modal highway and freeway solutions that will, with the appropriate investment and planning, work for all cities in one form of adaptation or another.

In this proposal, the alternate modalities are to be superimposed over large thorough streets and freeways by creating an upper level street in a way to maximize the benefits and minimize the disadvantages of each mode. For example, the most pleasant modalities in terms of least noise and pollution and greatest esthetic value get the most privileged position, the top. Such include bicycles, pedestrians and any other quiet, non-polluting mode of transport. Below that, a suspended, mono rail system connects the citizens with mass transit in places where subways are nonexistent and/or not feasible. Below that again still continues on car and bus traffic as usual, although hopefully in revised forms of



vessels. It is to be noted that modern mono rails are relatively quiet and their noise would barely change the overall noise level of the existing freeway traffic. In addition, the platform of the upper level bicycle freeway as well as all the vegetation above and along the transportation-artery will greatly contain and reduce the noise levels and the vegetation will help mitigate the pollution of the car traffic. The point of this multi-tiered, multi-modal transportation infrastructure is to elevate people to the top of the food chain, rather than the bottom. People and people powered transportation means will now have an elevated, safe, esthetical, efficient and panoramic parkway system to move around the city.

To the critics that argue that such structures would be too costly and difficult to construct over existing streets we suggest, that they could be built for equal or less the cost of building a subway system. But compared to building a subway system, there are numerous advantages. For one, construction is a lot easier and cheaper over ground than underground. The structure can be prefabricated and only the column footings have to be cast in place. These footings are located outside of traffic lanes, either in a center median of a major road or on the outside of a freeway, thus not obstructing traffic. Then the prefabricated pieces can be lifted in place and tied together relatively easily; one reason why mono rails have shown to be less expensive than subways. Beyond the staging and economic advantages over the subway (especially in



seismic zones), the proposed over-ground solutions have many more advantages: They create multiple modes of sustainable and beneficent transport solutions in a single approach, beyond just the mass transit. Moreover, these new bicycle highway structures will also serve as distributed public parks, with the bike paths lined by trees, softscape and hardscape for relaxation, walking and playing. To build the admittedly concrete rich structures without the normal energy needs and associated CO2 production of cement, the proposed multi-modal superstructures should be built using the new Calera

concrete technology which sequesters carbon dioxide from the atmosphere when producing concrete rather than releasing CO2. This negative CO2 balance will keep the environmental impact of construction to a minimum, while empowering millions of people for many generations to come to make environmentally healthy transportation choices.

Generally, the highways and rail will be accessed via elevators from the street, with level one being street level, level 2 being the mono rail level and level 3 the pedestrian/bicycle highway. This will facilitate the interchange between car, rail and bicycle/pedestrian



interchange between car, rail and bicycle/pedestrian use. In combination with strategically located parking facilities for cars as well as bicycles (and the like) on all major nodes of the network, an on-demand transportation system will give users complete flexibility and freedom of choice. On-demand cars at the parking facilities and on-demand bicycles above combined with the rail will cover the entire array of transportation needs for people without burdening them with the need to own and store all vehicles personally.

It is easy to discard or severely underestimate the potential number of cyclists who would choose this mode of transport for their daily commutes. The fact is that now in most mega cities the percentage of cycling commuters is very small. But the opposing fact is that in cities where urban policies have made cycling attractive and safe, the number is huge. In Amsterdam for example, 30% of people use their bicycles for their daily commute and another 40% use the bicycle sometimes for commuting. In the same city slightly more trips are made every day by bicycle than by car. And to put it in perspective, Amsterdam is not blessed with perfect year round weather, so these numbers could be even higher in the sunbelt cities of the world. In many other European cities bicycles make up 20% or more of the commuter trips, so Amsterdam is not so much an exception as it is an illustration of highly effective planning policies. China's cities on the other hand used to have an 80-90%+ share of

bicycle commutes until the last two decades slowly deteriorated safety and thus desirability of bicycle commuting. At the same time, given China's recent interest in sustainable growth policies and its fearless approach to infrastructure projects, the People's Republic could be a prime candidate for introducing a network of bicycle freeways. To all those that say bicycling is not a practical way to get to work, here a few facts and a few solutions to alleviate the minor flaws of practicality.

- Bicycle freeways will allow for non-stop flow of cyclist traffic as opposed to bicycle paths on the ground that are subject to traffic lights. This will make bicycle commuting efficient and comparably fast. Average bicycle speed on road with no traffic signals is 15-25 mph depending on person, but can be 30mph for trained cyclists. This compares with and often outperforms the speed of freeway traffic during commuter hours. (In comparison Metro Rapid Bus service on Wilshire Blvd in Los Angeles has an average daytime speed of 11.7 mph, with even slower speeds during rush hours.)
- The elevated structures (super arteries) can be combined with surface bicycle paths (veins) and neighborhood roads (capillaries) for a complete network.

- The entry/exit points of the arteries will be major nodes in the transportation network and offer amenities catering to the cyclists, joggers and pedestrians. Such amenities would include

juice stands, outdoor restaurants, showers and spas, repair shops and bicycle on demand stations to name a few. Facilities may be creative in catering to this new class of commuters.



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Shower and spa houses may also offer a rent-a-closet service where people can store their work cloth to change into after a good workout and a shower on the way to the office. Cleaning service of work-out and business clothes is an obvious extra...

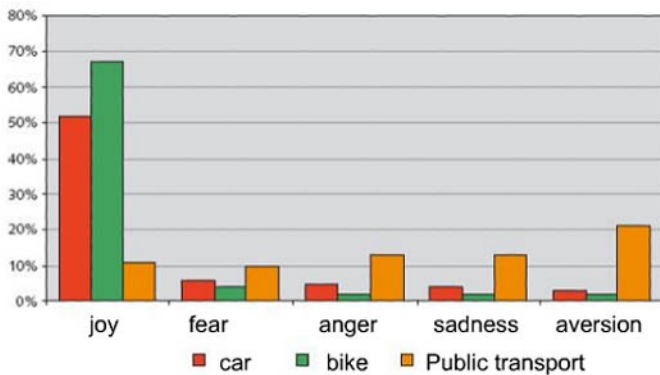
- Depending on the local climate, the bicycle freeways can be designed covered, partially covered, shaded, heated or cooled. In line with the ecological ideas outlined by this proposal, heating and cooling should be done by nature, in form of radiant floor heating generated by solar water heaters on the roof above, or cooling via flowing water curtains and enhanced

air ventilation, again powered by solar cells, wind turbines, etc installed above/along the freeway . Even for climates without the need of temperature enhancement, shading or roof structures may consist of high-tech PV panels that function as a distributed solar power station and possibly run the suspended rail below or charge the electric vehicles on the ground or serve any other number of power needs catering to the local transportation system.

- Commuting on a bicycle will make for happier, healthier and more effective people. It will also make for more productive workers, as daily exercise will keep them healthy and all

the endorphins released during exercise will leave them in a good mood. It will help people's personal relationships too, as they will not need to take out that additional time after an exhausting commute to zone out, and they won't even need to take the time out for the gym as they have already taken care of daily exercise. Instead people get to spend the extra time with their friends and family. Commuting in traffic makes many people feel anxious, depressed, angry or resigned and more than everything, it makes them exhausted. If they can replace these negative emotions even for a couple of days a week with positive ones, it will make a big difference in people's personal lives. As studies show, cycling has been rated the highest in the emotion of "joy" in relation to modes of transport even while traffic jams were not considered in the survey.

Emotions linked with modes of transport



1. Image from the Dutch Bicycle Council from a presentation given by Hans Voerknecht

- Bicycling and walking are the most inexpensive, the healthiest and the most environmentally sustainable modes of transportation. They are therefore the best candidates to rejuvenate the people and the economy while taking care of the environment. To complete the network of bicycle and pedestrian paths for a safe door-to-door connection, surface paths need to be created providing access to the cycle superstructures.

The obvious question regarding this proposal to most people is how to finance such an ambitious infrastructure project during these financially challenged times. Therefore we suggest some ideas on potential financing for both initial and ongoing costs. These ideas are based on a US proposal but would apply similarly to any part of the world.

- **Governmental Infrastructure grants:** "Obama's New Deal" provides generous infrastructure grants for projects that put people to work and make long term investments into the economy and the environment. This project would qualify under all these conditions.
- **Low interest government loans:** Low interest government loans can bridge the upfront engineering, planning and construction costs and be paid back with the revenues sources described below.
- **Gasoline taxes:** Gasoline taxes per gallon of gasoline pumped at any station in the state would generate an enormous income while curbing pollution. Americans have never been so eco-conscious as they became during the period of 4.-/gallon gas prices in 2008. Alternative energy sources and related businesses flourished like never before and at the same time, it became hip to be green. Now that gasoline prices have dropped, it would be a perfect time to keep them artificially elevated and take the billions of gas-tax revenues to sponsor long term infrastructure projects such as the proposed one to ensure the economic and environmental wellbeing of the region in the present and future. It would be an economically unfair proposition towards low income families if such elevated gas prices wouldn't be creating alternative transportation modalities. But since they are doing just that, they would actually create a much more economically fair environment that gives individuals choices and ensures the regions long term prosperity for all.
- **Zoning change:** Changing the zoning along the bicycle highways/freeways should allow for mixed use and unlimited height restrictions. This will substantially

lift the property values and all taxes deriving from new developments and sales along these multi-tiered transportation arteries will go directly towards paying back the low interest government loans taken out for construction.

- Leasing revenues:

The leasing revenues of commercial spaces within and above the infrastructure to various tenants including restaurants, cafes, retail, vehicle rental stations, gyms, spas etc will create a steady cash flow helping to subsidize the structures.

- CO2 tax credits:

CO2 tax credits can be sold on the international market and sponsor all the carbon dioxide offsetting installations/materials, including PV cells, wind generators and the calera-process produced concrete.

- Tourism:

If a city were to be brave and bold enough to implement such a network of bicycle highways and bicycle freeways, it would most likely cause a major tourist influx as many people would love to experience a metropolis by bike. Tourism increases have been linked to interesting architecture and attractive city planning all over the world and the additional tax revenues from such a tourism upswing are likely to be sufficient to pay for maintenance, security and ongoing operations costs of the structures.

- City wide gentrification.

More functional, people friendly and healthy cities attract more talent from a global market and result in city-wide gentrification. This again means more tax revenues for the city to pay for the attractions.

To complete the network of bicycle and pedestrian paths for a safe door-to-door connection, surface paths need to be created providing access to the cycle superstructures. Since only secondary neighborhood streets are affected by these feeder paths, most urban settings will be able to accommodate them. How this is done and where is idiosyncratic to the particular city and neighborhood, but here an outline of a few possible planning methods on how to realize this:

- Turning low traffic neighborhood streets into one-way streets and designating the other half of the road for pedestrian/bicycle use. To

separate the two parts clearly and beautify the roads, trees and landscaping should be planted in the middle.

- In neighborhoods that are being newly developed and areas where backyard setbacks are clear of structures, a pedestrian pathway can be placed along the backyard line, thus creating a parkway system between people's yards, totally separate from car traffic. This would be a very idyllic path but in existing neighborhoods it would mean people have to give up a piece of their backyard to designate it for the common good.

- In neighborhoods with very wide, low traffic streets, such as some industrial park areas and suburban areas, the center of the street, at least 12' in width, may be designated for pedestrian use. Again, this would need to be separated from car traffic via landscaping and trees. Being in the center, cyclists would not be interfered and endangered by parking cars as they are in typical side of the road bike paths. Plus, the double width path separated by landscaping creates a better quality space than regular side of the road paths.

- Removing parking lanes for narrower streets and turning the extra space, preferably in the center, into bike paths and placing the parking spaces into neighborhood parking structures.

- Using part of residential front yard lawn spaces and turning it into a bike path for the common good. Most people never spend time in their front yard anyway and would not necessarily be opposed to giving up a piece of this maintenance heavy land for a useful neighborhood feature

Quality of vessels

Compared to infrastructure, considerably more creative work has been done in the field of improving the individual transportation vessels. There are working prototypes today for everything from intelligent city cars to smart motorcycles and self-charging electric bicycles... One of the hold backs to these intelligent vehicles has been the lack of safe and efficient environment to drive in and a clean



Vehicles developed by the MIT Program "Smart Cities/Mobility", led by William Mitchell

and effective way to charge the powered vehicles. What is clear is that the petroleum based vehicles of today do not hold the future of tomorrow, as they are both economically and environmentally unsustainable solutions.

For an exemplary illustration of a collection of smart vessels you may refer to the MIT smart city mobility program developed by William Mitchell. These and other smart vehicles would combine well with the proposed cycle freeways.

Landuse and the Need and Distance of Travel

Finally, metropolitan transportation depends on the structure of transportation flows that ultimately depends on land use patterns. A well established tradition in transportation planning emphasizes the land use/transportation link. Ultimately, this amounts to increase the multifunctionality of sub-metropolitan urban areas, so that residences, services, commercial facilities, and jobs, are clustered, thus limiting travel between mono-functional spatial units. Although this is an old principle of city planning, articulated in the original schemes of British New Towns, it was abandoned in practice under the pressures of land zoning dictated by the interests of real estate developers. Thus, the polycentric metropolis should

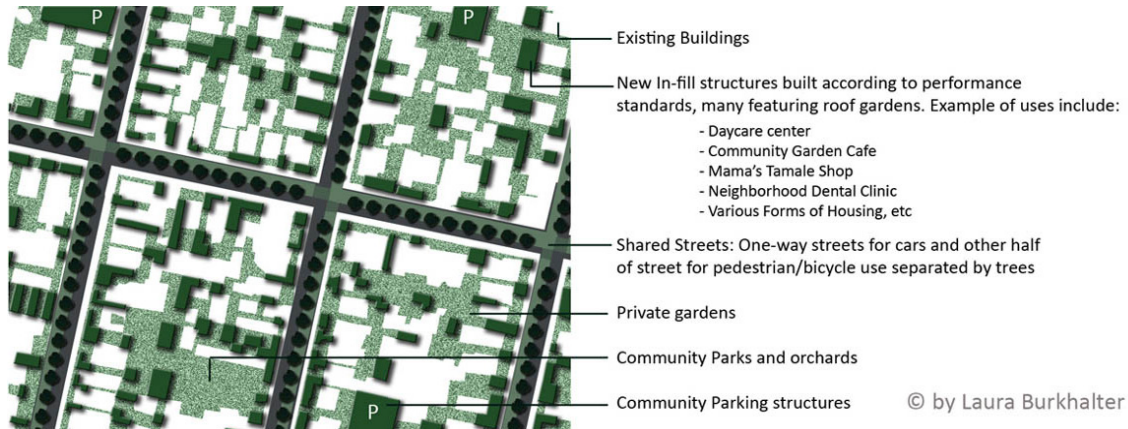
establish a regulatory framework that would allow the mixed uses of space, would sharply curtail the exclusive residential uses of certain areas, and would limit the concentration of services and retail shopping in freeway dependent mega-centers. In other words, zoning should not be left to the local planning agencies but should be designed on a metropolitan scale, taking into account the transportation consequences of landuse patterns.

Planning and Landuse Policies for Urban Quality of Live

To complement the multi-modal transportation system as part of the urban recovery plan and address some key spatial, economic, environmental and social problems of the contemporary polycentric city we have outlined a framework of transformative planning and policy changes.

For the sake of clarity we enumerate them and illustrate each point.

1. Zoning laws are turned into performance guidelines. This eliminates restrictions on landuse as long as the established performance requirements are fulfilled and safety building standards (per occupancy groups and per building code) are maintained.



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Performance guidelines are based on the following criteria:

- Ecological performance
- Social quality to the local community
- Economic performance
- Aesthetic/artistic value

Replacing zoning laws with performance guidelines would singlehandedly address many of our current urban problems, especially in North American cities. It could transform monotonous suburban landscape into vibrant, thriving communities. It would turn every community into mixed use, not from a top down master planned approach of apartment living above a mall, but in a spontaneous, diverse and grass roots way. The fact that one can now open a business anywhere as long as the performance criteria are respected means the beginning of a new chapter of community entrepreneurship creating flourishing local economies based on real added values. This gradual transformation would automatically tailor itself to each and every community and give places its unique identity rather than the master planned or zoned “one size fits all” solutions currently making up our urban

fabric.

Moreover, it would no longer exempt factories and polluting industries from performance standards. Regardless of the use of a building, performance standards would have to be met. For a certain amount of transit time, these performance standards may be based on the surrounding area, so that a new factory in an existing factory complex would have to perform better than all the existing buildings, but maybe not equally as good as if it were placed in a residential neighborhood. But beyond this short term grace period, all structures would have to meet the same standards. This way, manufacturing jobs could be placed in what once was a purely residential neighborhood, as well as retail, offices, restaurants etc. There would be no longer a “those neighborhoods” stigma, meaning the dirty industrial places, because there would be no longer any zoning laws allowing any business or residence to be dirty and depleting the quality of life and ecosystem of its surrounding areas.

2. Front yard and side yard setbacks are eliminated. (Seismic separation may be required

between structures). Natural light and ventilation and emergency access must be provided for each structure. Each structure is required to provide a minimal, accessible and usable garden space that may be located anywhere within, around or above the building.

3. The minimum lot size is eliminated.

4. The legal process to subdivide and join land is freed from its current red tape procedures.

These three points again have a fundamental impact on the urban fabric. Under these new rules, each property owner could decide to sell portions of her property. For example two neighbors may agree to sell their adjacent side yards and partial front yards to a new owner by creating a new property out of these strips of land. The new lot may be quite narrow, but wide enough for the new owner to build an infill structure. Let us look at the benefits from various perspectives.

Economic benefits: By selling off a portion of their property both existing owners get a considerable financial relief. This can save owners from losing their house in foreclosure, save the banks from thousands of bad loans and the taxpayers from bailing out all the bad loans the banks accumulated. It also creates opportunities and economic accessibility for new ownership as small, affordable parcels that have previously not been available on the market.

Ecological Benefits: The denser communities with a mixed use program ensure that a good portion of the local residences can also work in the immediate community, thus reducing transportation needs and pollution. Denser neighborhoods allow for smaller city footprints and more opportunities for open space. Furthermore, small infill lots make for smaller structures which can help reduce carbon footprints and pollution associated with property maintenance. Removing the status quo of the front lawn means reducing very considerable amounts of toxins currently polluting our soil and water with pesticides, herbicides and fertilizers, reducing the wasteful water use as well as the loud and highly polluting lawn mowers and leaf blowers. Instead, yards would be encouraged to include vegetable gardens and compost and would

be allowed to include small chicken coops etc as outlined by the performance requirements. This would have the added environmental benefit of food grown at the source, thus cutting out toxic processing and polluting transport for that food.

Social Benefits: The new spatial density allows for a much more integrated social structure. For one it makes it feasible for extended family and friends to be neighbors and thus attend to each other's needs. This means taking care of each other's children, cooking for each other and generally more time to exchange and socialize. The many new community businesses, such as community cafes and mini restaurants, daycare centers etc create places for people to meet and commune and give people a sense of belonging.

Spatial Benefits: The infill projects will piece by piece transform the visual disconnect of the suburban street face by providing the visual glue between the parts. Eventually the street face will gain continuity within diversity of expression and grow suburban monotony into attractive urban villages.

5. Onsite parking requirements are eliminated and made voluntary (currently in US. Metropolitan areas every single family home must provide a garage for at least two cars). Loading zones and offsite designated parking facilities are established instead.

As long as every residence is required to provide a two car garage we will not be able to move from an unsustainable suburban era to a vital and people centered urban era. The current North American standard parking requirement has turned street faces into assembly lines of garage doors and drive ways. This is both unattractive and destructive to a sustainable city, presuming that there never will be an alternative transportation method to the car and disallowing its development. Under the new rules, people could still choose to have a garage, but on a voluntary basis. Instead, the space could be used for any other purposes and could even be sold off as described above.

Neighborhood parking structures would provide people the opportunity to park their car in the vicinity. The parking structures would also allow for an easily accessible city wide on-demand car system where



users pay participatory or use-based fees and do not need to own their own vehicle. This would relieve a lot of economic strain on people and create a more sustainable city with its fleet of electric and green cars without removing the convenience of having access to a car at any given point in time and any in neighborhood across the city.

6. Every neighborhood designates at least one street as pedestrian zone.

This creates an instant push for economic gentrification as has been shown in every living example of a pedestrian zone. Moreover, it adds significant quality of life to the neighborhood. The pedestrian zone becomes the vital core of the neighborhood, hosting weekly farmers markets and other occasional street fairs and festivities. The businesses along the pedestrian street, especially restaurants, cafes and retail, will have an instant and permanent boost in business and all the residences in the surrounding area will see an increase in property value. This is an easy, inexpensive and permanent economic stimulus that can

be applied anywhere.

7. Restore existing rivers, storm drains and seasonal runoffs into riparian urban parks.

The parks should include bicycle paths and nature walks and the bicycle paths should connect and supplement the network of bike paths as outlined in the multi-modal transportation section. These linear parks will physically and psychologically tie neighborhoods together, bring natural resources to the communities, create sanctuaries for natural habitat and with today's improved understanding of flood control, keep adjacent neighborhoods safe. Most cities across the world have a number of concrete encased water channels that represent a natural and financial opportunity to be uncovered.

8. Easy processing of licenses to operate a small, home cooked food and beverage service businesses.

This point would create a whole new entrepreneurial class of small scale food businesses, giving people

of all backgrounds economic opportunities. It would also create access for citizens to many convenient, healthy, home cooked food choices within walking distance from their house and work. It would create a real competition with fast food chains, which, under the performance guidelines would clearly have to clean up their act to open new businesses and would get taxed after a certain grace period if they kept existing facilities running in the current depleting manner, thus disadvantaging such unsustainable operations economically.

Since zoning laws have been replaced with performance standards, small scale home cooked food businesses could be located anywhere, from within private homes to roof tops, courtyards to front yards, thus creating lively neighborhoods and social places for exchange and to meet neighbors. It would also give the opportunity for food establishments to be located in attractive areas and have outdoor seating away from busy through streets, which, in cities across the United States are currently the only

places zoned for commercial/restaurant use. In essence it would create nicer places to eat on a daily basis, with more, better and healthier choices of food and in closer vicinity to the users.

9. Percentage of property sales tax of each parcel (including portions of previous parcels), as well as a percentage of business tax of any business goes directly into the local community fund that is 100% managed by the local community and serves as a direct reinvestment into the neighborhood and the people.

This would give the local community a budget and a voice for self determination. Whether it's to plant trees, create a community center, a playground or improve a neighborhood parking structure or introduce new youth programs that help kids stay out of trouble and keep the neighborhood safe, the priorities of each community would be implemented in a direct fashion and without the financial waste of top



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top down bureaucracy. The selected improvement project would also reinvest into the local community by employing locals to direct and construct the projects whenever possible. This then creates a positive feedback loop with the area getting more valuable, thus attracting more businesses and residents and then again collecting more money to reinvest into the community. And since every community would work this way, every community would have the same opportunity for positive feedback loops leading to true economic prosperity based on real values.

To conclude this part, we want to point out the intrinsic interrelationship of density and a multi-modal transportation system. One cannot function without the other. A very low density suburban model has an extraordinary amount of area designated for streets. Therefore, at an unsustainably high economic and environmental cost, it enables cars to move around relatively freely. With added density comes the inevitable traffic congestion. Out of this dilemma all metro regions eventually suffer from the congestion symptoms. Despite low density zoning, metro regions over time grow tighter than they were originally designed for, with very few exceptions (such as Detroit). Instead of fighting this inevitable trend of densification, our suggestion is to embrace it and design for it. On the flip side multimodal transportation requires manageable distances for many of its modes. Manageable distances again require added density. This does not mean a necessity for verticality, simply a necessity for using space wisely, maximizing its qualities and creating what we call densified urban villages.

Soft Proposals: Reuse, Community, Communal Space and Everyday Life

Creative Re-use of failed economic-spatial models

In terms of spatial policy and new forms of urban design, we also propose the re-use of existing built structures that lose functionality under the conditions of an economy characterized by the crisis of financial and real estate corporations, and by a substantial reduction of consumption levels. For instance, high rise downtown buildings occupied by real estate and financial corporations, and their related services, are being vacated, as these corporations are forced to scale down in the current economic environment. Subsequently rents of these corporate buildings are becoming significantly lower, but not enough for small business to afford them. Thus, in the absence of government initiatives, these buildings will remain half empty for a long time, and will still have to be maintained at a high cost. We propose that the government should include in the financial bail-out packages handed to large corporations the right to manage this corporate office space to rent it, at a subsidized rate, for start up, entrepreneurial business firms in the knowledge services sector. The vacant space in these corporate buildings would then become sites for business parks for projects deemed to have the most promise in the future economy, eg. environmental services, green technology, or digital creative industries. Another example of re-use of structures potentially vacated by the structural economic crisis includes shopping malls and strip malls. They are going out of business at accelerated rates, as some of their anchoring companies file for bankruptcy. What is to be done with these mammoths of the industrial, mass consumption era at the time when this era is coming to an end? We propose to convert failed strip malls into mixed use housing, commercial and communal services, and use their huge parking lots for a gardened courtyard, including some areas of community farming. If such a proposal may appear utopian at this point, the public perception will change as an increasing number of these

shopping facilities become deserted. The subsequent collapse of their value as real estate ventures may make them quite affordable for housing cooperatives, and community banks to take them over at market price. This is at the bottom price of a failed market. Another illustration may clarify the actual feasibility of this urban conversion scheme. The current (2009) average price for a housing unit in central Detroit is about US\$ 50,000. The low housing price is the result of massive depopulation of the city of Detroit. So, if no one wants to live there, the affordability of the housing stock becomes irrelevant. But we are considering a different situation: residents are there, still living and working, But with much lower levels of income and consumption. Besides, they are not able, in many cases, to hold onto their houses under the traditional financial schemes. Thus, shopping centers may collapse, but since there still will be people and jobs around, the conversion of some of these obsolete structures into housing and gardens could be of help for both the residents and the owners of the vacant commercial structures. Additionally, there would be a substantial enhancement of the urban and environmental quality for the city at large.

Urban Self-Reliance: From Shopping Malls to Urban Farming

It is often overlooked that access to food is still the primary concern of everyday life. And insufficient attention is paid to the fact that chemically grown/ processed and genetically modified food is associated with a whole range of illnesses, from cancer to cardiovascular diseases, and from obesity to migraines. Healthy living starts with healthy eating. Yet, even when people are aware of the dangers of what amounts to be poisoned food, they have few practical alternatives, particularly if their budget does not allow them to buy high priced organic produce. So, in a time of crisis, growing their own food is fast becoming a way to cope with shrinking resources while improving health. Furthermore, beyond the individual benefits, there are extraordinary payoffs for the environment and for the economy. Increasing the share of agricultural land in a congested metropolis sets the path for a balanced

land use pattern that benefits the proper functioning of the local eco-system. Reducing the amount of industrial food that has to be manufactured, conserved, transported (often from the other side of the world), stored and distributed would represent a major contribution to the fight against global warming and to energy conservation. Eating your own food and making the physical effort necessary to plant it, cultivate and harvest it, may yield extraordinary benefits in terms of preventive health care, thus contribute to alleviate the health costs that have reached an unsustainable level because the emphasis has been placed on machines, pills, and corporate hospitals geared towards the sophisticated care of serious illnesses, often when it is too late.

Urban farming on a scale large enough to make a difference in the city and in society is not just a matter of individual vegetable gardens. It is a communal venture. While it is commendable that people use their own front and back yards to grow vegetables rather than tending an immaculate lawn at great cost of energy, pollution, and time, urban farming requires dedicating small tracks of land throughout the metropolis for cooperatives of part-time or full-time farmers, with proper financing and skills. There is an abundance of vacant land in most metropolitan areas. In most cases this relates to speculative schemes, as this is land waiting to be entitled for residential and commercial uses, when the conditions are matured for developers, and when they are able to put pressure on the planning agencies to spur new growth, always with the argument of generating jobs and revenue. So, with sufficient political will, and a new comprehensive planning strategy, numerous tracts of idle land, in different points of the metropolis, can be converted to urban farms. This strategy could in fact go beyond self-consumption. If the harvest of urban farming and individual vegetable gardens can amount to even a fraction of total food consumption of a city, it would mark a great deal of ecological progress. Plus, urban farms may generate jobs and revenues by providing organic food to nearby households, to local restaurants, and even to an extended area, using home delivery and multiplying the locations of farmers markets. The urban farms may be accompanied by urban

villages housing the farmers and volunteers as well as produce stores, restaurants and other commercial activates.

Thus, the metropolis could become dotted with numerous farms and villages that coexist with the manufacturing and services functions of the city. The diversity of uses allows for the metropolis to adapt to the changing conditions of the market and society, following the evolution of peoples' needs and desires.

The Heart (s) of the City: Public Space

Cities are, have always been, communication systems. This certainly refers to connectivity within the city and between cities, including multimodal transportation systems, telecommunications, computer networks, and the media. But there is another means of communication that has defined urban social life throughout history: public space. Public space is simply a space where the public can meet at will. For instance, a shopping mall is not public space because while it is used by people to meet, as they often lack alternatives, it is private property and the owners can impose their own regulations and restrictions. But public space is not necessarily a square, a public park, a monument, or any of the spatial configurations built on the tradition of the piazza.

It can be all the above, but it can also be a street corner or a street or a common park ground in a neighborhood or the halls of a train station or the steps of a church, or a string of restaurants, cafes and movie theaters that attract spontaneous gathering. Public space is where people gather for no special purpose or for a wide variety of purposes. It is the site of random interaction, where everything and nothing can happen depending on who is there at a given point in time. Public spaces are multifunctional, they can be used for specific events or celebrations, as well as for commercial fairs or street theater or mimes or musicians, or simply to stroll and be there. They are not the equivalent of city centers or downtown squares. In fact, more often than not, the monumental spaces designed around downtown functions, such as plazas around the corporate buildings or the cultural or sports icons of the cities are inhospitable,

surveilled environments not conducive of spontaneous exchange. While some public spaces are located in the centers of the metropolis, often at the exchange points of the transportation system, public spaces ought to be distributed all over the polycentric metropolis, as an essential part of urban living, so that people have intermediate spaces between home and work, spaces of transition and cultural exchange and reciprocal learning. Spaces to meet for people who know each other and spaces to discover, and enjoy, other people, so to explore new relationships. While social networking on the Internet is playing an increasing role in sociability, research shows that it is the hybrid between electronic communication and face to face interaction that better suits human social needs. Indeed, in some of the most successful public spaces, the deployment of free WiFi networks adds to the multimodality of communication and sociability, bringing together people in one site to be able to integrate their local networks and their web networks. Public space has always been considered the high point of the city, but it has been often captured by ceremonial functions and commercial functions associated to urban centrality. Distributed public space brings social life everywhere, and so doing makes the city safer, as nothing is more dangerous than an empty street. Indeed, for public space to diffuse and to bring people together, a new conception of urban safety has to be developed. Indeed, it is often the case that law enforcement agencies tend to distrust social gatherings and aim at dispersing dense concentrations of people without a definite purpose. We will return to this essential point below while dealing with the city of fear.

However, public space, and particularly small scale public space, needs purposive design to exist and grow in the polycentric metropolis. The zoning tradition of urban planning runs counter to this notion of distributed public space integrated in and around the residential neighborhoods. Symbolic public space, marked by art, is also an essential part of the construction of meaning in the sprawling metropolis. But this monumentality must also to be distributed around the entire urban structure, instead of remaining concentrated in a few locations that become the icons of power and money. Art in all forms

distributed around multi-located public spaces of all sizes would provide the much needed spatial support for a vibrant urban life beyond the walls of functional spaces defined by the spatial fragmentation of living that reduces people to dwellers, commuters, workers, and consumers without connecting the dots of their human experience.

Yet, nothing of what we have proposed can happen without a complete reassessment of urban design and spatial policies.

Housing for Living: From Unsustainable Models to Community Based Dwelling Forms

The basic contradiction in our cities is that what is the foundation of people's lives, their home, is also the source of business profit for the real estate industry, and the primary form of accumulating assets for people themselves. The assumption is that the market satisfies the housing needs for the large majority of the population. In fact, this is not the case and has never been the case, because very few families can afford to pay the full price of a home with their own earnings. This is why the housing market is subsidized by a government guaranteed-mortgage market that secures the investment for the financial institutions and enables families to spread over their entire life the payment of their loans and their interests, deducting the interests from their taxes. Without this indirect government subsidy to homeowners at the expense of all tax payers, the suburban housing market would not have been viable. In principle, this system keeps everybody happy: the banks, the real estate industry, the construction industry, and the homeowners. However, this only works as long as enough people keep their jobs, keep their income, and benefit from the accrued value of their homes, while the government absorbs a major portion of the residential debt. When the process reverses, as it is currently the case, massive foreclosures follow, housing prices plummet, and people's assets dwindle, while unemployment grows and real wages decline. There is little hope that without major changes in housing policy and urban forms, the system could be restored.

The federal government is bailing out banks in the hope that they will re-start lending and the mortgage market may function again. This may happen for a segment of the population as housing prices have declined dramatically making housing more affordable for middle-income families with a stable job. Yet, millions are not in this category, either because they have lost their stable jobs, don't have the now required 20% down payment or don't have worthy credit after losing their house or their jobs or both. The fact is that most houses repossessed by the banks are not finding a new owner despite of the drastic price cuts. It appears that new government-sponsored schemes of housing provision will have to replace the unsustainable system established during the golden years of the suburban dream. The most realistic strategy would be one that combines different policies in a pragmatic way. In some cases, government refunding of banks and lending institutions should include conditions of lending at more favorable rates, extending the guarantees of second-mortgages by federal institutions to good faith prospective buyers at the limit of their possibilities. In others, housing cooperatives could be formed by homeowners on the edge of foreclosure, buying their homes from the banks at a discount price with the support of soft loans from the government. In some cases, the government could support the creation of federally insured community banking cooperatives that would manage the mortgage market under the supervision and for the benefit of the local residents. Schemes of house sharing, either rental or in co-ownership, could be developed with the help of both federal agencies and local governments. Non-profit foundations could come to the rescue acquiring and rehabilitating dilapidated properties to house people in need, while using this opportunity to upgrade the quality of certain neighborhoods. However, while a number of innovative financial schemes can be imagined and implemented, their feasibility will be drastically hampered by the current legal framework of housing development, as well as by the rigidity of the local policies that respond to an obsolete vision of spatial forms.

Thus, we propose a reassessment of the dwelling forms that are appropriate to a period of reduced

lending, and slow urban growth. And we suggest experimenting with some new forms of habitat, based on a revamped notion of a community network of social ties and resource sharing.

Against common wisdom, dwelling forms do not result only from the logic of the real estate market. Urban policies and planning practice shape and guide developers and urban dwellers towards urban forms that are woefully inadequate in the current context, although they fulfilled a certain function during previous processes of urbanization. Let us consider the forms of urban dwelling supported by current planning policies.

There is the apartment building, the multifamily dwelling, the single family house in a dense setting and the single family house on the maxi sites reserved for the high income bracket. Finally there is the condominium which has been on the rise in popularity during the last real estate boom period. Let us look at each of their pluses and minuses:

Apartment buildings – always built to maximize the leasable square footage in the available space for the smallest price. They therefore have no room for communal area or anything that is not directly leasable. They are always built with the cheapest and most environmentally unsustainable methods (unless they were built during the early 1930's or before). Since there is usually no place for people to socialize and meet in a pleasing setting, having neighbors usually becomes more of a burden than a pleasure. Due to the low quality of construction in post 1930's buildings there is always insufficient sound insulation, which disturbs and irritates the dwellers, particularly considering the fact that they are usually grouped together with many other apartment buildings, often in areas lacking public spaces or restful open spaces of any sort.

The small multifamily complex typology is a dying breed and exists mostly in the historic areas of a city. It happens to be one of the more successful typologies, as these buildings usually have a small area of shared space such as a courtyard where people can meet and interact. They tend to allow for

a mix of social strata and be somewhat affordable.

The condominium typology has for the most part replaced the new construction of the small multifamily houses, as it has proven more profitable to the developers. The condominium typically shares these benefits of communal space for which the owner pays in form of membership fees. The downfall of the condominium is that the prices of condos have risen to the levels of single family house prices, thus excluding social diversity. This is a noteworthy fact – people are willing to pay the same price for a condo as they are for a single family house, even though in a condo the owner typically does not own the land and does not have a private yard.

The dense single family house setting, depending on neighborhood will span the social strata of lower to upper middle class. There tends to be little privacy in any of the yards with the exception of a grown in back yard. The houses tend to be separated only by two narrow strips of side yard and thus have marginal light and no views out the sides of the house. The front yard is visually part of the public street, although private, and must conform to the uniformity of the neighborhood lawn enforcers. It is in principle where people could meet and casually socialize, but in practice the front lawn is not a place where anyone spends time, other than to do lawn maintenance, which is often done by people other than the home owners. Therefore the social interactions are extremely limited and mostly dependent on school children of same age.

The maxi size single family house on a large piece of land is considered the highest end dwelling possibility in the low density city. It is surrounded by the like and comes with a status symbol zip code. The newer the houses in these maxi lot settings, the more oversized the actual houses. The regulations are slightly more lenient on them as far as what constitutes a single family house. In normal single family dwellings, it is usually forbidden to have a secondary kitchen, a second entry, any room labeled home office or a separate inhabitable structure. For the maxi mansions on the supersize lots on the other hand it is perfectly acceptable to have separate maids'

quarters, separate staff kitchens, estate management offices etc. The problem is that these type of luxury residences usually are so labor intensive to maintain that there is a round-the-clock staff needed to take care of the estate. This again means no privacy or real peace to the owners. And despite of the fact that there are always people around, there is no sense of community as the people are strictly distinguished as servers, drivers, cleaners, gardeners and butlers and not as friends to commune with. Owners of these maxi mansions often tend to be the most isolated from any sense of community and look for relief in country clubs away from their houses.

Contemporary society has been on a steady path of alienation and fragmentation, and the spatial policies in place today are enforcing that it will continue on this course.

There is an acute need for a new dwelling typology associated with the culture and functions of the 21st century city. In our perspective, to define new dwelling forms we need to define new social forms, because dwellings serve as people's habitat. As it is now, people have to fit in rigid, pre-existing dwelling forms that are either the expression of obsolete forms of living or, more often, the product of speculative calculations that force people to fit in whatever dwelling forms are most profitable for the developers and easier to control for the bureaucrats. New dwelling forms may require the re-engagement and re-invention of forms of living based on sharing resources.

Planning policies today are mainly concerned about the size of houses and sizes of lots and front and side yards but not at all at the performance of a house. Los Angeles recently adopted the anti-mansionization law "reducing the ratio of square feet to lot size, and therefore reducing the opportunity of supersizing a single family home".

The question is whether the ratio of lot size to house size is the real problem or whether the underlying problem is much deeper. We argue that the biggest problems of "supersized single family homes" is, on the one hand, the unsustainable construction practices developing these homes, and on the other, the very

concept of “single family”, a shrinking entity in our time. The fact is that large houses make for great places for communal living. Of course these houses may have different features than the standard supersize mansion, and to perform well and truly respect the idea of shared resources, they have to be built sustainably and should provide their own energy, as well as a garden for outdoor enjoyment and food growing. But a large, completely sustainably built house with a just as large roof garden on a not so large lot, occupied by a sizable number of people who may share resources beyond the house will add up to a much smaller carbon footprint per person than a small house on a large lot occupied by only two people who spend most of their time at work or commuting in traffic. It is time for the planners to start tackling deeper issues of land use rather than finding quick fixes that only address the tip of the iceberg.

In addition to sharing a living space, there are many types of resources that can be successfully shared. They may include material things such as real estate, finances, services, food, clothes, transportation and energy as well as social and emotional matters such as giving each other company, sharing laughter and sorrow, protests and celebrations.

Situating this idea in the 21st century context we find a variety of possible forms of urban resource sharing.

- Dwelling communities (sharing a structure designed for shared living that preserves privacy and individuality while making housing affordable and enjoyable)
- Business investment communities (such as those often created by immigrant communities)
- Cooking/food communities (every participant in the community rotates with the task of making a home cooked meal for all the members. Similarly, home tasks, such as cleaning and shopping are shared on a rotating base)
- Food growing/gardening commune
- Childcare support networks
- Educational support networks (for adult and students)
- Transportation sharing (sharing cars, rides, etc)
- Office communities (shared office spaces or office equipments)

With people today involved in a dense network of activities, sharing home labor and space actually can liberate one from many time consuming tasks and stress.

Many of these forms of sharing resources are common practice already. What needs to be created is an easy organizational structure of information sharing and connecting to each other to facilitate these formal and informal networks of shared resources. Current web-based social spaces are good tools for spreading information about sharing.

For the most part, these forms of communal association don't require a change in spatial policies, nevertheless they would greatly benefit from a change. Fragmented space tends to create a fragmented social structure. Thus we can reverse the process, creating by design more cohesive spatial patterns that will help amalgamate and solidify social structures.

The issue arises of the compatibility of people sharing a space in a culture that is deeply individualistic. This is in fact the daily experience of many young householders who share a house or an apartment. It does not go without tensions, and rules must be established and enforced if necessary. A simple contract, written or not, legally sanctioned or not, must exist. But by opening the possibility of co-paying a home, and dividing the space between private areas and commons, the practice of shared living may re-use the built housing stock adapting it to the means and needs of people, particularly in a historical moment of shrinking household size. In other words, the large nuclear family of the 1950s and 1960s gave rise to dwelling units with an oversupply of space. The sharing of this space in the conditions of today may provide a partial answer to the housing crisis on the condition that it goes hand in hand with a cultural transformation: learning to live together.

City of Hope: How to Make it Happen

The City of Fear, the City of Hope

Fear is the greatest enemy of quality of life. If an organism is in the state of fear, it contracts and shuts down all the healthy functions of the immune system, the cognitive, digestive, reproductive system, and all the energy is channeled to the fight or flight functions. It is useful for short term survival situations, but prolonged dwelling in this state will deteriorate the organism and eventually kill it slowly.

This metaphor suits well many of our cities experiencing the slow death associated with the enduring stresses that result from fight or flight functions. Entire neighborhoods have seen themselves forced to focus on matters of pure survival for an extended amount of time. Fear permeates everything from people to infrastructure to the local economy.

The City of Fear can only be counteracted by the City of Hope, a city with lively pedestrian streets, a city where people trust their neighbors, feel a level of self-reliance and control over their lives, and share some degree of communal living and support services that gives them the peace of mind and the strength to look ahead and weather the storms of their existence. The City of Hope builds on communities to transcend fear.

How to Make it Happen: Grassrooting the Metropolis

Our proposals are rooted in our knowledge and professional practice on the urban space. We contend not only that they are realistic but that they are better suited to the management of the current problems plaguing our urban way of life than obsolete spatial forms and practices of the 20th century city pushed to the limits of unsustainability for the sake of short term financial profit. Now that not even this “benefit” is attainable, it is time to think out of the urban box,

to open the debate to professionals, politicians, and citizens at large, and to create a project towards a new city transcending the ruins of our metropolitan civilization. It will not be a grand vision articulated in a Master Plan. Rather, it will be the cumulative result of many specific urban interventions such as those we have outlined in this article. However, we are aware of the skepticism that surrounds the implementation of the ideas we are putting forward. And yet, the history of cities is a succession of innovations, technological, economic, but above all social, that create new urban forms that were unthinkable at an earlier time. Yet, there is a fundamental pre-requisite for urban transformation to happen: people need to believe in it, to practice it, and, eventually, pressure politicians to adopt the urban policies that will respond to their needs and their desires. Citizens make cities, as shown by the cross-cultural study of urban social movements conducted time ago by one of the authors of this article. And citizens mobilize for a new city when the one where they live becomes unlivable, and when their minds open up to an alternative set of values. On both counts we are at a historical inflection point. The current metropolitan system has collapsed in every dimension, and any attempt to re-start the engine with the same formula will lead to a repetition of similar crises, with increasingly catastrophic results. On the other hand, people’s awareness of the environmental crisis has grown exponentially over the last two decades, as documented in opinion surveys around the world. For instance, over two thirds of people surveyed in 20 countries, including developing countries, consider that global warming is a critical issue and corrective policies should be adopted. 30 years ago while scientists had already documented the threat to our environment less than 10% of people felt any concern. The combination of the crisis of the metropolis with the awareness of it has laid the ground for urban social movements that will be the agents of the process of change leading to new urban forms. Furthermore, citizens have not waited for politicians to articulate their alternative projects: they are doing it by themselves, often circumventing bureaucratic hurdles and local politics dominated by real estate interests. Urban farming is a widespread practice in metropolitan areas in the United States and in Europe, including in Michelle

Obama's White House lawn, and, of course, it has always been a fundamental dimension of urban survival in developing countries. Bicyclists have taken the streets in hundreds of cities, obtained special lanes and forced safety measures to protect their movement. Communal living is coming back on a large scale, both out of necessity and as a way to overcome isolation. Sharing child care and health care is a mass practice today. Residents have created spontaneous public spaces on their own. Graffiti artists have redecorated the city. Street musicians, street artists and street theater have distributed art and culture beyond the secluded walls of corporate galleries and iconic cultural venues. And environmental restoration/conservation projects spring up everywhere.¹

Most of these practices are not ideological, they are simply better ways of life than the one dimensional consumption model imposed from the top on behalf of the real estate/financial/bureaucratic establishment that continues to design for us, every day, an unsustainable way of life. Thus, the connection between conscious social movements and alternative urban practices experimenting out of necessity, is already implementing in practice many of the proposals we have presented. In fact, we have learned from their practice. It is now a matter of scaling up these urban innovations and convincing planning agencies and political institutions to adapt to the new world by removing the legal obstacles that block the necessary process of social change.

Moreover, this wave of multi-dimensional urban innovation is taking place in a context marked by the hope generated by the Obama campaign and the subsequent Obama Presidency, not only in the United States, but in countries around the world. By emphasizing green energy and environmental conservation, by calling upon citizens' responsibility to care for each other, and by using government leverage to put pressure on the financial system to clean its act, Obama is changing the political climate in ways that allow people to dare imagine that

another world is possible. Yet, nothing can really change unless there is a grassroots movement that projects the construction of the city of hope. But if such a multiform movement continues to grow in the current economic and political context we may well reconstruct the city and reinvent our lives.

1. See an overview of some of these movements in a recent, documented book: Chris Carlson, "Nowtopia. How Pirate Programmers, Outlaw Bicyclists, and Vacant-Lot Gardeners are Inventing the Future Today", Oakland, Ca: AK Press, 2008.)