

BREAKING THROUGH THE MONOPOLY CITY

*A Game of Urban Agriculture Played Through Fissures In
Industrial Urbanism*

by

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A thesis
presented to the University of Waterloo
in fulfilment of the
thesis requirement for the degree of
Master in Architecture
in
Engineering

Waterloo, Ontario, Canada 2019
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AUTHORS DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Theory //

// Game

*On spreads noted with *Theory// //Game [white and blue]* general information about the theory and development of this thesis will appear on the left [white] pages, with corresponding information specific to the final game of this thesis appearing on the right [blue] pages.

If one wishes to read the thesis they may read only the left hand pages of this book. If one wishes to play the game they may read only the right.

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Games have been used throughout the world's cultures to teach and influence ideas of urban space and planning while also arguing that in the future of sustainable cities architectural development of urban land should inherently be linked to the productive use of land. This thesis proposes a game, designed using theories linked to urban agriculture to encourage thought about possibilities of future urban development, exploring aspects of the value of land in economic development and success of urban farming. Detroit is used as a case study for these urban agricultural principles.

The global population is increasing, today's 7.6 billion is expected to grow to over 11 billion by the year 2100¹. With over 3 billion more mouths to house and feed, we must consider what our future cities will need to look like and how they will function with resilience and sustainability. As humanity has urbanized it has distanced itself from food sources, relegating agricultural production to some pictorial idea of "countryside" that does not accurately depict our methods of massive industrial production. Today it is estimated that 50% of the world's livable land is used for agriculture². While the global population continues to grow so will the demand for arable land, coupled with climate change the future of global food sustainability is at risk. With industrial urban

1 "World Population Prospects: The 2017 Revision | Multimedia Library - United Nations Department of Economic and Social Affairs." United Nations. Accessed February 28, 2018. <https://www.un.org/development/desa/publications/world-population-prospects-the-2017-revision.html>.

2 Max Roser and Hannah Ritchie (2018) - "Yields and Land Use in Agriculture". Published online at OurWorldInData.org. Retrieved from: <https://ourworldindata.org/yields-and-land-use-in-agriculture>. [Online Resource]

practices ingrained into our conception of what the City³ is, the fundamental question becomes; how do we begin to reshape our understanding of what urban means?

The game proposed in this thesis, Commonopoly, presents an adoption of this kind of urban thinking. The industrial era game of capital and property management, Monopoly, is broken apart to facilitate new exploratory play in which players need to reconsider the value and condition of land as no longer entirely abstracted to pure monetary value. Players are not rewarded simply for owning land and receiving rent. They must actively develop, adding human value to the inherent value of land using the principles of urban agriculture built into the rules and forms of the game, combining labour and resources with other players as they do so.

Commonopoly is engaging and fun, while introducing ideas about alternative ways of creating and existing within urban space and a capitalist economy. Players of Commonopoly who become interested in this game may then find themselves further exploring topics of game analysis, agriculture urbanism, economics, Detroit, industrial urbanism and the process of game making within this thesis book.

The ideal city, in the extension of this thesis is the perfect hybrid of urban, rural, and wilderness. That, however, is far too broad. For simplification the study of the development of this kind of city begins with urban agriculture, explored through play.

3 Lefebvre, Henri. "From the City to Urban Society", *Implosions/Explosions: Towards a Study of Planetary Urbanization*, edited by Neil Brenner, Jovis Verlag: Berlin 2014.

Theory //

// Game

Commonopoly 'hacks' the world's favorite game, Monopoly. A new game played inside of the classic monopoly ring, with new ideas and pieces to break open the industrial and capitalist economic model to form a representational model of agricultural urban ideas. The play of this game overlays urban agriculture onto the existing or typical city, allowing a palimpsest to form displaying what is and what could be. Players become designers of this layer of urbanism. Rather than become the richest player, Commonopoly asks its players to use their capital and to work together to collect resilience points by building neighbourhoods of urban agriculture.

Commonopoly looks to re-establish the value of landscape in urban development. That is why, though a capital economy is still modeled in this game, winning is not done through capital gain alone. Players need to use the pieces provided to create one of 5 neighbourhoods that earn Resilience Points.

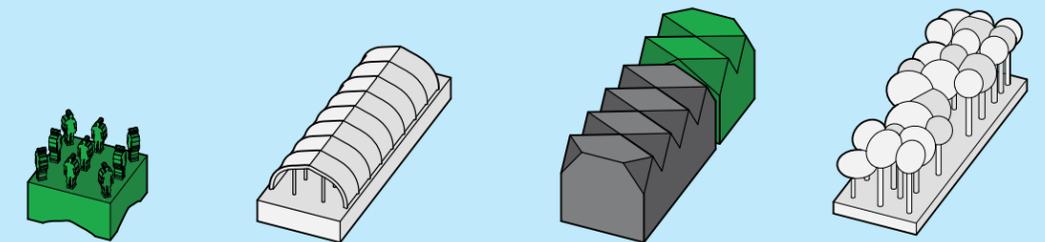


Fig 0.1 Selection of Game Pieces `

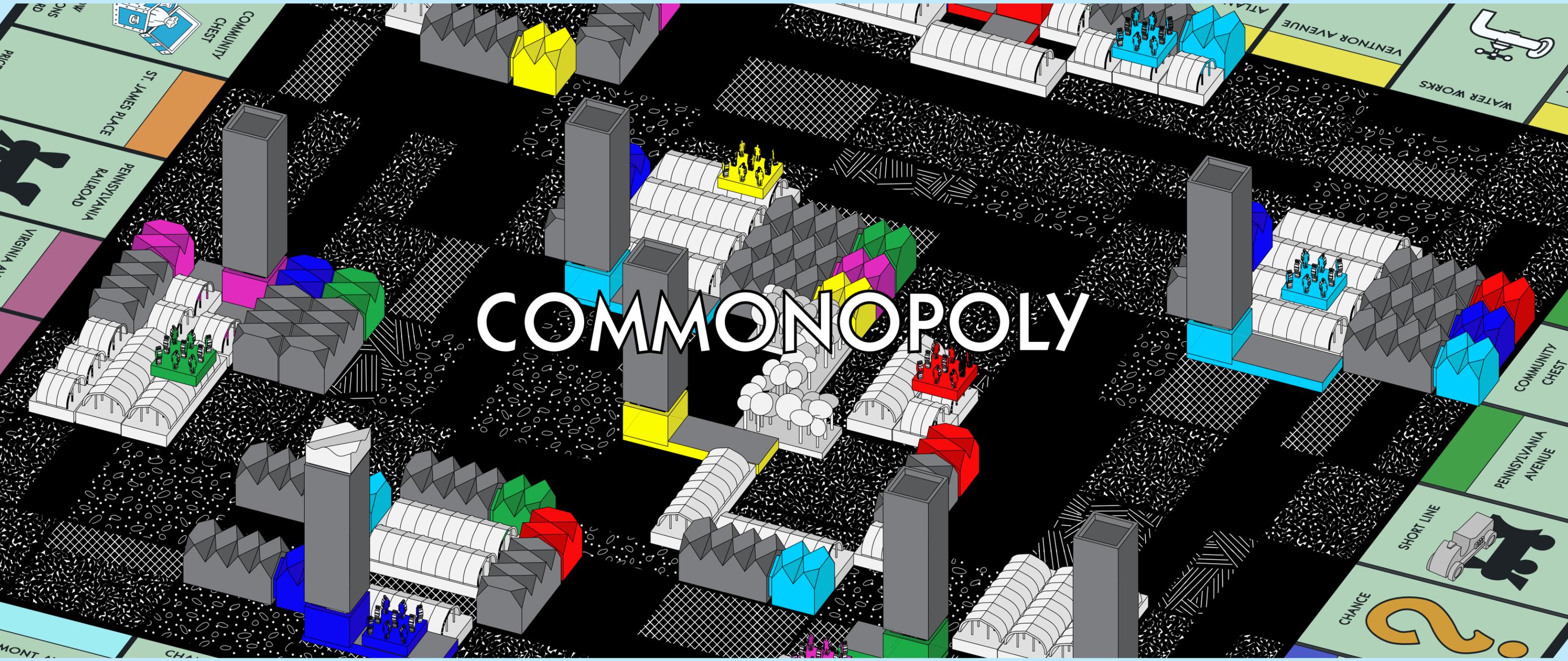


Fig 0.2
Commonopoly Title Art

ACKNOWLEDGEMENTS

I must share the immeasurable gratitude I have for my thesis advisor, Jane Hutton. Her support, encouragement and criticism drove me through this enriching and difficult process. Also, to my committee members David Correa, whose dislike of games gave challenge and fascination of objects gave importance, and Adrian Blackwell, who's enthusiastic and analytical eye helped to sharpen my approach.

I thank those who excited and encouraged me in my Detroit site research. The farmers, volunteers, academics and locals who took time to speak with me about their experiences. A very special thank you to my two gracious hosts, Alyce and Joe.

My un-ending thanks to my support system. The friends working beside me through their own thesis process sharing frustration, anger, snacks and laughs. The friends who knew when to tear me away from the architecture world for a break and when to support from the sideline.

Thank you to my sister, who would go without sleep just to be present for me.

To my parents, I never could have gotten this far without your continual love and support. I will be forever thank you for what you have given me.

DEDICATION

*To the people who knew I could when
I thought I couldn't.*

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Since the dawn of industrialization, humankind has experienced swifter social, technologic and economic shifts than ever before. The industrial revolution changed the way people interacted over continents, how goods moved across territories, how cities were organized, how people moved through them and the very physical space humans lived within.¹ We now exist in this industrialized landscape, capitalist economic structure, and social construct that has become [for argument sake] global. Within the last few decades, the industrial age has already begun to shift once more. Technology replaces the industrial worker and as with the shift from the agrarian age to the industrial, our collective move into the information world has become a force of powerful displacement. In the turmoil of this changing social and economic climate we should not only be cognizant of the job losses, but also the geospatial and environmental implications inherent in our past and current practices of urbanization. Time and space, the human perception of them, are the markers by which all histories are made. However, we have encountered a problem with this method. Our own understanding of the scales and value of time and space has collapsed inward, humanity moves forward now in leaps and bounds rather than the comparatively crawling pace of our ancestors and the environment's ability

¹ Alvin Toffler, *Powershift: Knowledge, Wealth, and Violence at the Edge of the 21st Century* (New York; Toronto: Bantam Books, 1990).

to adapt. Waves of spatial and social changes have consistently followed major groupings of technological advancement. Capitalist economic structures enhanced our desire for things to happen faster and cheaper, the industrial revolution facilitated these wants making production for production's sake more convenient. Now, we see technological advancement beyond our wildest dreams happening every day. The price we pay for our own accelerated time and geographic shrinkage is the fall out of Capitalist inequality, "critical"² urbanization and acceleration of geologic forces of the global environment. There is now no reasonably denying that humans have made a huge ecologic impact on the earth primarily occurring within the last 200 years of urban development.³ If we are to recognize this as a fact we must also recognize that the continued construction of our environments must reconsider the modes and values that determine them.

The spatial manifestation of these man-made problems can be read in modern urban form. These problems present unequally around the globe, as cities, regions and countries have developed at unequal rates. However, most places that have fully adopted the capitalist mindset have seen similar

² Henri Lefebvre, "From the City to Urban Society," in *Implosions/Explosions: Towards a Study of Planetary Urbanization*, ed. Neil Brenner (Berlin: JOVIS, 2014), 36. doi:ISBN 978-3-86859-317-4.

³ Toffler, *Powershift: Knowledge, Wealth, and Violence at the Edge of the 21st Century*

Theory //

// Game

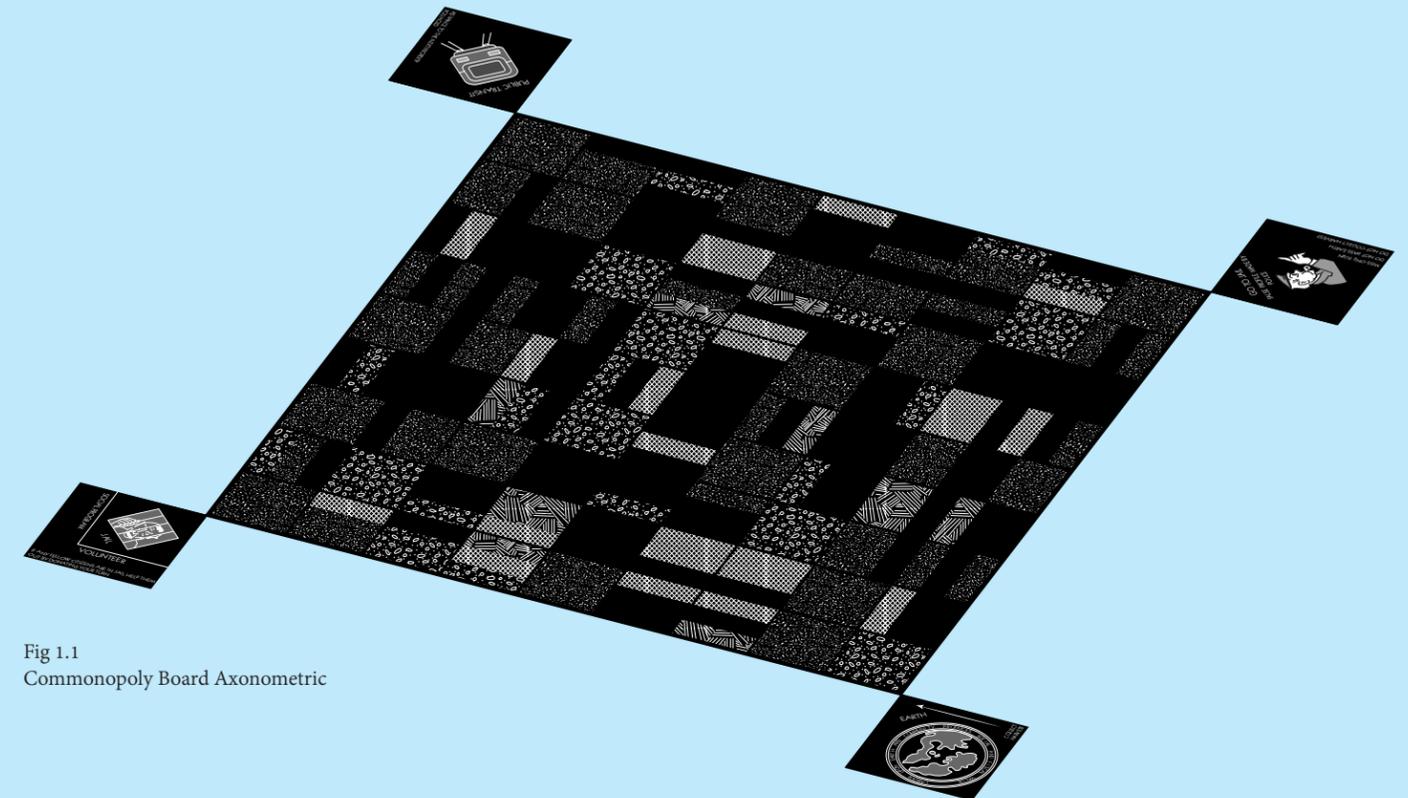


Fig 1.1
Commonopoly Board Axonometric

The game board re-introduces the physical and biological implications of land. The board itself is divided into a grid that follows the rhythm of the Monopoly board. The black lines that divide the Monopoly properties bleed into the Commonopoly board. The interior board lays the landscape to be developed upon. The hatches note specific conditions of land that need to be addressed before development can take place.

The resolution of the space requires payment and/or a specific piece to be played in that space. The Monopoly board is laid with the Commonopoly board placed in the center on top of it. The corner covers should be slipped onto to Monopoly board corners, EARTH covering GO, the new JAIL over the original, the new GO TO JAIL over the original and PUBLIC TRANSIT over FREE PARKING.

patterns of wealth movement through urban environments over the 19th and 20th centuries. Early in human history any 'city' or dense population had to rely on its own regional metabolic support. For these cities, dependence on immediate surroundings and the ability to be self-sufficient largely dictated the economic health of a city.⁴

What humanity began to see was that networks are inherently more effective than items in isolation. The development of the steam engine could only be as powerful as the physical structure it ran on, and the fuel that could be harvested. Networks of cities relying on several hinterlands are more easily able to grow massively than a single city relying on its own single surrounding hinterland. The development, and application, of networked technology and organization created and enhanced the atmosphere of capitalist urbanization allowing for the ability of financial interests to take precedence.⁵

The technologies, theories, strategies and archetypes utilized throughout the agrarian and industrialization of past civilizations have become ingrained in the collective understanding of what our capitalist urban environments now are. Not only through lifetimes of experience but

4 David Harvey, "Cities or Urbanization?" in *Implosions/Explosions: Towards a Study of Planetary Urbanization*, ed. Neil Brenner (Berlin: JOVIS, 2014), 52. doi:ISBN 978-3-86859-317-4. 55

5 Ibid.57

through many cultural factors which can very often take the form of games and toys.⁶

Many of our global cities have adapted well into the rising technological age, transitioning from the industrial use into the modern 21st century. Toronto, born of the industrial time period can be a shining example of a modern city, while it does have its own problems Toronto was determined to be the 4th most livable city by the Economist Intelligence Unit in 2017.⁷ Like in many cities, sites that were once infinitely important for; storage of food products, construction, transportation, energy, have fallen vacant. In Toronto, the money happens to be available in development investment to deconstruct industrial infrastructures that we now find spatially problematic and no longer useful, i.e. the reshaping and development of the previously industrial Don Lands. However, in these cities, we see an increasing division in economic classes. The capitalist urbanization, the patterns of gentrification of lower-income neighbourhoods, lead to social clashes and, in the example of Toronto, a housing market that borders on the absurd.

6 Chapter 2 speaks more directly to games themselves

7 "Most Livable Cities," City of Toronto, accessed Nov 27, 2017, 2017, <https://www.toronto.ca/city-government/data-research-maps/toronto-progress-portal/world-rankings-for-toronto/most-livable-cities/>.

CONTAMINATION

Cost of remediation for development \$75

This refers the typical problem of land being contaminated by human use. Either building material or waste could have caused the contamination. In order to grow things in or around contaminated soil precautions must be taken. Either of remediation, built up planters, or interior growing.

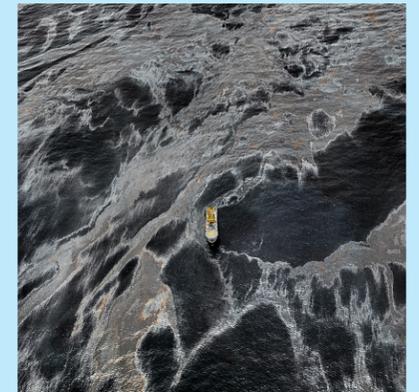


Fig 1.2
Oil Spill #1, Photo By Edward Burtynsky
Source: <https://www.edwardburtynsky.com/>

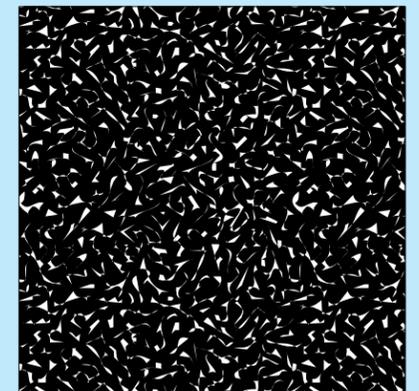


Fig 1.3
Contamination Hatch

Theory //

// Game

Toronto is one of two types of Western City, those that are “healthy” and have grown [economically and physically] since the shift to the technological age, and those that have become ill and decayed because of it. Cities like Toronto, New York and London have continued to grow [if after a few hiccups] through the problems of industrialization, suburbanization, economic disaster and more. Economically they have made themselves hubs of their respective countries.

Other cities, however, have not had the economic strength to withstand the tide of post-industrial urbanization. While we tend to imagine, dream about and focus on those cities that are impressive with new buildings, fancy restaurants and sprawling malls, places like Ivanovo, Leipzig, Pittsburgh and Detroit decay and become crime-ridden, fear-filled and often fetishized in their ruin.⁸ This does not imply that one type of city is better than another, but that some cities need a new kind of attention, a reimagined dream.

David Harvey suggests that in order to begin to recognize what is necessary for progressive and emancipatory urban development in the 21st century we must explore the preconceived principles of capitalist urbanism and address the mythic truth. He suggests nine myths as fundamental to working through the problems of 21st century urbanism.⁹ These

8 Philipp Oswalt, *Shrinking Cities* (Ostfildern-Ruit Germany): Hatje Cantz, 2005).

9 Harvey, *Cities or Urbanization?*, 5264-66

“myths” create the framework of current urban development; however, we know that we are able to reshape or redefine them altogether. Moving into the future of the city the language and the perceived definitive of urban network development must take on new shape. The ninth and final myth refers to the idea that cities can not be ecological, while the transverse argument may present that cities are exactly that. The ‘environment’ being natural and the ‘built environment’ unnatural is no longer an acceptable understanding in the future of cities.¹⁰ As we move toward future urban development, we must create environments of both the natural and fabricated. This thesis explores a small avenue of breaking the ninth myth to create new form through the application of urban agriculture.

In cities that have struggled with the move out of the industrial era, places like Detroit, the marginalized people left in malfunctioning cities are forced to develop ways to survive outside of the typical mode of urban living. Food becomes the very primal need is once was before our “civilization” [industrialization] and people must become self-sufficient in their urban habitats or starve. Detroit will be taken as a particularly paradigmatic example of the causes and outcomes of the 9th myth and the game to be played in developing a bright urban future from Urban Agricultural success.

10 Ibid.66



Fig 1.4 Woodward plan aerial, 1920

Source: <https://artbasil.org/2016/05/24/the-woodward-plan/>

HIGH DENSITY

Cost for development \$40 high rise only

This space requires a High rise piece be Played. There is no space on the ground for anything else here.

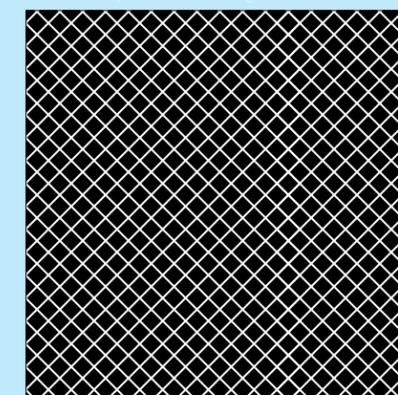


Fig 1.5 High Density Hatch

Types and Scales of Urban Agriculture
 Urban agriculture, in its many forms and scales, can positively contribute to the social, economic and environmental health of cities and encourages those who live within them to learn and be aware of their food, waste and individual agency to act upon the land. Our current idea of the city has been consistently reinforced since the beginning of the industrial revolution. While we now leave our industrial civilization, we still see the remains of that industrial culture in our school system, the office work week, materialism, city street grids, and our games.

The ideal city, in the extension of this thesis, is the perfect hybrid of urban, rural, and wilderness. That however, is far too broad and for simplification, the study of the development of this kind of city begins with urban agriculture. Explored through play.

While I have primarily studied Detroit, the pattern of adopting urban agriculture can be found in struggling cities throughout the world. Even in a place like Toronto, where economic activity is considered strong, it is reported that hunger is an issue in 1 of every 8

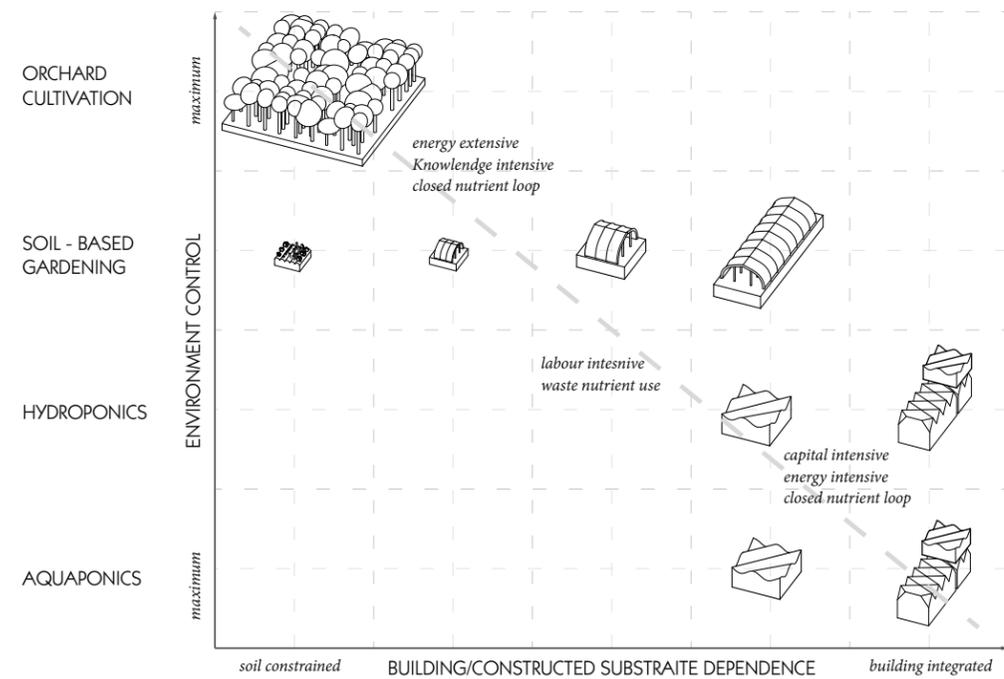


Fig 1.6
 Agricultural Strategies and Structural Dependence Diagram

Theory //

// Game

DEBRIS

Cost of clearing for development \$50

For abandoned land to become usable and material left behind by its previous use needs to be removed



Fig 1.7
 DebrisStone
 Source: <https://www.textures.com/download/>

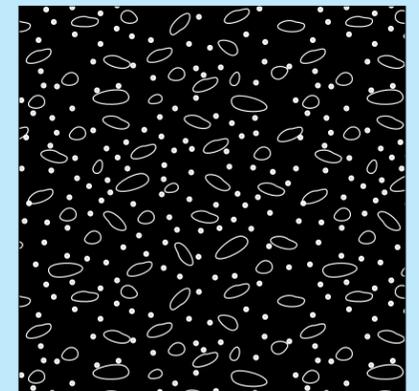


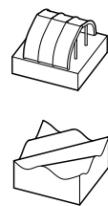
Fig 1.8
 Debris Hatch

households¹¹. Urban agriculture, normalized into the planning of modern cities, could mitigate hunger rates, can productively use

¹¹ "Household Food Insecurity in Canada, 2014," PROOF Food Insecurity Policy Research, last modified May 12, 2017, accessed March 10, 2018, 2018, <https://proof.utoronto.ca/wp-content/uploads/2016/04/Household-Food-Insecurity-in-Canada-2014.pdf>.

Small

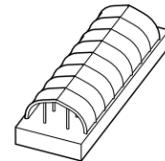
Scale of the individual or small number of actors. From a window box to a back yard Garden. A particularly important scale for individuals who have the option within their own living space to enact their own agency individually. Requires participants to have or seek out knowledge.



city resources for food growth rather than pure aesthetics, can create community links and identities, help to mitigate rainwater and heat island effects, and bring a social knowledge of earth and human consumption to citizens.

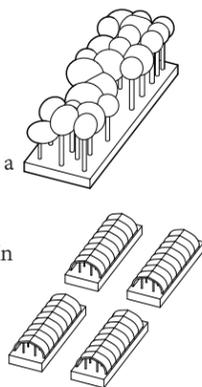
Medium

Scale of the community. A larger group of people working a single plot of land or the collection of several small scale actions connected through social infrastructure. A step toward systemised and social agriculture. Allows for knowledge transfer and aquisition.



Large

Scale of a city. Multiple communities coming together to take care of and profit from a land resource in the form of orchard or park or larger scale agriculture or infrastructure. In Detroit several community farms contribute to a larger social network, reaching and helping more people.



Extra Large

Corporate scale industrialized agriculture. Or the expansion of social systems of urban agriculture beyond a single locality.

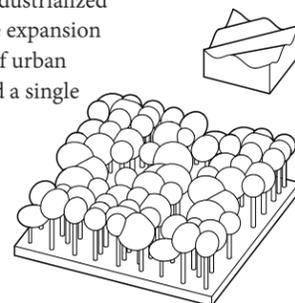


Fig 1.9
Agricultural Scales Diagram

Theory //

// Game

EXISTING FARM

Cost for development \$5 to commons, agriculture only

Using Detroit as an example means that there are many urban farms already established. To develop here you must continue to grow the farm, and the cost is paid into the commons rather than the bank.



Fig 1.10
Shades of Grey, Photo By Mary Andreade
Source: <https://pamphotography.wordpress.com>

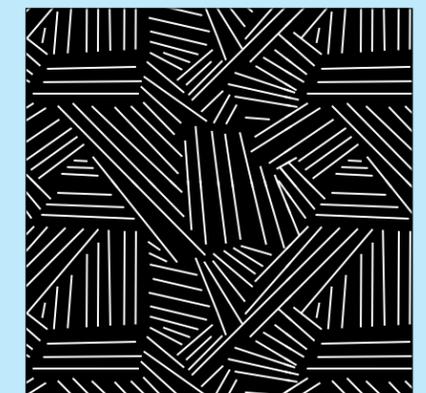


Fig 1.11
Exiting Farm Hatch



Fig 1.14
Michigan Urban Farming Initiative, Detroit 2018

Games have always been paramount in teaching and reinforcing lessons of status quo, communication, problem-solving and competition. From the ancient Indian game [we know as snakes and ladders] that taught the lessons of karma to toy towns reinforcing ideas of urbanism, games exist in humanity as tools of education in both conformity and experimentation. Game design allows for very specific messages to be played and to seed themselves in the consciousness of youth and adults alike.

Game theory has been developed to imagine and model possibilities, to explore choices made and their outcomes. When analyzing and designing games, aspects like motivation and desired outcome can be built into the structure of the game itself shaping the interaction between one player and another and the players and the model that is represented by the game.¹ When discussing game theory aspects or values are often referred to as utilities, in any game model the desire is always to “maximize utilities” or model the most valuable choices.² There are many mathematical methods of organizing and tracking these values throughout gameplay such as percentages as well as methods of tracking decisions in qualitative and[or] quantitative manners such as decision trees, or a combination of methods.³

Thought of as some of the first human constructs for handling and organizing

interactive systems,⁴ serious gaming in the real world as a form of systems organization and urban construction is well documented through time. From leisure game applications like Sims City and World of Warcraft or Dungeons and dragons to academic proposals such as Buckminster Fuller’s world game released in 1969, the ‘Platform Society’ and ‘The Hackable City’. As far back as 475 BC the game Go (weiqi) is used as a tool of strategy for war and from the time of the cold war the US, and other militaries, have created and utilized numerous war games scenarios and theories. There even exists such thing as a ‘funsultant’, made popular in the 90’s for helping companies create innovate playful work methods for their employees to boost productivity, reminiscent of the Soviet ‘Socialist Competition’ in the workplace. The concept of gaming as a tool for cooperative and interactive environment making has a long and strong history. Games also, and very importantly have aesthetics that become valuable to the play of the game itself and its visual feedback. Buckminster Fuller’s Dymaxion maps are functional representations of such aesthetic importance.⁵

Buckminster Fuller’s ‘World Game’ is perhaps one of the most famous of gaming scenarios within the architecture world. Though the original 1969 game dates itself a little in its

⁴ Eric Zimmerman, “Manifesto for a Ludic Century,” in *Gamefu World: Approaches, Issues, Applications*, eds. Steffen P. Walz and Sebastian Deterding (London: MIT Press, 2014).

⁵ Richard Buckminster Fuller, *World Game Series: Document One. the World Game: Integrative Resource Utilization Planning Tool* (Illinois: World Resource Inventory Southern Illinois University, 1971).

¹ Shaun P. Hargreaves Heap and Yanis Varoufakis, *Game Theory: A Critical Introduction*, Vol. 106, 1996), 231. doi:10.2307/2234951. pg 14

² Ibid. pg16

³ Ibid. pg 51

Theory //

// Game

EQUIPMENT

Standard Monopoly set

- Board
- 2 dice
- 6 players tokens
- Houses and Hotels (not used)
- Chance cards
- Community Chest cards
- Deed cards for each property
- Money
 - 20 - \$500
 - 20 - \$100
 - 30 - \$50
 - 50 - \$20
 - 40 - \$10
 - 40 - \$5
 - 40 - \$1

New game pieces

- Game manual
- Board overlay
- Corner covers
- Development pieces
- Residential:
 - Houses (5 per player)
 - High Rise (2 per player)
 - Podiums(2 per player)
 - Labour(5 per player)
- Agricultural:
 - Small agriculture (16)
 - Large agriculture (24)
 - Orchard (3)
 - Hydroponic (3)

Theory //

somewhat abstract recognition of world resources the current, and much more reasonable, the application is referred to as the Buckminster Fuller Challenge. Participants create innovative 'design science' solutions to specific issues, often of dire necessities in the third world or developing areas, that are intended to be applicable elsewhere. In this way, a game becomes a powerful way to entice participation, and in many ways, expands the possibility of participation further than a single field or discipline of study.

In attempting to create fun and meaningful game experience this thesis began with a series of game analysis to understand the components and game mechanics of popular games.

Ann Pendleton-Julian is an architect, writer and educator. Her architectural design studios have been designed to utilize games and the thought process of game theory to create more complex architectural concepts and buildings. The studios begin with students playing games, then designing them and finally using the skills gained to design architecture.⁶

Pendleton-Julian's work *FourPlusOne Studios* became an important learning tool in the way in which one can look at games strategically, socially and architecturally. Her assertion that "play through games is the basis for culture even before there is culture" exemplifies the intent of the game of this thesis.⁷ To build a game that could imply "culture before culture" it must utilize group participation that encouraged uncovering of meaning and/ or associations and eventually evoking ideas

of real-world action. Pendleton-Julian uses a matrix as a project brief for her game based architectural studios. This matrix strategy was used as a guide for the analysis of games. A nine-square grid was devised to organize and facilitate crossing associations of the chosen game mechanics and themes. These having been chosen to specifically understand the theoretic landscapes of the studied games as well as things that make the games playable and desirable. The matrices gave 3 key aspects of gameplay in the y-axis [rules, players, space of game] and the literal to the theoretic spectrum of analysis on the x-axis [given, critical, imagined]. The interior of the matrix then filled with the subcategories of analysis. Some games proved to have qualities that were desirable for the design of the eventual game of this thesis. Those games have been referred to in greater detail in this thesis book and have been used as president for subsequent game design.

Please see appendix for full selection of game analysis matrices

The use of games for architectural thinking is extremely fitting. In all study of games and game theory several things are almost universally understood; that games are cultural artifacts, governed by rules and strategy, create fun and include some kind of interaction or story. The implication of these things is that games must all happen in some place, the understanding, design and play of games exists within space either imagined or literal.⁸ With this in mind the structure of play becomes an appropriate manner of exploring narratives and giving them implicit space.

// Game

SET UP

The Monopoly board is laid out with the Commonopoly board placed in the centre on top of it. The corner covers should be slipped onto to Monopoly board corners, -EARTH over GO
-JAIL over JAIL
-GO TO JAIL over GO TO JAIL
-PUBLIC TRANSIT over FREE PARKING
Players each choose a monopoly game token and place them at EARTH, they will also collect \$1000. (See Monopoly rules for denominations, 1 less \$500 should be collected). Players then may select their development colour and collect all pieces belonging to that colour. The

remaining money and the agricultural pieces should stay in the box until used. The Community Chest and Chance cards should be placed in piles close to the board. Each player throws the Dice to determine who will start, the player who throws the highest number starts and play will move counter clockwise from them. Starting from the player with the highest roll, the Title Deed cards are dealt to each player until there are none left. (The Rail Roads, Electric Company and Water Works should be put aside first). This has players ready to develop immediately, removing the initial buying phase of Monopoly and randomly sets players at an advantage, or disadvantage.

⁶ "Four (+1) Studios: 7 Papers and an Epilogue", accessed Nov, 21, 2017, <https://fourplusone.wordpress.com/four-1-studios/>.

⁷ Ibid. pg 157

⁸ Steffen P. Walz 1973- author., *Toward a Ludic Architecture : The Space of Play and Games* (Pittsburgh, PA): ETC Press, 2010). pg 9

Theory //

// Game

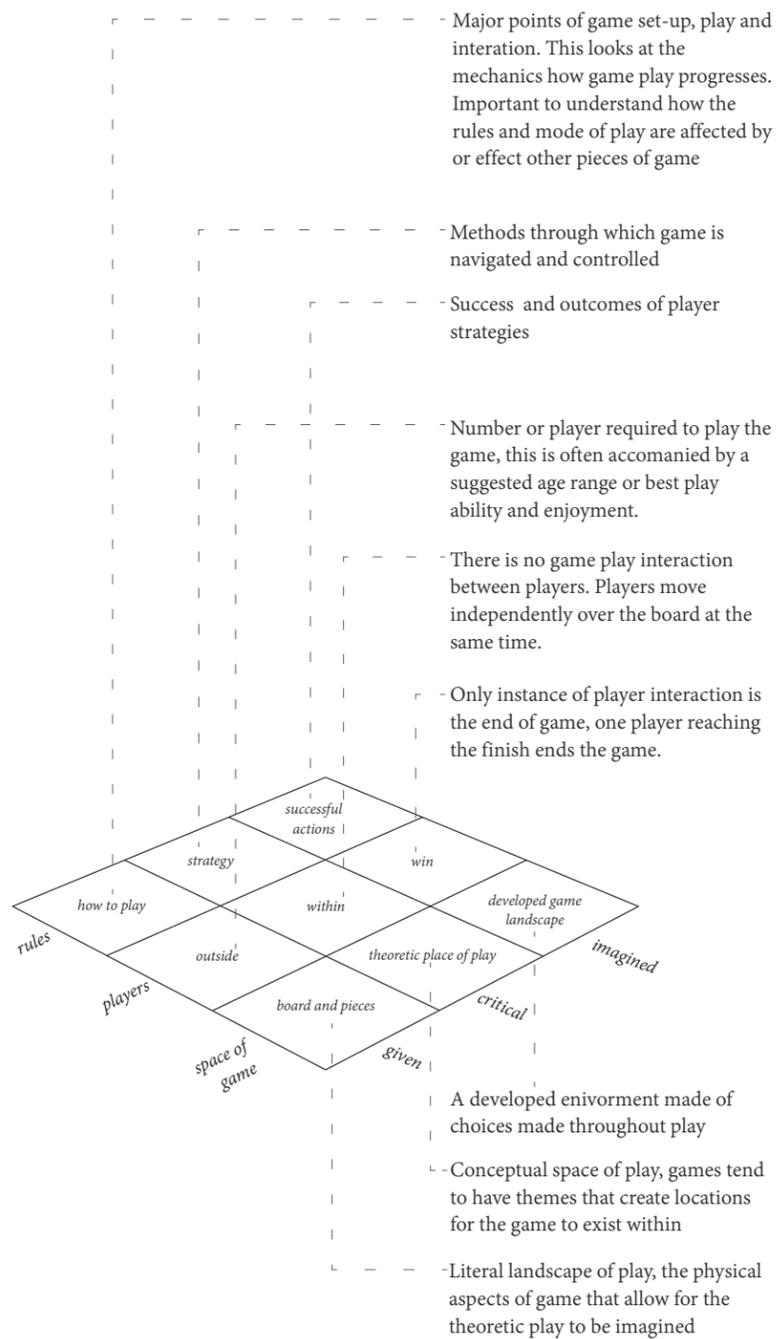


Fig 2.1
Base Game Analysis Matrix

HOW TO PLAY

On a player's turn they will roll the dice and move their token, the number of spaces rolled, clockwise around the board. The space they land on will dictate the action that can/must be taken. Two or more tokens may rest on the same space at one time. The space landed on may prompt the payer to either pay fees (Luxury Tax), pick up a Community Chest Card, a Chance card, pay rent to another player or go to jail. If a player lands on a Rail Road, Water Works or The Electric Company they pay the minimum rent into the Commons, a fund that is then held for the common needs of the players. It can be used for any purpose deemed fit by a majority vote. If doubles are thrown the player should complete the necessary action from that move and then receive dice back and

throw again. If a player throws doubles twice in a row they should go to JAIL. If a player lands in the SOCIAL PROGRAM areas while another player is in jail they may donate one, two or all of their development opportunities to the player in JAIL. Each time a player's token lands on or passes EARTH, that player will receive their harvest for the "year" (see Labour and Harvest) To make a development players must play in an activated square (see Activation). Players may make a maximum of 3 developments per turn. These can be all residential, all agricultural or a combination. The game ends when there are no more pieces to be played or no player(s) is able to make another point OR a player has made four trips around the board(or any predetermined number).



Fig 2.2
The Heidelberg Project, Detroit 2018

Through an exploration of games and game types, it becomes apparent that many games present very urban ideas. Because of the inherent need for *place* (due to the use of narrative or rules dictating spatial movement) required for a game to be played, whether that be literal or abstract, games present a unique way of designing and exploring space. Many board games seem to hint at strong ideologies of human settlement, whether intentional or unintentional in their design. Three incredibly popular games became the focus of research attention, with a breadth of academic study these games have been dissected to suppose the purposeful or unintended messages about physical, economic and social human development. In my own study of each of these three games, I isolated what can be described as specific ideologic kinds of urban development — that of the Colonizing City, the Capitalist City and the Realpolitik City.

The games Settlers of Catan, Monopoly and SimCity can be read in expressing specific values particular to the environments they were designed and became popular within.

Theory //

// Game

“RENT” AND MOVEMENT OF CAPITAL

This is a concept typical in Monopoly. All property cards will be held when play starts. When a player’s token lands on a property held by another player the first player must pay rent. That can be a payment of rent according to the printed value on the Title Deed card and the amount of development that has already taken place, or a contribution of development by donating a development chip. Rent should begin at the rent with 1 house level and increase with each addition of a development in the square directly above the property. (i.e 1 development in that square above means rent with 2 houses, 2 developments is rent with 3 houses and 3 developments is rent with 4 houses. The rent with hotel can not be reached) Developments on the interior of the board do not affect rent.

RESILIENCE POINTS

As players develop the interior of the board resilience point will be awarded. To gain a resilience point, players must take part in the creation of a Neighbourhood. These Neighbourhoods must always maintain the prescribed residence/agriculture balance or no point is earned (see *Ag-Residential Ratio*). In order for a player to receive points for a Neighbourhood they must have contributed AT LEAST 1 residential and 1 agricultural piece. They must also have a Labour piece in the Neighbourhood. Players may run out of Labour pieces and may move them to other Neighbourhoods for more points or to increase their harvest.

The development pieces exist in two categories. Agriculture and residential. The third piece type is a labour piece.

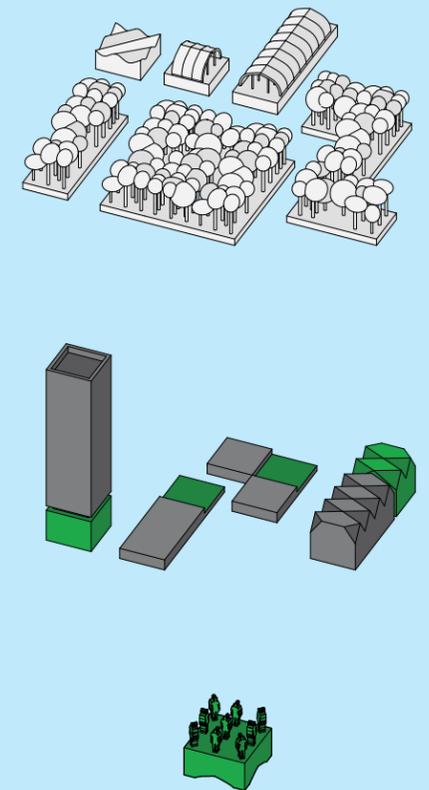


Fig 3.1
Development Game Pieces

Settlers Of Catan (from now on referred to as Catan) is a German Style board game with play defined by its hexagonal board tiles, resource cards and wooden developments (roads, villages and cities). The aesthetic and narrative of this story imply a colonial relationship with land, a “civilized” medieval people arrive at the uninhabited island of Catan (though the existence of the “robber” may imply a pre-existing people), its resources are extracted and settlements are built. Players attempt to earn the most points by building the most/largest settlements.

Catan was designed by Klaus Teuber, originally published as “Die Siedler von Catan” in Germany 1995. Teuber used game design as an escape from his life, he was at the time a dentist and quite likely severely depressed. Since its introduction to the US, Catan has become increasingly popular. So much so that it has been suggested that it may replace monopoly. This game has been paramount in the introduction of Euro-Games (sometimes called German-style due to the predominance of German origin) to the US. These games tend to be fairly simple while still being intellectually challenging. The analog nature of euro-games has grown well alongside of the emergence of digital games with Catan now available on several online platforms. In 2014 Catan set the record for most people playing a board game at one time. Catan has become so popular that Digital-media professor at Georgia tech, Brian Magerko, has been quoted in saying “Catan [re] opened the door for consumers to reconsider board games as a social play experience.”¹

The spatial and political presentation of Catan creates a very urban and hierarchical

¹ Adrienne Raphel, “The Man Who Built Catan,” *The New Yorker*, sec. Business, February 12, 2014, 2014.

model of the development of civilisation. In play, each player expands their own territory until there is no more space left displaying a notably imperial expansion pattern. The difference from reality to the model of the game is that there is no ability to invade other players territory. Peaceful settlements expand with players losing due to inability to continue to grow their own developments. Play exemplifies a somewhat Lockean mode of expansion. Players must be adjacent to the property (or in the game resources) in order to gain from them, expansion must happen through the linear placement of roads and cannot jump from place to place without having expended resources for infrastructure. The popularity of Settlers of Catan has been thought to be attributed to its ability to speak to our innate feelings toward resettlement. Since its creation in 1995 the world has become increasingly global and our fear of change in a world that is now a place of climate displacement, with war refugees and border struggles, has only increased. In a period of time that has been referred to as the ‘age of unsettlement’² Settlers of Catan models a system of relationships — the players who settle, the robber, the natural resources, that work together to create social and urban systems in empty space.³

The physical mechanics of the board dictate the kind of development and expansion players are able to take part in. Within a relatively small perimeter of the board, the edges of the tiles allow for a large amount of movement. The hexagonal tiles allow

² Lorenzo Verancini, “Settlers of Catan,” *Settler Colonial Studies* 3, no. 1 (March, 15. 2013, 2013), July, 25, 2018. doi:10.1080/18380743.2013.761941. <https://doi.org/10.1080/18380743.2013.761941>.

³ Blake Eskin, “Like Monopoly in the Depression, Settlers of Catan is the Board Game of our Time,” *Washington Post*, sec. Outlook &Opinions, Nov 21, 2010, 2010.

Theory //

// Game

RESIDENTIAL

House

Cost for development \$100

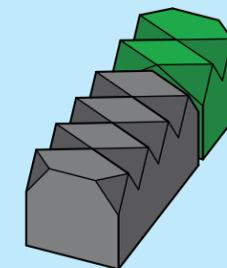


Fig 3.2
Development Game Pieces: Houses

Monopoly is a well-known game, familiar to most. The square Monopoly board presents a perimeter of “properties”, up for purchase by the players and valued based on the position on the board and the number of similarly coloured properties a player holds. Monopoly has its own currency, the aim of the game is capital gain. Players attempt to bankrupt each other until there is only one player left standing. Loved or hated, Monopoly is a household name and has been since its debut with Parker Brothers in 1935 when 278,000 games were sold in its first year.⁴ It is estimated that since then over 250 millions sets of monopoly have been sold worldwide.⁵ Charles Darrow claimed to have invented the game for his family in the depths of the great depression. The truth, however, goes much deeper.⁶

This is a game that consists of capital trade to achieve total board and capital control. The square board is surrounded by properties that make space for the timeless and recognisable silver tokens to move within. These silver tokens, in an anecdotal way, seem to represent and connect the contemporary player to Monopoly’s industrial origins. The thimble,

⁴ Mary Pilon, *The Monopolist Obsession, Fury, and the Scandal Behind the World’s Favorite Board Game* (USA: Bloomsbury, 2015). 37%

⁵ “Monopoly Patented,” Library of Congress, Business Reference Section, last modified 07/23/2018, accessed March 30, 2019, <https://www.loc.gov/rr/business/businesshistory/December/monopoly.html>.

⁶ Ibid. 3% This topic of discussion continues on pg 42

the iron, the cannon, the battle ship, the boot and the top hat are original icons well ingrained in players minds even though the original game never came with them, players were asked to use household objects due to lack of resources for production.⁷ The other game pieces are typical and recognisable aspects of life and property ownership; money, a bank, title deeds, properties, as well as a board that quite obviously, though abstractly, represents a city. All players start with the same amount of money and then rely on strategy and chance to eventually control the game. In Monopoly the value of land is linear, with it rising starting from GO from each property to the next. The lowest value are the brown properties, the highest dark blue. When a player chances to land on or outbid players for higher valued properties they become structurally advantaged, as they make developments the value of the properties increases at a much higher rate than lower valued properties. In this way the linear travel around the board creates severe disparity between the advantaged players and disadvantaged players.

Monopoly, though Darrow could technically designed it after Atlantic city, can be any city, as the numerous editions of monopoly suggest. For the sake of my research interests Detroit became the primary Case Study city,

⁷ “The Evolution of Monopoly Playing Pieces Over the Years,” The Spruce Crafts, last modified January 24, 2019, accessed January 30, 2019, 2019, <https://www.thesprucecrafts.com/original-and-new-tokens-411914>.

Theory //

// Game

AGRICULTURAL

Small

Cost for development \$10

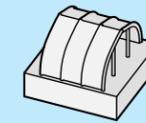


Fig 3.6
Development Game Pieces: Small Agricultural

Theory //

Spatially Monopoly is an abstract City. Land, and its value in the city are extrapolated to pure retail value and commoditised for commercial development. The use of the colour grouped properties (something that is explicitly missing from Magie's Landlords Game) forces the monopolization of space in order to make developments. Wealth then begins to build in certain areas of the board depending on several factors, how many players, which property colours have been bought, by who, and the chance aspects of the game. This simplistic but effective game models the way in which wealth can accumulate with a single player when it comes to the development and use of land as well as illustrating how drastically inequalities between players can increase. Monopoly has obvious connections to the capitalist mindset much of the world exists within, for this reason it was chosen to be the landscape for Commonopoly.

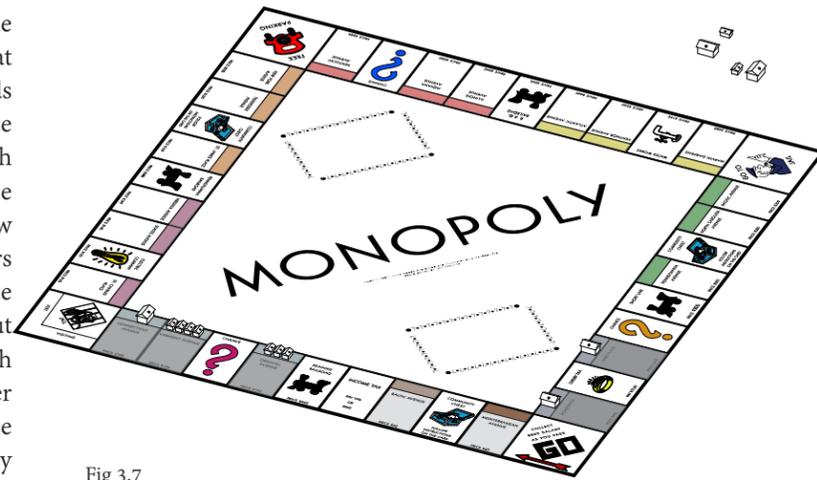


Fig 3.7
Monopoly: Full Board Diagram

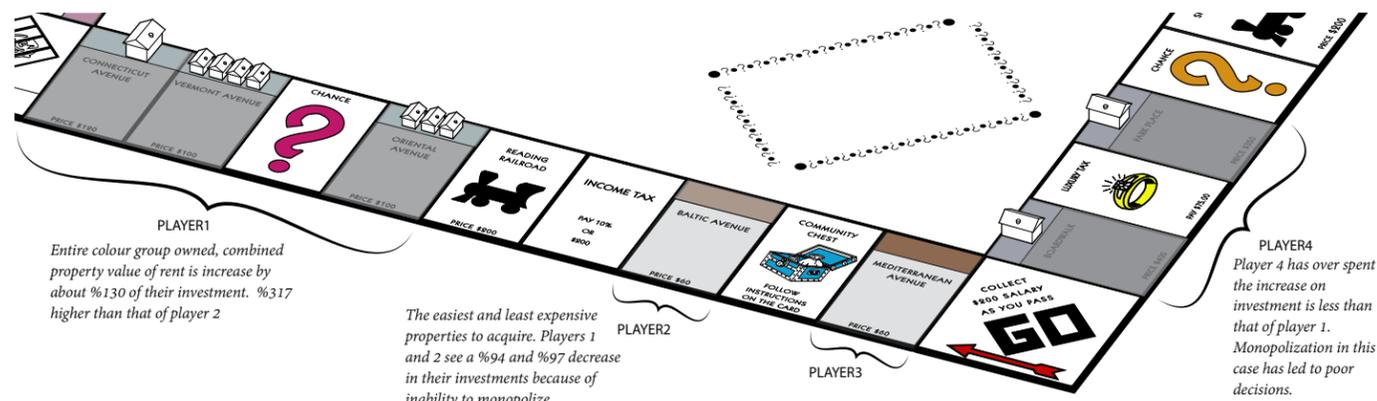


Fig 3.8
Monopoly: Spatial Play Diagram

// Game

AGRICULTURAL

Large

Cost for development

\$25

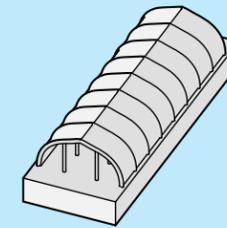


Fig 3.9
Development Game Pieces: Large Agricultural

SimCity is a city build type digital game that sits high in popularity among many others like Minecraft and Cities: Skylines. The game allows development of zones, road systems and building types to create a functioning city. With control of aspects such as economy, health, energy and police a player constructs a digital city meeting goals set by the game itself and disrupted by other factors such as natural disaster and crime.

The city building genre began in 1968 with The Summer Game by Doug Dymet. This game was a forerunner to the city builder type. With no ability to actually build, a player could run a city, buy and sell land and feed their population. Several games began to develop the concept from there, adding in more elements of actual city building until the genre as we know it today was realised in Sim City. Development for SimCity began in 1985 under the working title Micropolis, eventually being released by Maxis (Will Wright co founder) for PC as SimCity in 1989 (later being released for Atari that same year). The Nintendo platform was launched in 1991. SimCity 2000 was created as a sequel to the original, this edition being much more elaborate with the ability to build underground, power plants, neighbouring cities, work with complicated budgets and disasters. Over the past two decades Sim City has had multiple upgrades and spin off on many digital platforms, the most recent from 2012. Sim City gives players developmental knowledge of the urban environment through play, allowing insight into real urban planning decisions. The newest version of SimCity allows users to build their cities, use futuristic looking architectures, destroy them, monitor using drones, cause natural disasters or let them run rampant with crime. The SimCity

manufacturers advertise to its consumers that their imagination is the limit when playing “God” in their city building toy. This, as with its analogue forerunners, is untrue. In the past children have played classic games and toys like doll houses, train sets, playing house and building blocks. Each of these toys, while encouraging imagination and spatial recognitions, are inlaid with pedagogical ideologies reflecting morality and the idea of a town or city. Generally the toys require making space with a set of modular pieces with either rural or urban connotation, for example a train set may come with some miniature houses, a church, a city hall, a post office. While reviews and descriptions of the game often refer to it as the best way for everyday people to learn about city planning, the education of city planning through SimCity is biased, offering a structurally closed space of play. SimCity offers the typical industrial American city and nothing else.

SimCity offers the typical embodiment of the American city. Cities are built first by a road grid structure in a blank landscape as though drawn on paper rather than starting with a more “natural” settlement pattern or community structure. There is indication of water table and potential for environmental disaster, but no trees or existing nature. Once roads have been established a City Hall is the first building you are asked to construct. Rather than focusing on creating a community the game demands you build a physical city for people to move into. The spaces made now by the network of roads are then assigned to one of three zones, residential, industrial and commercial. The game has been criticized in its sprawling American spatiality and ingrained principles of systems similar to the ‘realpolitik’ of the

Theory //

// Game

AGRICULTURAL

Orchard

Cost for development \$200sm/\$350lg

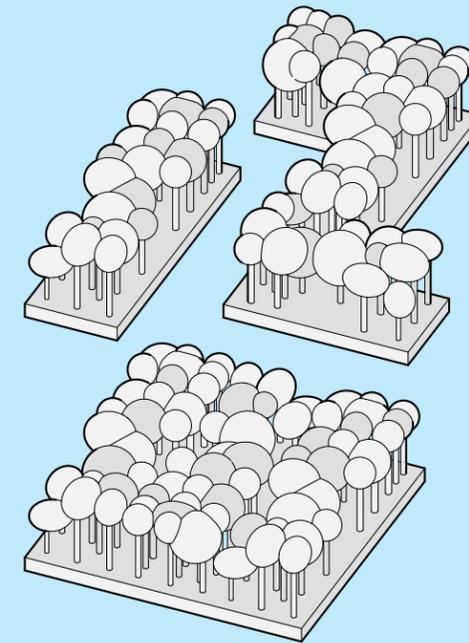


Fig 3.10
Development Game Pieces: Orchards

80's and 90's.⁸ The methods of determining the value of your city are logical, but not socially or environmentally moralistic. No matter how aesthetically futuristic a city gets the spatial organizer remains the automobile, there is no option for creating realistic urban pedestrian traffic, true park space, multi-purpose or multi-zone space. The built-in ideologies of SimCity do not allow for urban development ideas outside of the three zoning categories offered (residential, industrial and commercial) while success of the city and value of land is determined by extremely structured calculations. For

8 Maaïke Lauwaert, "Challenge Everything? Construction Play in Will Wight's CIMCITY," *Games and Culture* 2, no. 3 (July 2007, 2007), Nov. 30. 2017. doi:10.1177/1555412007306205. <http://gac.sagepub.com>.



Fig 3.11
SimCity: Early City Analysis
Source: SimCity, Windows PC version, Maxis, 2013

example, "industrial" programs decrease land value regardless of the type of industry. No matter how aesthetically futuristic a city gets the spatial organizer remains the automobile and the option for creating realistic urban pedestrian traffic or park space is unavailable. Like other city building games (analog or digital) sim city presents a conventional city making environment that allows users build and play following the pre-determined ideology. While SimCity gives your average game player some insight into the ways in which cities are created it does not allow for creative intervention in the methodology of city building or any actual participation in community construction.

Theory //

// Game

AGRICULTURAL

Hydroponic

Cost for development \$300



Fig 3.12
Development Game Pieces: Hydroponic

Theory //

BLANK

// Game

LABOUR AND HARVEST

Once a player has made an agricultural development they must use a Labour piece (placed on top of the agricultural piece) to activate its harvest capability. With each complete rotation around the board players may collect their harvest, the bounty that their agricultural Labour has produces over the “year”. Players may only collect from the agriculture pieces where one of their Labour pieces resides. If a players Labour piece is on top of an agricultural piece that is part of a complete Neighbourhood players may collect the total harvest value of all agricultural pieces in that Neighbourhood. Labour pieces can only be played on top of agricultural developments made by that same player. Multiple players may have Labour pieces on top of their own agricultural pieces in the same Neighbourhood.

TO BE COLLECTED

- \$50 for small agriculture
- \$150 for large
- \$300 for hydroponic
- \$500 for orchard



Fig 3.13
Development Game Pieces: Labour



Fig 3.14
Dilapidated Church, Detroit 2018

The game of Monopoly has been adopted as the primary precedent to the game of this thesis. Not only is Commonopoly played on top of a game of it, but the history of Monopoly's development has influenced the game design and inspired the continuation of theory communication through play.

Monopoly, arguably one of the worlds most popular games, is familiar to most. Whether loved or hated, Monopoly is a household name and has been since its debut with Parker Brothers in 1935, when 278,000¹ games flew off shelves in its first year. However, this beloved[hated] game has a

much longer history. Parker brothers bought Monopoly from a man named Charles Darrow who previously had been marketing Monopoly himself with small games stores after having been rejected by Parker Brothers in 1934.² Charles Darrow claims to have invented the game for his family in the depths of the great depression. He had an epiphany one day in his basement devising the financial game with a board based on Atlantic City allowing players to buy and sell property, build houses and hotels and amass wealth. A great American entrepreneur story that followed Monopoly for decades. The only problem, the story isn't true.³

1 Mary Pilon, *The Monopolist Obsession, Fury, and the Scandal Behind the World's Favorite Board Game* (USA: Bloomsbury, 2015). 37%

2 Ibid. 35%

3 Ibid. 3%



Fig 4.1 Charles Darrow and Monopoly

Theory //

// Game

In order to receive Resilience points from a Neighbourhood players Must maintain an minimum residential to agriculture ratio. This is a relation of agricultural development pieces to residential development pieces.

A Neighbourhood that does not meet the required ratio will not be awarded points, nor will any player be able to collect Harvest from a Labour piece in the Neighbourhood. The required ratios are as follows:

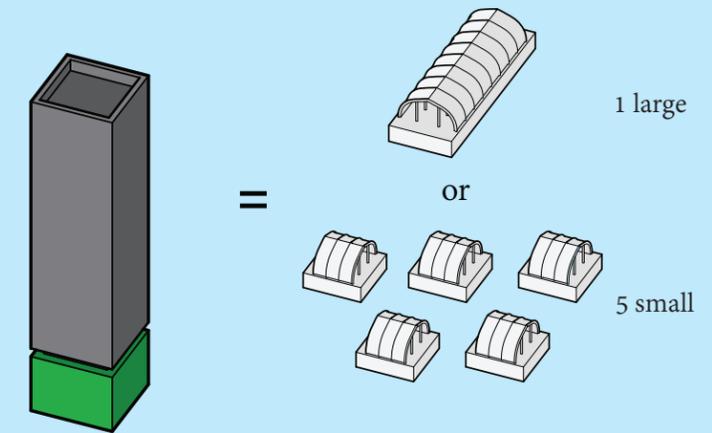


Fig 4.2 Ag-Residential Ratio: High Rise

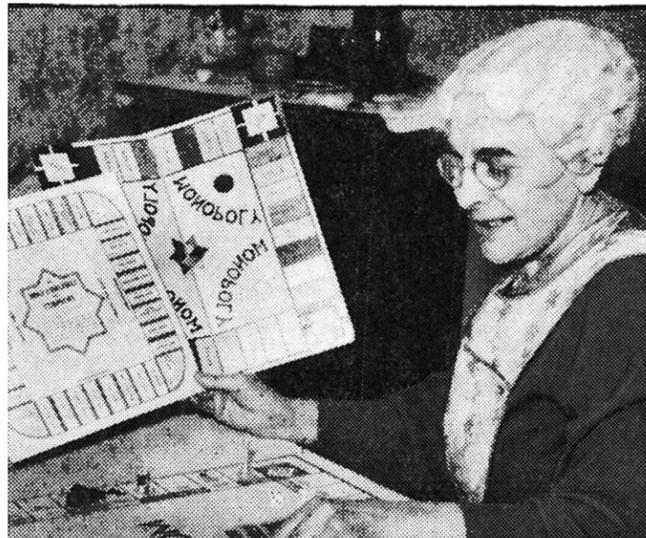


Fig 4.3
Elizabeth Magie and The Landlords Game

Monopoly made its way to Charles Darrow through an effectual game of Telephone, passing from one individual to another with homemade game boards and rules passed on through word of mouth. Where it eventually comes back to, though, is a woman Named Elizabeth Magie.

Known to her friends as Lizzie, she was a stenographer, writer, poet and feminist. Early in the 1900's, Magie began work on a board game. Frustrated by income inequality and fascinated by the economic and political theories of Henry George. Her game was designed to communicate George's "single tax", a philosophy that stated individuals should own 100% of what they create,

everything found such as land and nature should belong to everyone. Land should not be divided and sold as right, and those who do have the privilege to own land should be taxed for it. Any good other than land would then be untaxed⁴. In George's theory of wealth inequality and taxation, the burden of taxation across multiple areas decreases incentive for production and encourages the withholding of land to create higher demand and value. If instead, a single tax determined on the value of bare land rather than the value of its improvement could be applied, the harmful effect of speculative land value could be mitigated, landowners in

⁴ Henry George, *Progress and Poverty*, ed. Bob Drake (New York, NY.: Robert Schalkenbach Foundation, 2006).231

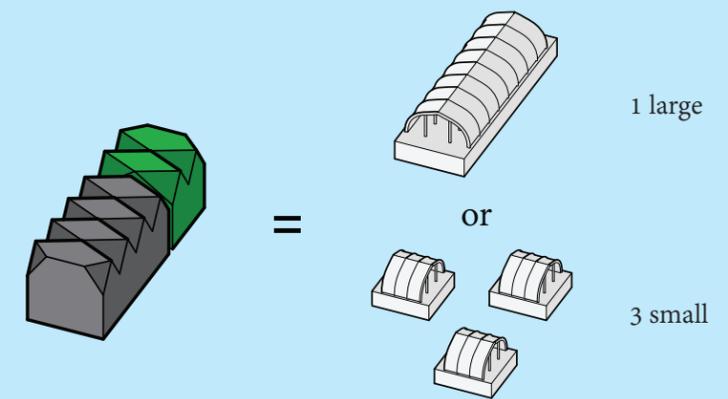


Fig 4.4
Ag-Residential Ratio: Houses

the country would benefit similarly to those in cities and wealth would become increase and more evenly distributed.⁵ This is the point the Magie attempted to communicate through her game which she came to call The Landlords Game. She built the rules to allow players to explore the idea of a single tax with a finite ending point in the game. She did however also include rules that are more recognizable as those of Monopoly to create a stark contrast to the George theory. In her original set of rules, she states: "The Landlord's Game is based on present prevailing business methods. This the players can prove for themselves; and they can also prove what must be the logical outcome of such a system, i.e., that the land monopolist

5 Ibid. 252

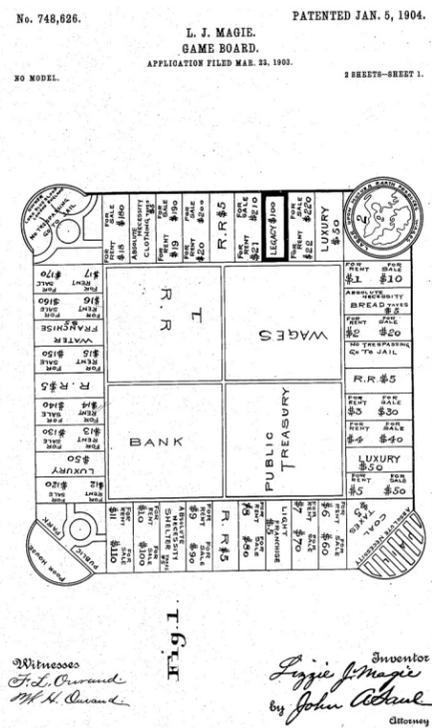


Fig 4.5
The Landlords Game Patent: 1904, by Elizabeth Magie

has absolute control of the situation. If a person wishes to prove this assertion -- having first proven that the principles of the game are based on realities -- let him do so by giving to one player all of the land and giving to the other players all other advantages of the game. Provide each player with \$100 at the start and let the game proceed under the rules with the exception that the landlord gets no wages. By this simple method one can satisfy himself of the truth of the assertion that the land monopolist is monarch of the world. The remedy is the Single Tax."⁶ Magie then goes on to describe the way in which the game should

6 "The Landlords Game," LandlordsGame.Info, last modified January 5, 1904, accessed July 12, 2018, http://landlordsgame.info/games/lg-1906/lg-1906_egc-rules.html.

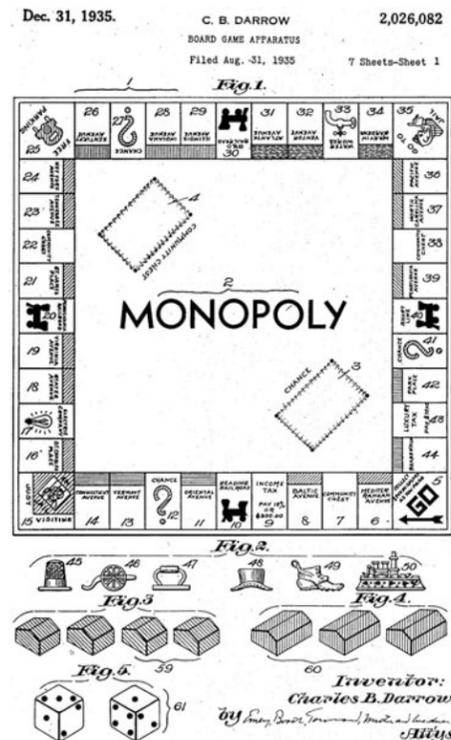
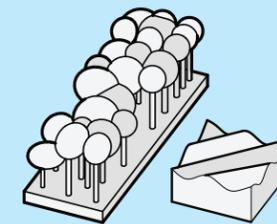


Fig 4.6
Monopoly Patent: 1935, By Charles Darrow

Theory //

// Game



orchards and hydroponic are not used to create ratios but to add additional points. (See Neighbourhoods)

Fig 4.7
Ag-Residential Ratio: Orchards and Hydroponic



Fig 4.8
Citizens of Arden Playing The Landlords Game

be played with the Single Tax rules. *see appendix for The Land Lords Game rules*

In 1904 Magie received the patent for The Landlord's Game. This game had many of the components that we would recognize on the Monopoly board of today; Rail Roads, Go to Jail, Jail, Public Park (cars were not so prevalent at this time and this is the Monopoly 'Free Parking' space), money, title deeds, properties to be bought or sold, taxes to be paid, and a bank. The Landlord's Game had a 'Mother Earth' space instead of Monopoly's recognizable 'GO', each time a player passed this space they were assumed to have performed labour for earth and received a wage. The Landlords Game embraced the value of land and labour as being beyond that of pure capital wealth implying Goerge's removal of land speculation,

reducing the artificial inflation of value and creating a more balanced wealth system.

The Landlord's originally game grew popular in a place called Arden, Delaware. A town founded in part by Quaker architect William Price. A utopian community where property could not be bought or sold.⁷ In the game's popularity in Arden, where the name Monopoly first appeared, it was spread beyond the Quaker community across the country through Magie's own small number of sales as well as through word of mouth. Eventually making its way to Charles Darrow and with the help of parker brothers, almost every home in the United States and many around the world.

⁷ Pilon, *The Monopolist Obsession, Fury, and the Scandal Behind the World's Favorite Board Game* 15%

Theory //

// Game

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Michael Piper [et.al] has successfully utilized the history and economic theory found in Monopoly and its predecessor The Landlords Game in creating a game that discusses the land development of Toronto's TODs (Transit Oriented Developments), the organizational form of "edge city" conditions intended to be dense mixed-use hubs for the perimeter of the city.⁸ The game developed from this is called Mallopoly, posing a strong

8 Michael Piper and Zoé Renaud, "Mallopolis: A Board Game about Megalopolitan Urbanization," *Thresholds* (05/01; 2019/01, 2018), 88-101. doi:10.1162/thld_a_00030.11

precedent for the game of this thesis. In Mallopoly players use items such as malls, amenities and transit lines to connect areas on the board map and create equitable and valuable assemblies in a speculative model of Toronto's urbanization. Mallopoly creates an "open-ended environment to visualize different spatial configurations that may result from its indirect system of value capture and particular geography of land value."⁹ Mallopoly and Commonopoly begin to create precedent for a new strategy for urban and architectural speculation.

9 Ibid.12-13

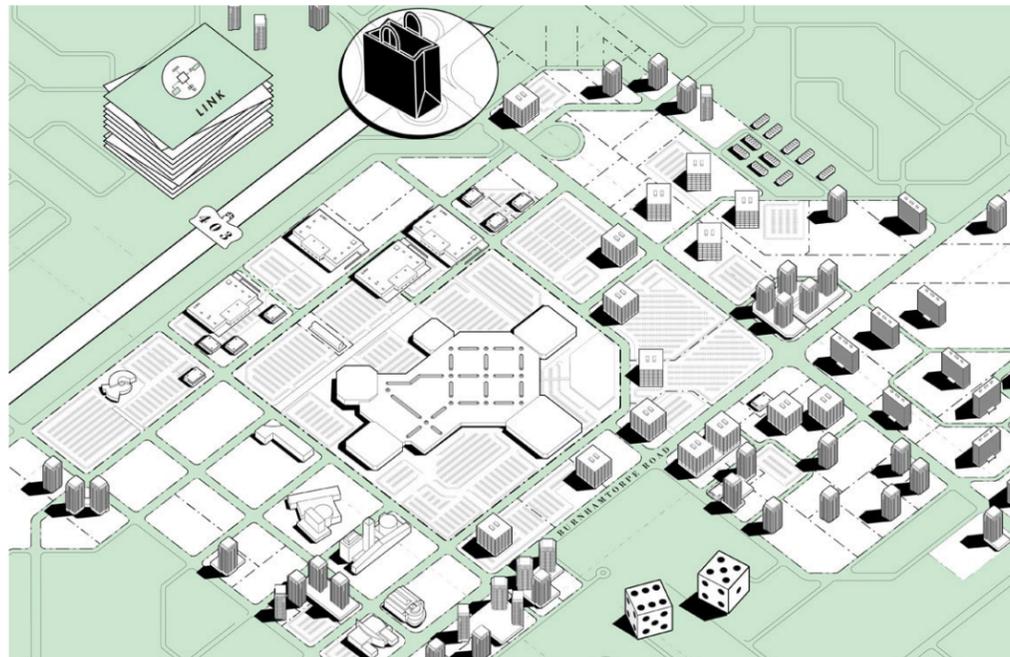


Fig 4.9
Mallopoly, By Michael Piper [et al]

Theory //

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Fig 4.10
Commonopoly and Monopoly Board Image

Monopoly, though Charles Darrow technically designed it after Atlantic city, can be any city. Monopoly makes the value of land separate from the moral and biological implications of those using it. This abstraction encourages monopolization and economic gain over fellow players. In this abstract form any capitalist city can be transplanted into the scenario of Monopoly. For the sake of my research interests Detroit is the primary Case Study city.

This thesis process began with an interest in what a utopic future city might look like, in a pragmatic sense. How will sustainability manifest in the creation of urban space in the future?

This question led to the exploration of how our urban environment exists today and how we got there. In studying work by people like Neil Brenner's *Implosions/Explosions*¹, Henri Lefebvre's discussion of critical urbanisation in his book *The Urban Revolution* (essay found in *Implosions/Explosions*²), and economists like J.K. Gibson Graham³ and

1 Neil Brenner, "Introduction: Urban Theory Without an Outside," in *Implosions/explosions: Towards a Study of Planetary Urbanization*, ed. Neil Brenner (Berlin: JOVIS, 2014), 14.

2 Henri Lefebvre, "From the City to Urban Society," in *Implosions/Explosions: Towards a Study of Planetary Urbanization*, ed. Neil Brenner (Berlin: JOVIS, 2014), 36. doi:ISBN 978-3-86859-317-4.

3 J. K. Gibson-Graham and Ethan Miller, "Economy as Ecological Livelihood," in *Manifesto for Living in the Anthropocene* (Brooklyn, NY: Puncum Books, 2015).

Doreen Massey⁴, on trends of urbanization and the almost complete cover of the earth in human habitation and how the form of our urbanization has shifted over time. Detroit presented as a specifically strong symbol of the struggle we face now in the transition from the most recent power of industrial urbanization into the information age. The shift has led to shifting geographical ties and the decay of many established industrial cities around the world.

Detroit could be called "poster child" for all decaying industrial cities. Its decay has been romanticized for decades and it has become a place of artistic and urban ingenuity⁵ while citizens of Detroit struggled to eat have been forced to find resourceful means to rebuild their communities. The rise of urban agriculture in Detroit, out of necessity, evokes a revolution in the perception of urban vs. rural where processes of food production and consumption can become decentralized and the participation in urban agriculture re-activates the inherent productivity of land while positively affecting social, economic and environmental spheres. Detroit has developed a community agricultural urbanism that is generating the beginnings of what can expand into an imagined future of tomorrow for Detroit and for an archetype of city planning.

4 Doreen B. Massey, *Spatial Divisions of Labour: Social Structures and the Geography of Production* (London; London: Macmillan, 1984; Macmillan, 1984).

5 Jason Young, Charles Waldheim and Georgia Daskalakis, *Stalking Detroit* (Barcelona: ACTAR, 2001).

Theory //

// Game

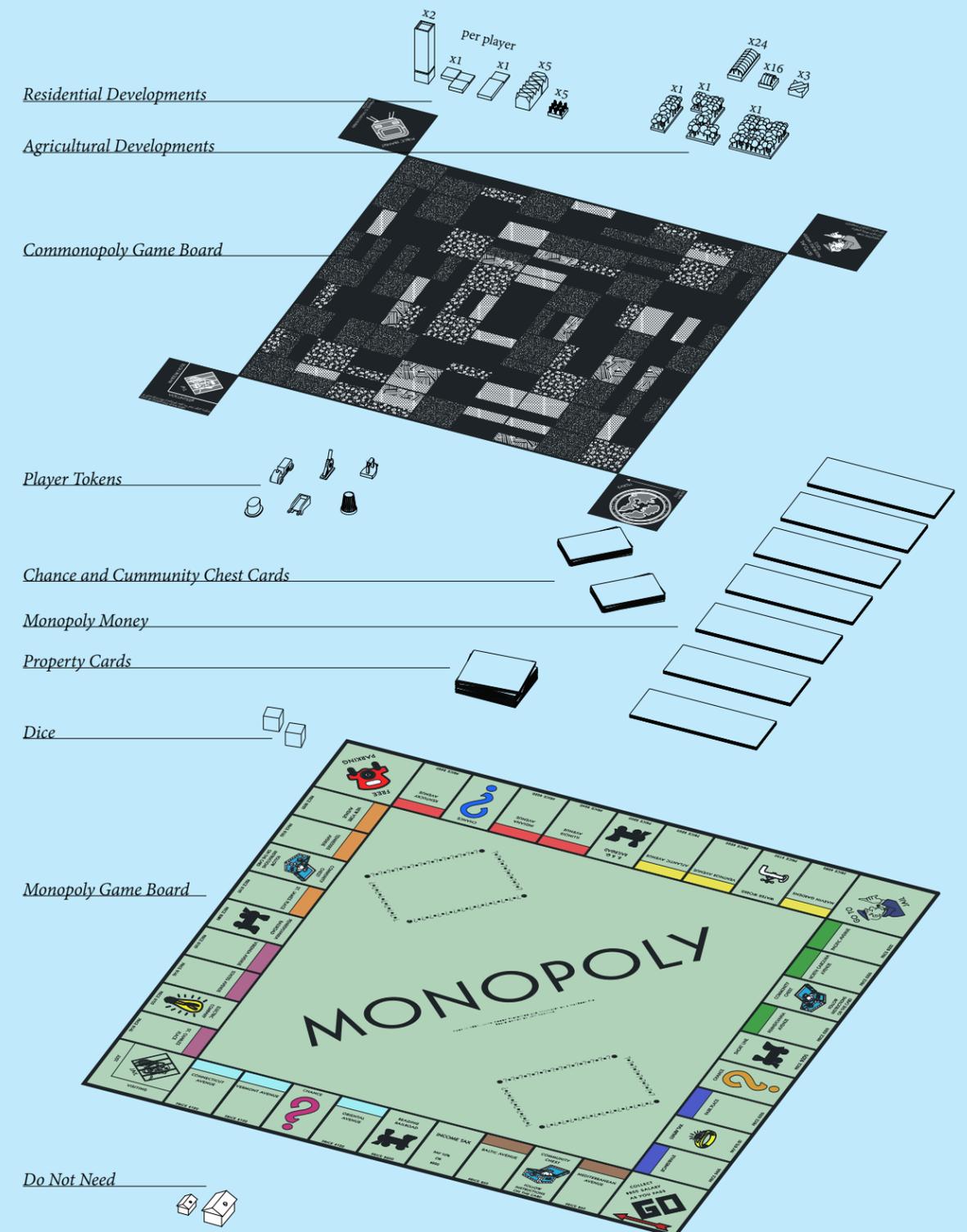


Fig 5.1
Play Manual Piece Diagram

One could almost call it easy, in a place like Detroit where people are starving or when a war rages and a country must ration provisions, to believe that food must be grown socially. However, when a city is considered economically stable why should anyone think of urban agriculture as important? It is unfamiliar, it is work, thus, it is unnecessary.

Urban agriculture, in its many forms, individual, family, community, corporate or networked, positively contribute to the social, economic and environmental health of cities and encourages those who live within them to learn and be aware of their food, waste and individual agency to act upon land.⁶ The currently prevailing idea of the city has been consistently reinforced since the beginning of the industrial revolution. While we now leave the industrial civilization we still see the remains of that industrial culture in our school system, the office work week, materialism, city street grids, and our games. The ideal city in the extension of this thesis is the perfect hybrid of urban, rural, and wilderness. That however, is far too broad and for simplification the study of the development of this kind of city begins with urban agriculture. Explored through play.

While I have primarily studied Detroit, the pattern of adopting urban agriculture can be found in struggling cities throughout the world. Even in a place like Toronto, where economic activity is considered strong, it is reported that hunger is an issue in 1 of every 8 households. Urban agriculture, normalized into the planning of modern cities, could

6 Francesca Miazzo editor., Mark Minkjan editor. and C.I.T.I.E.S.(Organization) issuing body, *Farming the City : Food as a Tool for Today's Urbanisation* (Amsterdam): trancity valiz, 2013).

mitigate hunger rates, can productively use city resources for food growth rather than pure aesthetics, can create community links and identities, help to mitigate rainwater and heat island effects and bring a social knowledge of earth and human consumption to citizens.

In the success of Detroit's agricultural urbanism, Jana Cephas argues there can be read three informal governances working to subvert the typical urban lifestyle that challenge the premise of Harvey's 9th myth⁷. These formations of self or community governance become the basis of the framework of the game. The *urban problematic*⁸ is addressed through the discarding of the urban as a conceptual superstructure without the possibility of the 'natural' and becomes a more organic ground up system, the participation of those within the system is integral to its ability to function. My proposal hopes to encourage that participation to spread through play, to use artistic and creative forces intrinsic within people to form the structure of the urban environment and its processes. Detroit stands to bridge the current liminality between past industrial urban life and a future urban through these three informal governances.⁹

7 David Harvey, "Cities Or Urbanization?" in *Implosions/Explosions : Towards a Study of Planetary Urbanization*, ed. Neil Brenner (Berlin: JOVIS, 2014), 52. doi:ISBN 978-3-86859-317-4. pg66

8 Henri Lefebvre, "From the City to Urban Society," in *Implosions/Explosions : Towards a Study of Planetary Urbanization*, ed. Neil Brenner (Berlin: JOVIS, 2014), 36. doi:ISBN 978-3-86859-317-4. pg39

9 Sebastian Deterding, "The Ambiguity of Games: Histories and Discourses of a Gameful World," in *Gameful World: Approaches, Issues, Applications*, eds. Steffen P. Walz and Sebastian Deterding MIT Press, 2104). pg25

ACTIVATION

A square is activated by the first development made in the square directly adjacent to a property in the hand of the player making the development. The player must develop directly adjacent to their own property if no other square has been made available to them. This move activates the square as well as all the squares abutting that one. Once a square has been activated any player with a property card in hand that has a direct linear connection to it may play within it on their own turn. Once a player makes a development in a square it has been claimed, to play within a claimed square an agreement with the original player must be made. This can, and will likely, be an agreement to build a Neighbourhood.

ORIENTATION OF PLAY

Play must be made in the orientation noted by the board or can be rotated provided the character of all three rows within the square are the same or remedied to the same if possible.

BANKRUPTCY

It should not be in any player's interest for others to declare bankruptcy. If a player must declare bankruptcy the game is over, and all have lost. When players owe more than they have they may mortgage their properties with the bank, sell properties to other players, auction their properties, sell development pieces, merge properties with another player for a fee of the player's agreement or with a majority vote take from the commons.

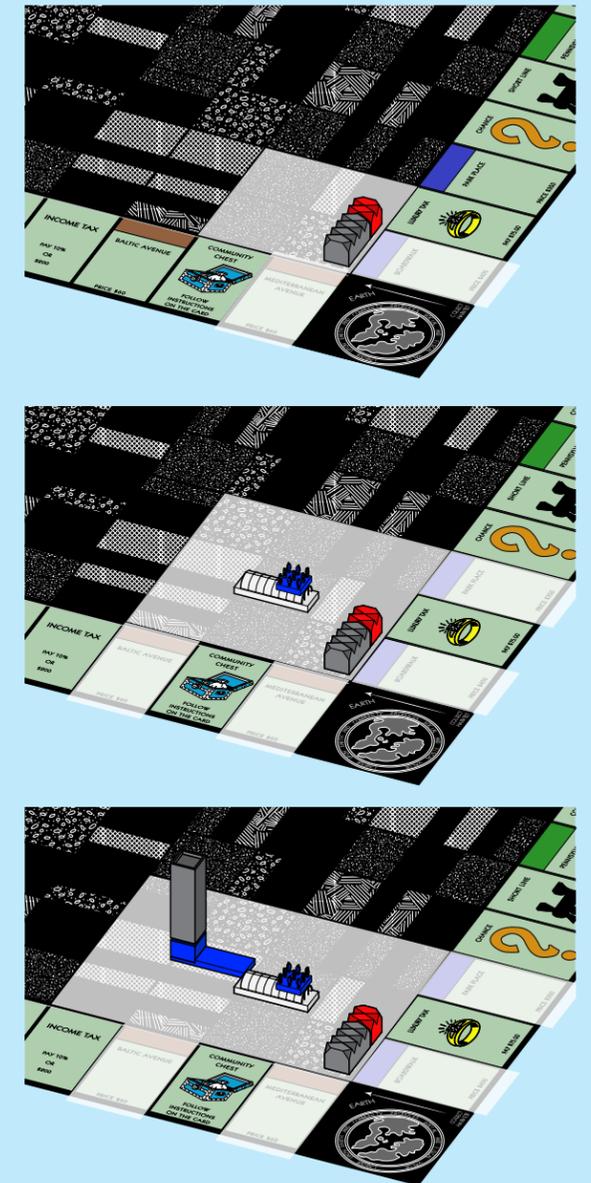


Fig 5.2
Activation Diagram Series

The emergence of ecological jurisdiction.
– There is wider economic value of urban agriculture beyond the produce of the farm itself. Everything from the procurement of seeds and bulbs to labour and all other external resources required for them to function connects the informal economic structure of urban agriculture to the larger formal global economy.¹⁰ The potential is there for an influencing force of the value of food and other items in our market. The spatial reorganization implied by subverted urban priorities through agricultural urbanization leads to entirely different forms of work, habitation, green space and all other physical pieces of a recognizable urban landscape. Within an ecological jurisdiction the form of a city does not need to follow road grids or typical neighbourhood formations. The environment is legible in its functional use and perspective. The game borrows this structure to create pathways, codification and playful modes of interacting with ecological or built territories.

Changing notions of public and private space
– As Detroit lost building stock and the land was taken over there arose a reorganization of social order and structures. The spaces of urban agriculture create public space other than the likes of a public park.¹¹ These spaces become work, play, social, education, economy and in this variety of use and the implicit participation involved there is a reorientation of the understanding of space,

10 Jana Cephas, “The Changing Image of Detroit,” in *In the Life of Cities*, ed. Mohsen Mostafavi (Zürich, Switzerland: Lars Müller Publishers, 2012). pg272-274

11 Ibid. pg272-274

not only in a spatial manner but in the conceptual *idea of the city*¹² The game will thrive in these kinds of liminal spaces of ritual. Participation becomes both desirable and unavoidable in the existence within this reconception of what urban life is.¹³

Agreements among citizens supported by knowledge obtained and sustained through informal social networks¹⁴ The participation and fruitful collaboration of all citizens is integral to the functionality of a gameful environment. This informal self-governance is the foundation for a bottom-up “grassroots” urbanism, wherein the new urban landscape can be crafted through the game in order to replace the industrial one. The game should support such collaborative structures of governance, encouraging what Fuller would refer to as a *preferred state*.¹⁵ The game, though flexible enough for citizens to form their own methods of governance should enact points and demerits in relation to the effects of developing innovative and productive social governances.

12 Lefebvre, *From the City to Urban Society*, 36 pg40

13 Deterding, *The Ambiguity of Games: Histories and Discourses of a Gameful World* pg25

14 Cephas, *The Changing Image of Detroit*

15 Richard Buckminster Fuller, *World Game Series: Document One. the World Game: Integrative Resource Utilization Planning Tool* (Illinois: World Resource Inventory Southern Illinois University, 1971).

Theory //

// Game

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Lafayette Greens inspires the Downtown Core neighbourhood type. This corporate sponsored community Garden is located in the Centre of Down Town Detroit. Donated by Compuware in 2014, the garden was designed by Kenneth Weikal Landscape Architecture.

This garden is surrounded by dense urban fabric. Its central location, while small, allows for maximum exposure for this kind of development. Creating many opportunities.¹

¹ "Lafayette Greens", accessed April 5, 2018, <https://www.greeningofdetroit.com/greenspaces/>.



Fig 5.3
Lafayette Greens, By Beth Hagenbuch, 2011



Fig 5.4
Aerial [Lafayette Greens]

Theory //

// Game

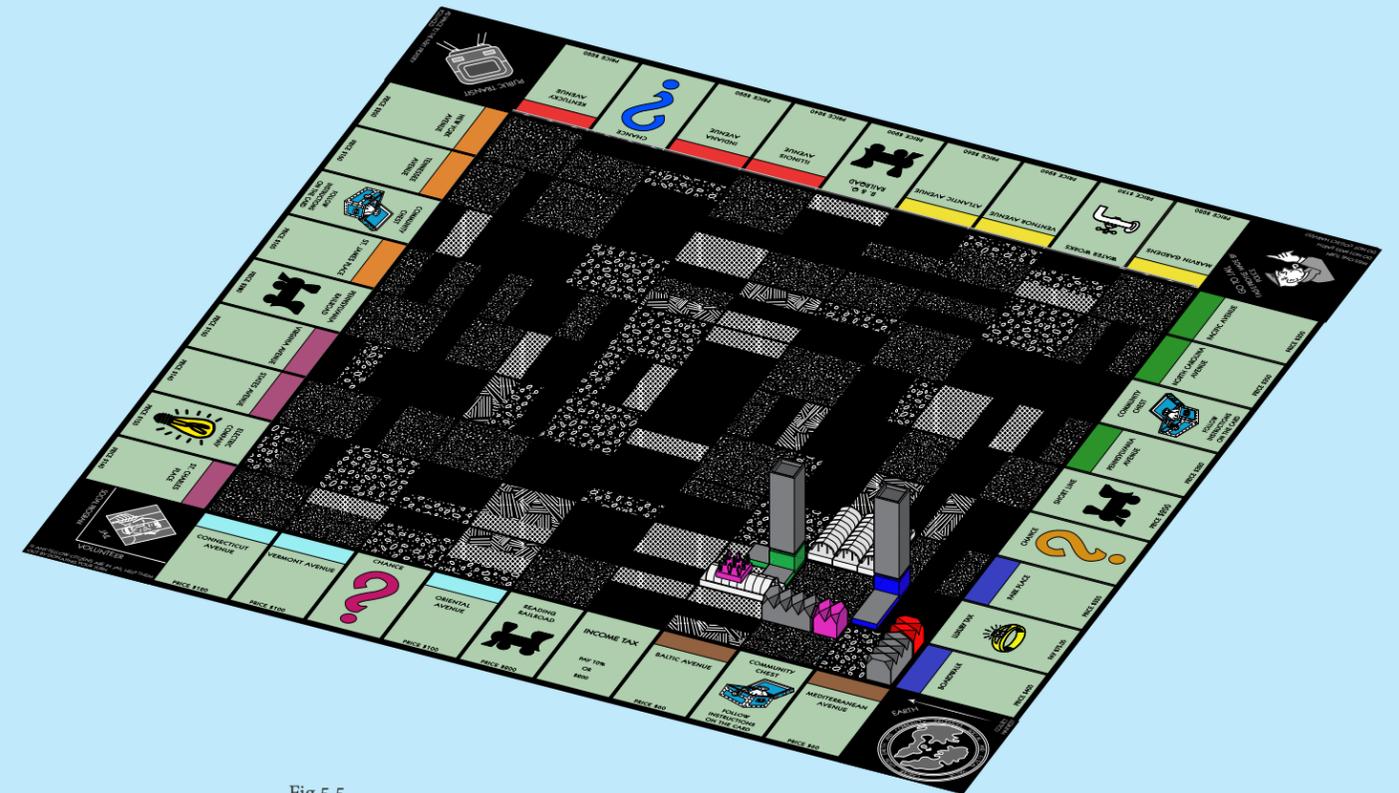


Fig 5.5
Neighbourhoods [Downtown Core]

DOWNTOWN CORE
Worth 4Pts. This is a Neighbourhood that leaves an opening of a square surrounded by building and must include at least two high rise pieces

Detroit Hives is a small bee farm run by a Husband and Wife team attempting to raise awareness and the bee population in Detroit. The Courtyard neighbourhood type is derived from this beehive. The conceptual idea here is that in a residential area space is

left fallow for regrowth of native plant types good for bee pollination and health as well as strengthening the native environment.²

² "About the Founders," accessed May 14, 2018, <https://detroithives.com/about-us/>.



Fig 5.6
Detroit Hives, Detroit, 2018



Fig 5.7
Aerial [Detroit Hives]

Theory //

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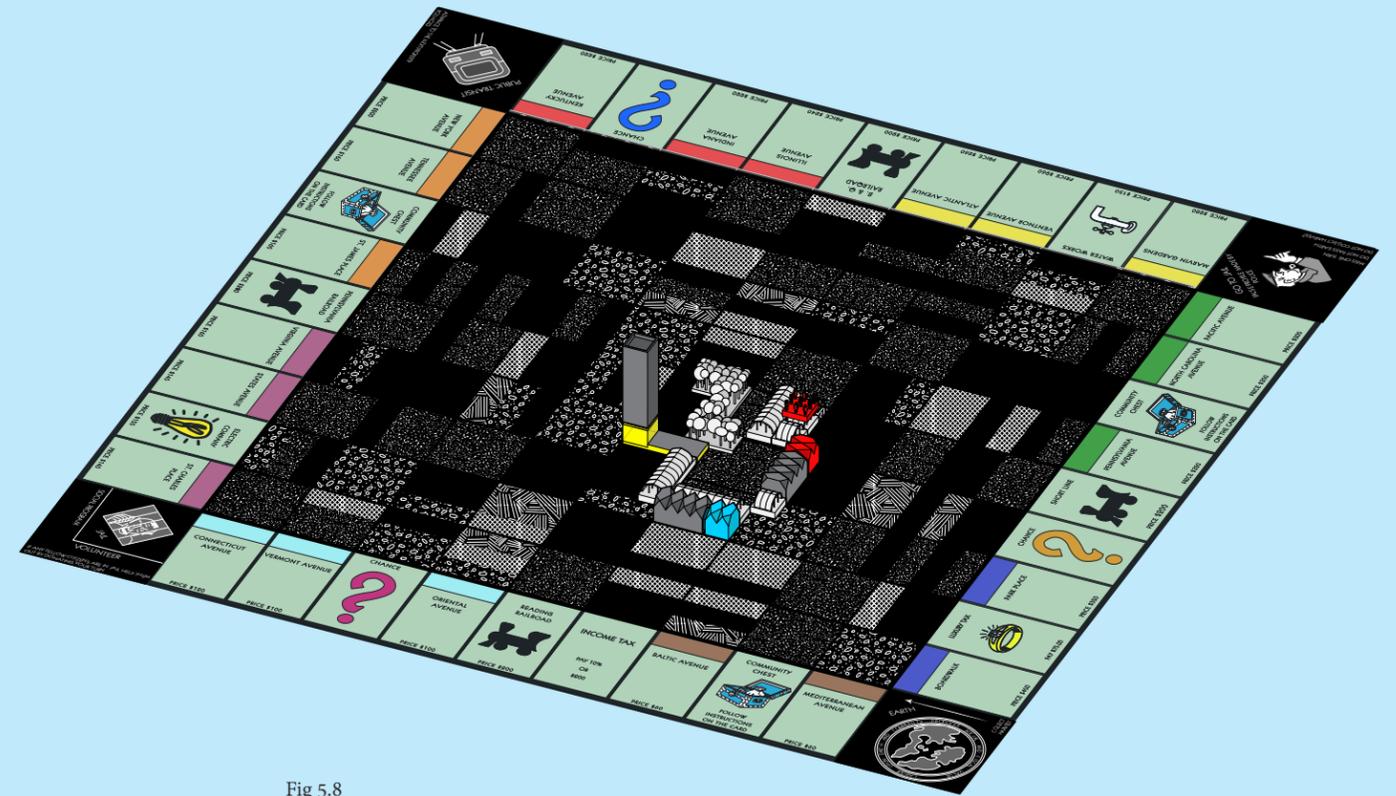


Fig 5.8
Neighbourhoods [Courtyard]

COURTYARD

Courtyard 3 pts. Again this is an open square surrounded by development that does not meet the minimum two high rise.

Earth Works inspires the idea of a farm integrated neighbourhood of the Farm-hood neighbourhood type. This type implies the value of agricultural practice embedded in a community structure. Started in 1997, Earth Works garden is supported by The Capuchin Soup Kitchen, a Catholic institution. This location has

a fairly well-populated neighbourhood adjacent to it and a surrounding community since the urban garden is rooted within the soup kitchen and church structure.³ The Orchard neighbourhood type in

³ "About Us - History," Capuchin Soup Kitchen, accessed May 04, 2018, https://www.cskdetroit.org/earthworks/about_us/history/.



Fig 5.9
Earth Works Urban Farm Greenhouse, Detroit, 2018



Fig 5.10
Aerial [Earth Works]

Theory //

// Game

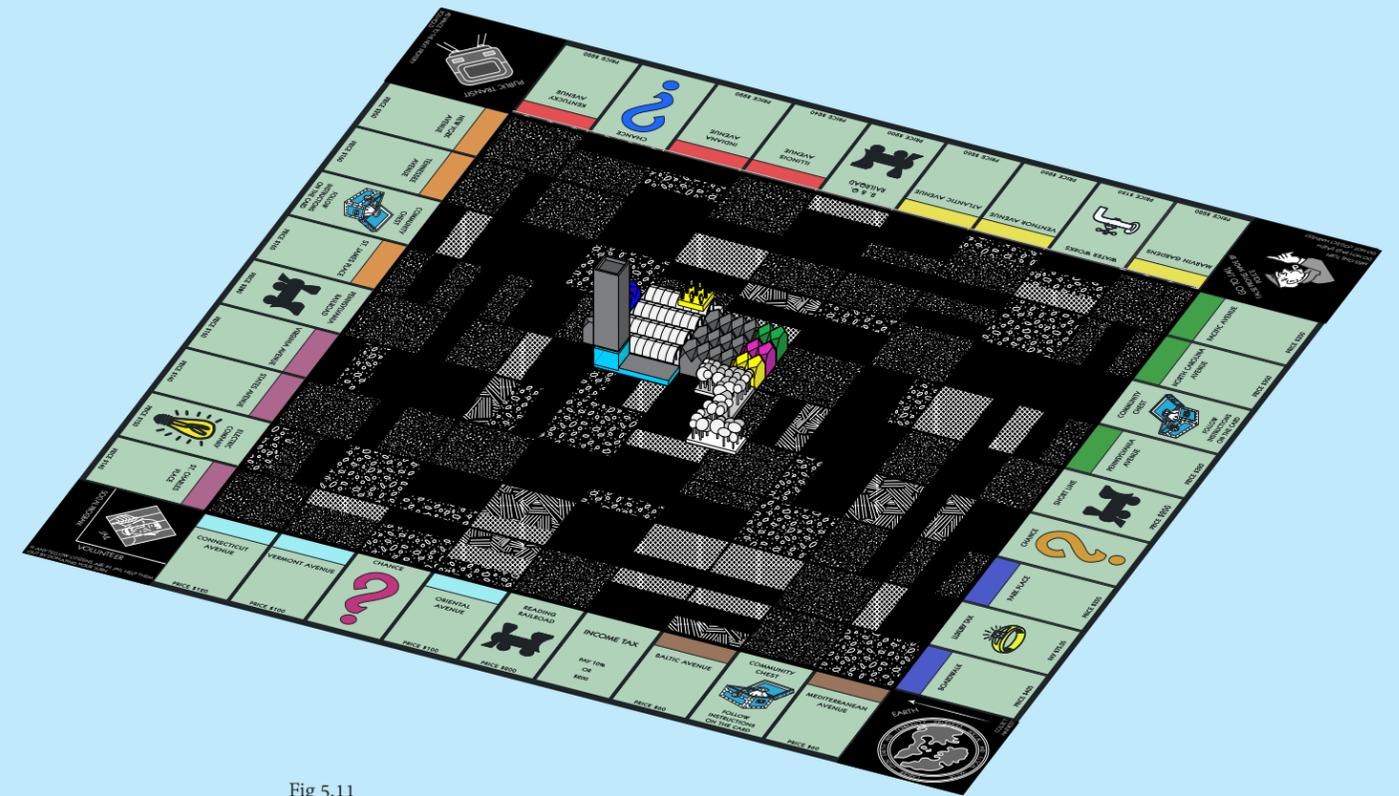


Fig 5.11
Neighbourhoods [Farmhood]

FARMHOOD
Farm-Hood (a neighbourhood surrounding a square filled with farm) is worth 4 points

The Block neighbourhood type refers to an area of dense population adjacent to a farm plot. The Michigan Urban Farming Initiative is located at the north end of the New Centre, Detroit. Physically the farm is a squat block of urban space next to a fairly populated

neighbourhood. While visiting the MUFI a big local cookout happened to be taking place in a park just north [to the left] of this image.⁵

5 "About MUFI," Michigan Urban Farming Initiative, accessed May 04, 2018, <https://www.miufi.org/about>.



Fig 5.15
Michigan Urban Farming Initiative, Detroit, 2018



Fig 5.16
Aerial [MUFI]

Theory //

// Game

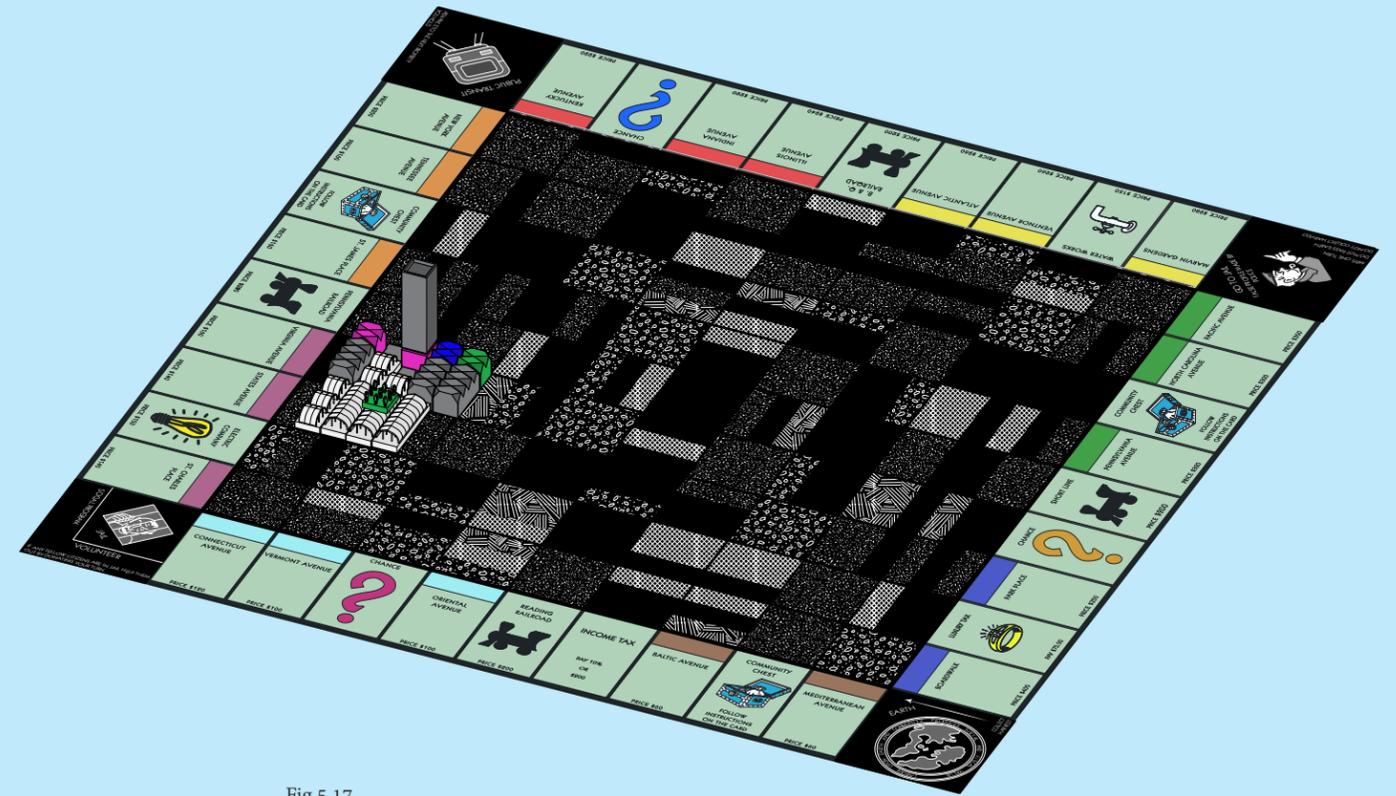


Fig 5.17
Neighbourhoods [Block]

BLOCK
A Block, 2 pts. Is at least 4 residential developments side by side with the agriculture developments next to them.



Fig 5.24
Food Field, Detroit, 2018

As the world becomes increasingly more global, an increasingly more singular humanity is coalescing and arriving at a realization that “society has been completely urbanised”.¹ With this realization comes the understanding of the social responsibility in the shape of the global urban future. Henri Lefebvre has discussed the “critical zone” as the product of this urban industrialization, the spread and intensity of human habitation evolving into global megalopolises. The

1 Henri Lefebvre, “From the City to Urban Society,” in *Implosions/Explosions: Towards a Study of Planetary Urbanization*, ed. Neil Brenner (Berlin: JOVIS, 2014), 36. doi:ISBN 978-3-86859-317-4.36

effects of which morphing cultures, the global landscape and environment.

What is referred to as an urban implosion-explosion, the continual cycle of capitalist land, territory and natural development, eventually leads to a point at which urban form fully dominates that the agrarian and natural, reorienting the importance found in the landscape development of each.² If some of our past urban forming tendencies

2 Neil Brenner, “Introduction: Urban Theory Without an Outside,” in *Implosions/explosions: Towards a Study of Planetary Urbanization*, ed. Neil Brenner (Berlin: JOVIS, 2014), 14.17

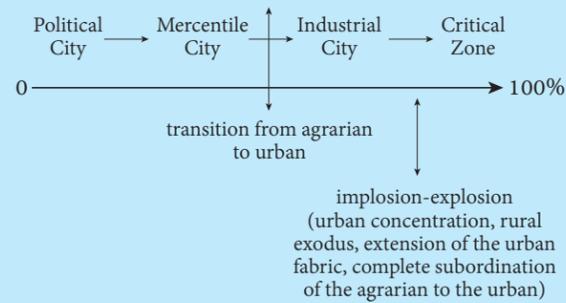


Fig 6.1 Lefebvre's Time-line



Fig 6.2 Visual Representation of Lefebvre's Time line (authors interpretation)

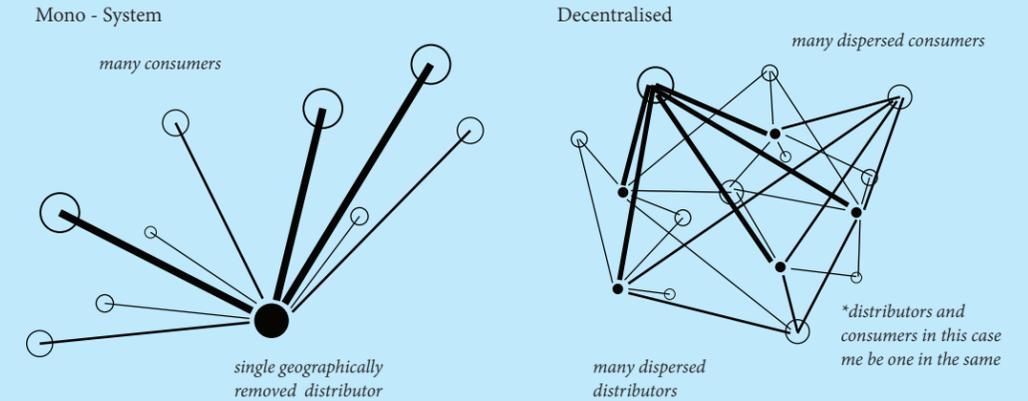


Fig 6.3 Visualization of Mono and Decentralized Systems

and strategies can be referred to a Colonizing (Political), Industrial or Realpolitik then a future organizing scheme in the Lefebvre “Critical Zone” could be referred to as Critical.

Commonopoly is a reaction to the idea of the critical zone as a Critical city. Commonopoly uses the industrial capitalist structure set by Monopoly to propose different reasons for development within the spatial structure determined by the monopoly board. This game ‘hacks’ the worlds favourite game with a new game played inside of the classic Monopoly ring. New ideas, pieces and rules break open the industrial and capitalist economic model to form a representational model of agricultural urban ideas. The play of this game overlays urban agriculture onto the

existing or typical city, allowing a palimpsest to form displaying what is and what could be. The intent here is not for Commonopoly to replace Monopoly, but for one to insert itself into the structure of the other. The Rules of the game have been developed, like Magie’s, from theories I have read. Specifically, of the Informal Governances Jana Cephas writes about having developed in Detroit [Being ecological jurisdiction making a stake in the economy, changing notions of public and private space, and the social character of knowledge] as well as creating an idea of Critical urban by challenging the 9th myth.³ Commonopoly challenges the idea of

3 David Harvey, “Cities Or Urbanization?” in *Implosions/Explosions: Towards a Study of Planetary Urbanization*, ed. Neil Brenner (Berlin: JOVIS, 2014), 52. doi:ISBN 978-3-86859-317-4. 67

agricultural subordination to the urban and the operational structure of monopoly and the traditional pattern of large food production moving food into large food distributors, turning the single point or mono system to a poly or decentralized one where many stakeholders balance the system and make it more physically accessible.

In the design process it was important for the new game to have an economy and not exist entirely outside of the capitalist structure we are living in, in reality. Through design iterations and game tests, the movement of capital between players and the game mechanics were tracked. Monopoly has a somewhat predictable movement. The movement of the new game designs however, were sometimes unexpected, as I came to learn designing games with economies are some of the most difficult.

Early game iterations attempted to challenge the preconceived notions of urban planning, zoning and type of space use in the city. The first game iteration removed the planning strategy of residential, commercial, industrial zones that have been defined on a map in favour of land qualities, implications of previous use of that land and the agencies that are negative or beneficial. The first game design was a sort of puzzle that allowed almost infinite starting possibilities as well as multitudes of possibilities in play. Those aspects made the game complicated. Leading to the next iterations when Monopoly began to be used as a precedent. The board

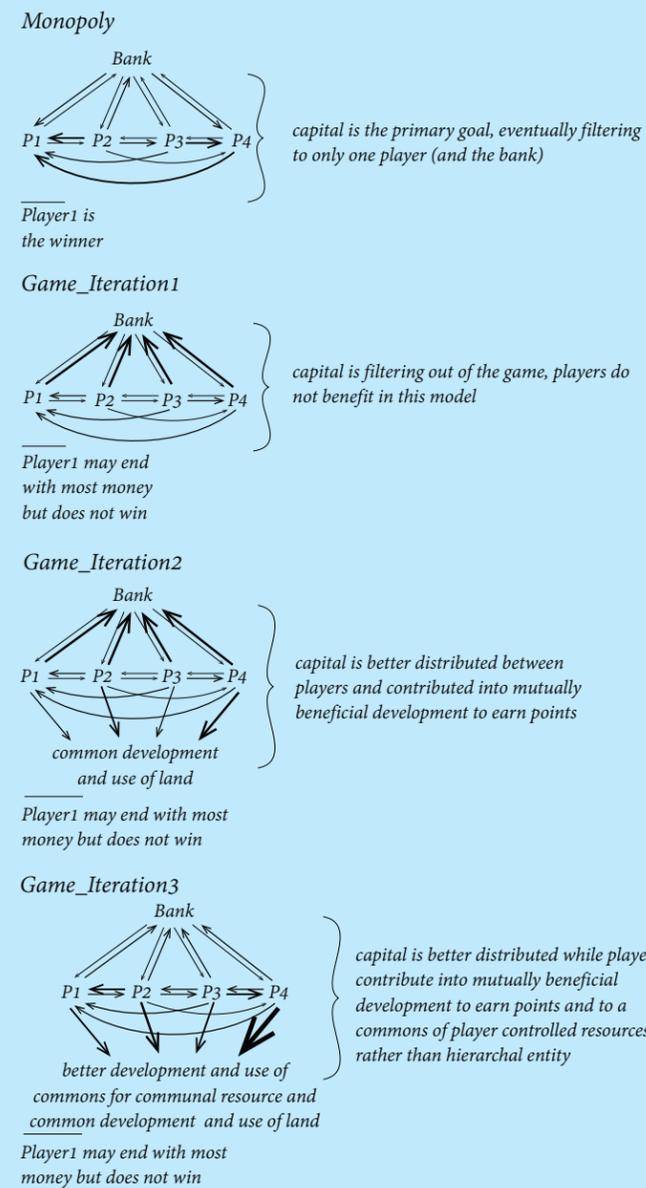


Fig 6.4 Visualization of Capital Movement through games

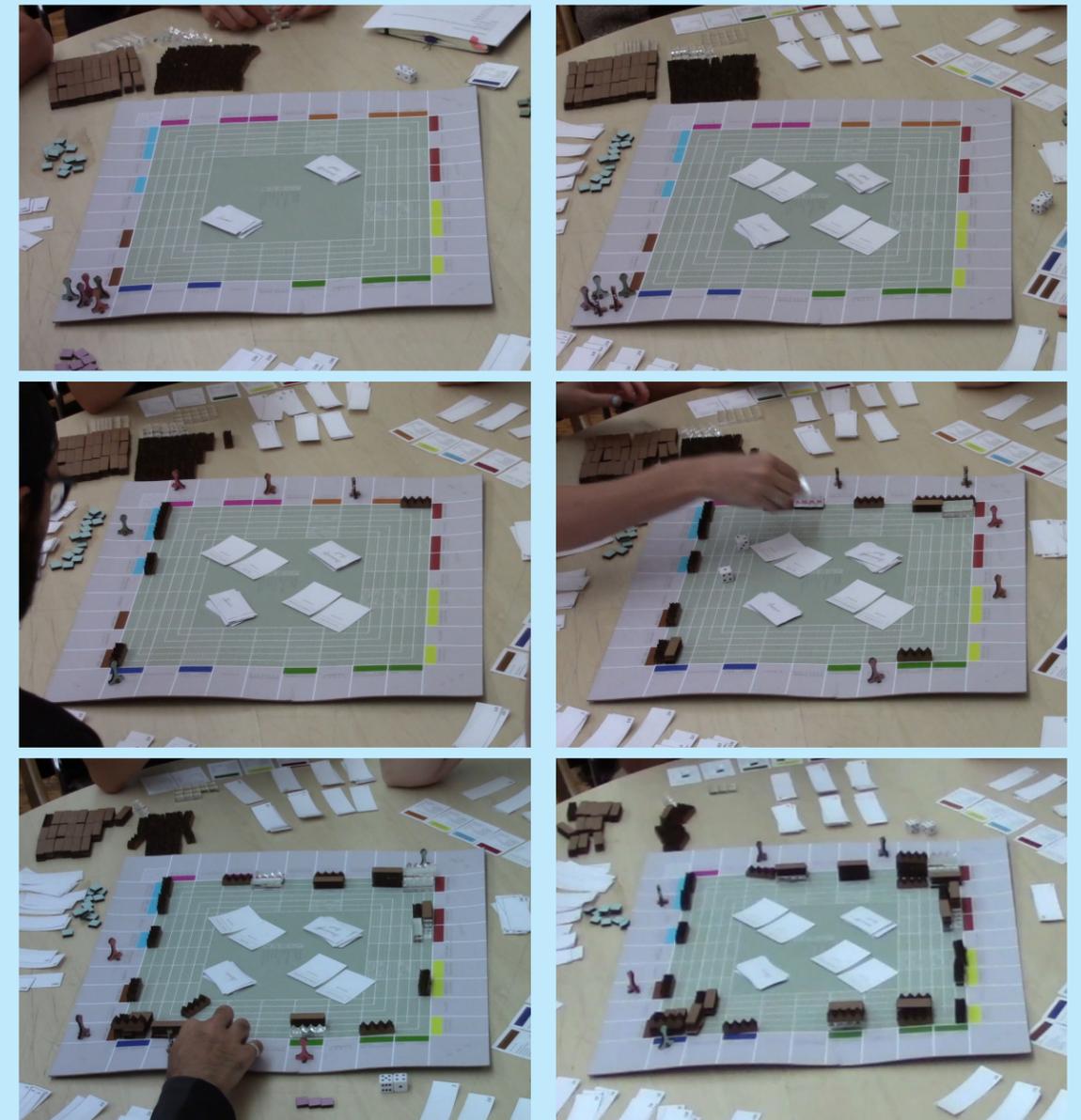


Fig 6.5 Commonopoly Iteration 1: Play Test [set of images]

was designed after the monopoly board, with Detroit lending recognizable landmarks. This game too much replicated Monopoly without adding enough of the urban agricultural or urban design conversation desired.

Finally, the choice to create a game to play inside the game of Monopoly was made. The liner and monetized value of real-estate as represented in monopoly⁴ is broken apart by the addition of the new game. Using the game of Monopoly allows for the capitalist manner of land development to remain present while the alternate value of agricultural production and human habitation is imposed with new rules. Commonopoly developed through two iterations of this kind of play duality.

Commonopoly 'hacks' the worlds favourite game Monopoly. A new game played inside of the classic monopoly ring, with new ideas and pieces to break open the industrial and capitalist economic model to form a representational model of agricultural urban ideas. The play of this game overlays urban agriculture onto the existing or typical city, allowing a palimpsest to form displaying what is and what could be. The players become designers of this layer of urbanism.

Commonopoly looks to re-establish the value of landscape in urban development. Though a capitalist economy is still modelled in this game, winning is not done through capital gain alone. Players need to

4 See monopoly analysis pg30/32

use the pieces provided to create one of 5 neighbourhoods that earn Resilience Points.

Then the game begins just as any monopoly game would. Roll the dice, move the number of squares take whatever action is necessary for the space you land on. Some differences of the normal game to note are payments made for railroads, water, electricity and tax go to a commons pile rather than the bank. This money can be used by players for any reason with a majority vote. The only way to get out of jail is to serve the sentence (missing a turn), but another player who lands in what is normally just visiting may allow you to participate in development. And landing on Public transit, normally free parking allows a player to move forward to the next property they hold in their hand. With each turn, players may make up to three developments of any kind.

As players move around the board they develop neighbourhoods and earn points. The labour pieces are used on top of agriculture piece to activate the productivity of the harvest. Harvest is then collected while passing Earth (the replacement of the GO corner) time and labour have passed with the developments made turning a fiscal profit. Labour pieces must be placed in a neighbourhood for a player receive the points of a neighbourhood they took part in.

While players continue to move around the board a model of an urban agriculture city is built. Players are unable to build

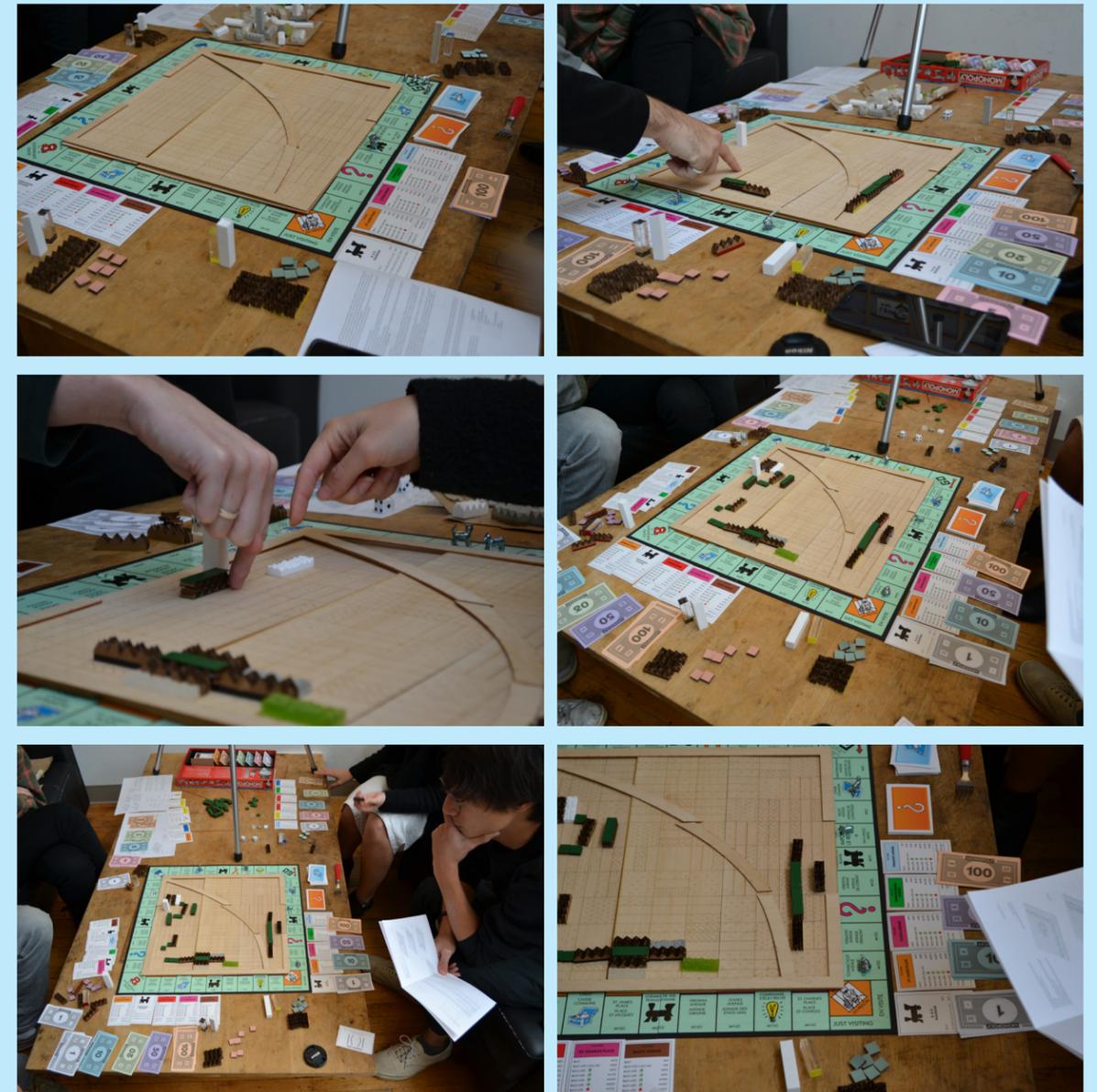


Fig 6.6
Commonopoly Iteration 2: Play Test [set of images]

neighbourhoods by themselves and must work with each other to build and earn points and money. The multi-piece nature of the neighbourhood formations require more than just partnered alliances. All players can and need to be active with multiple others in order for anyone to succeed.

Players of Commonopoly find themselves engaged in negotiations about what kinds of neighbourhoods they want to build, with whom and how. While the types of neighbourhoods modelled in the game may be abstract, the different forms and development pieces remind players of recognizable forms in real life. In this way players may enjoy a game of strategy and teamwork and/or engage in conversation about the nature of our built environments, their monetary and inherent land value and the way in which land is used for residence and food production. The multiple types of neighbourhoods, land conditions and the incorporation of the classic game of monopoly creates ever-changing landscape onto which players model build agricultural environments.



Fig 6.7
Orchard Development Piece [Z]

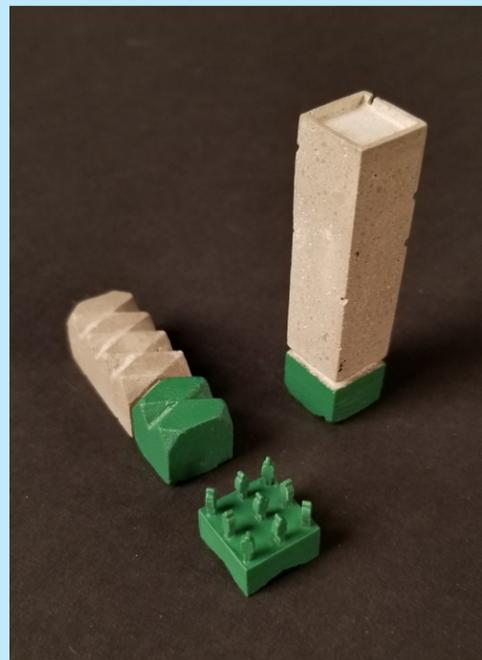


Fig 6.8
Coloured Development pieces [Highrise, House and Labour]



Fig 6.9
Commonopoly Unboxing [image1]



Fig 6.10
Commonopoly Unboxing [image2]

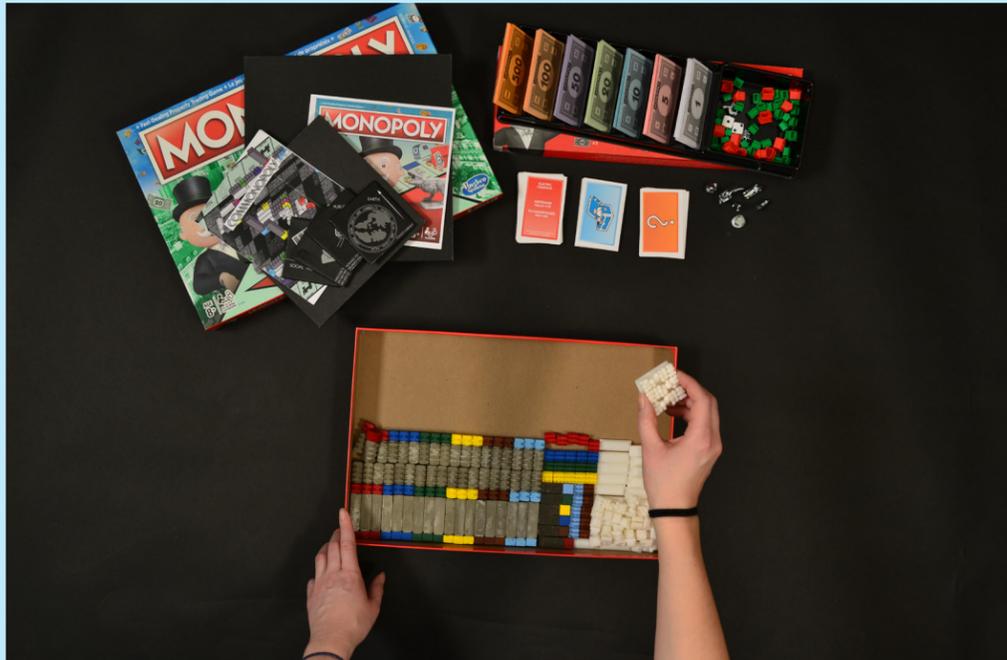


Fig 6.11
Commonopoly Unboxing [image3]

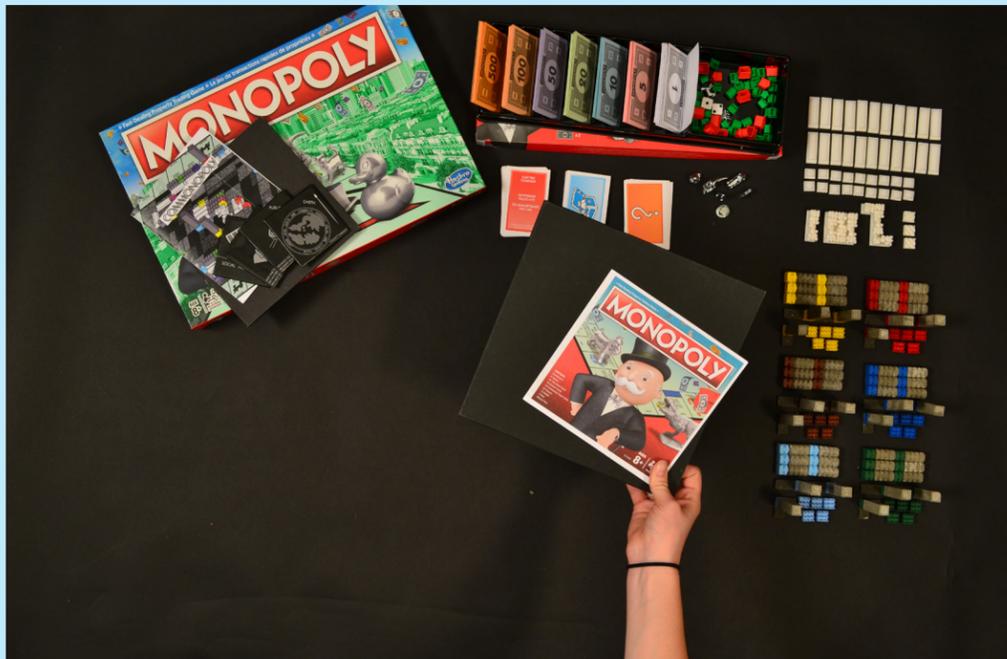


Fig 6.12
Commonopoly Unboxing [image4]



Fig 6.13
Commonopoly Iteration 3: Play Test [determining play order]



Fig 6.14
Commonopoly Iteration 3: Play Test [dealing property cards]



Fig 6.15
Commonopoly Unboxing [image5]



Fig 6.16
Commonopoly Unboxing [image6]



Fig 6.17
Commonopoly Iteration 3: Play Test [playing a labour piece]



Fig 6.18
Commonopoly Iteration 3: Play Test [discussion of neighbourhood]



Fig 6.19
Commonopoly Unboxing [image7]



Fig 6.20
Commonopoly Unboxing [image8]



Fig 6.21
Commonopoly Iteration 3: Play Test [collective planning]



Fig 6.22
Commonopoly Iteration 3: Play Test [fully played game]



Fig 6.23
Commonpoly Board and Development Pieces: Use of an Orchard Connection



Fig 6.24
Commonopoly Board after Play

Commonopoly presents the adoption of urban agricultural thinking. The industrial era game of Monopoly is broken apart to facilitate new exploratory play in which players need to reconsider the value and condition of land as no longer entirely abstracted to purely monetary. Players are not rewarded simply for owning land and receiving rent. Players must actively develop, adding human value to the inherent value of land using the principles of urban agriculture built into the rules and forms of the game, combining labour and resources with other players as they do so.

The ideal city, in the extension of this thesis, is the perfect hybrid of urban, rural, and wilderness. Commonopoly opens a fissure in a culturally established game, to play agricultural urban ideas that move thinking toward that ideal.



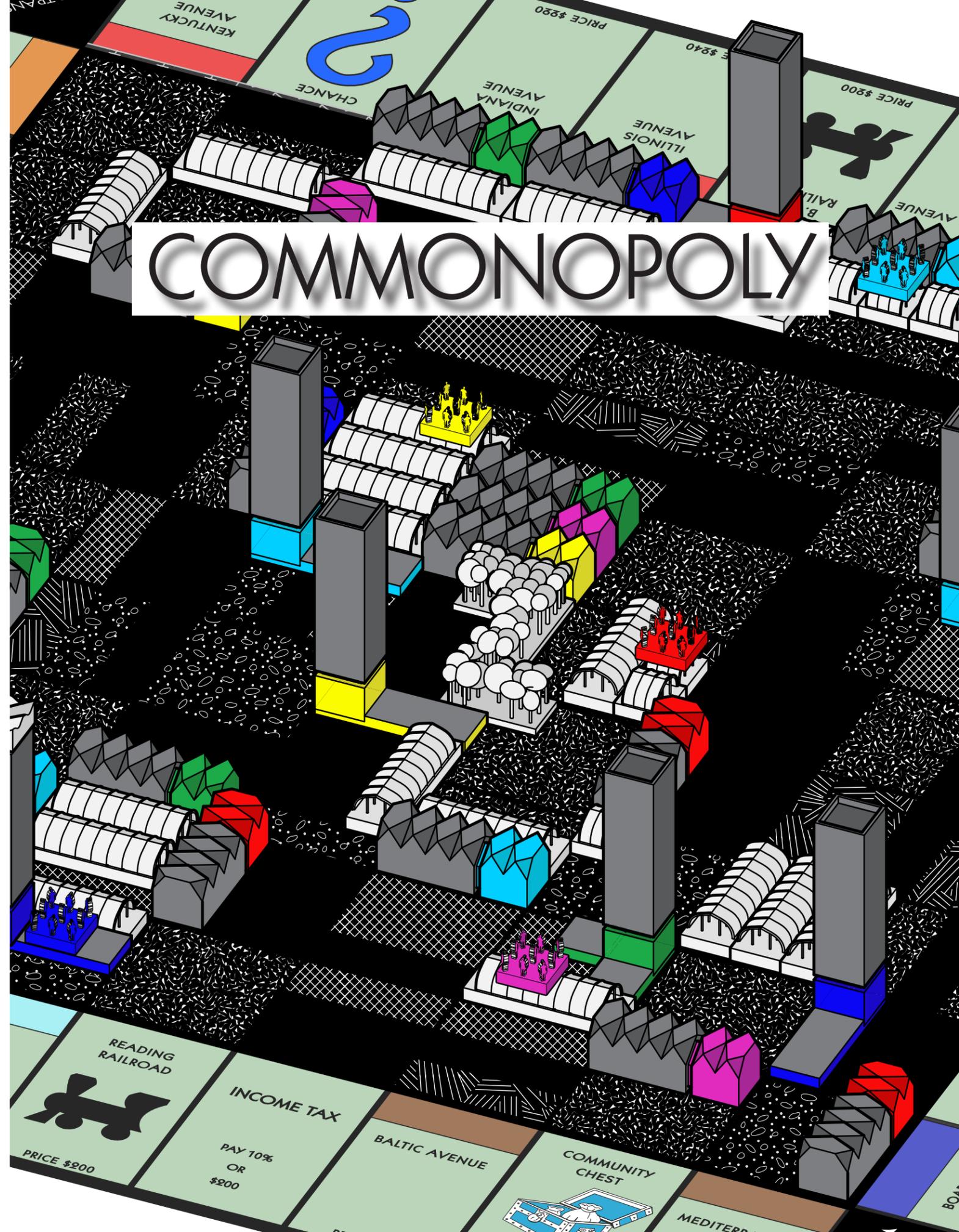
Fig 6.25
Detroit Commonpoly Collage

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*Printable Commonopoly instructions. Must also have a full Monopoly set and development pieces, colour coded. (may be made of cardboard and paint)
Print pages 99 through 113.
(half size booklet is recommended)*



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Commonopoly 'hacks' the world's favorite game, Monopoly. A new game played inside of the classic monopoly ring, with new ideas and pieces to break open the industrial and capitalist economic model to form a representational model of agricultural urban ideas. The play of this game overlays urban agriculture onto the existing or typical city, allowing a palimpsest to form displaying what is and what could be. Players become designers of this layer of urbanism.

Rather than become the richest player, Commonopoly asks its players to use their capital and to work together to collect resilience points by building neighbourhoods of urban agriculture.

EQUIPMENT

Standard Monopoly set

- Board
- 2 dice
- 6 players tokens
- Houses and Hotels (not used)
- Chance cards
- Community Chest cards
- Deed cards for each property
- Money
 - 20 - \$500
 - 20 - \$100
 - 30 - \$50
 - 50 - \$20
 - 40 - \$10
 - 40 - \$5
 - 40 - \$1

New game pieces

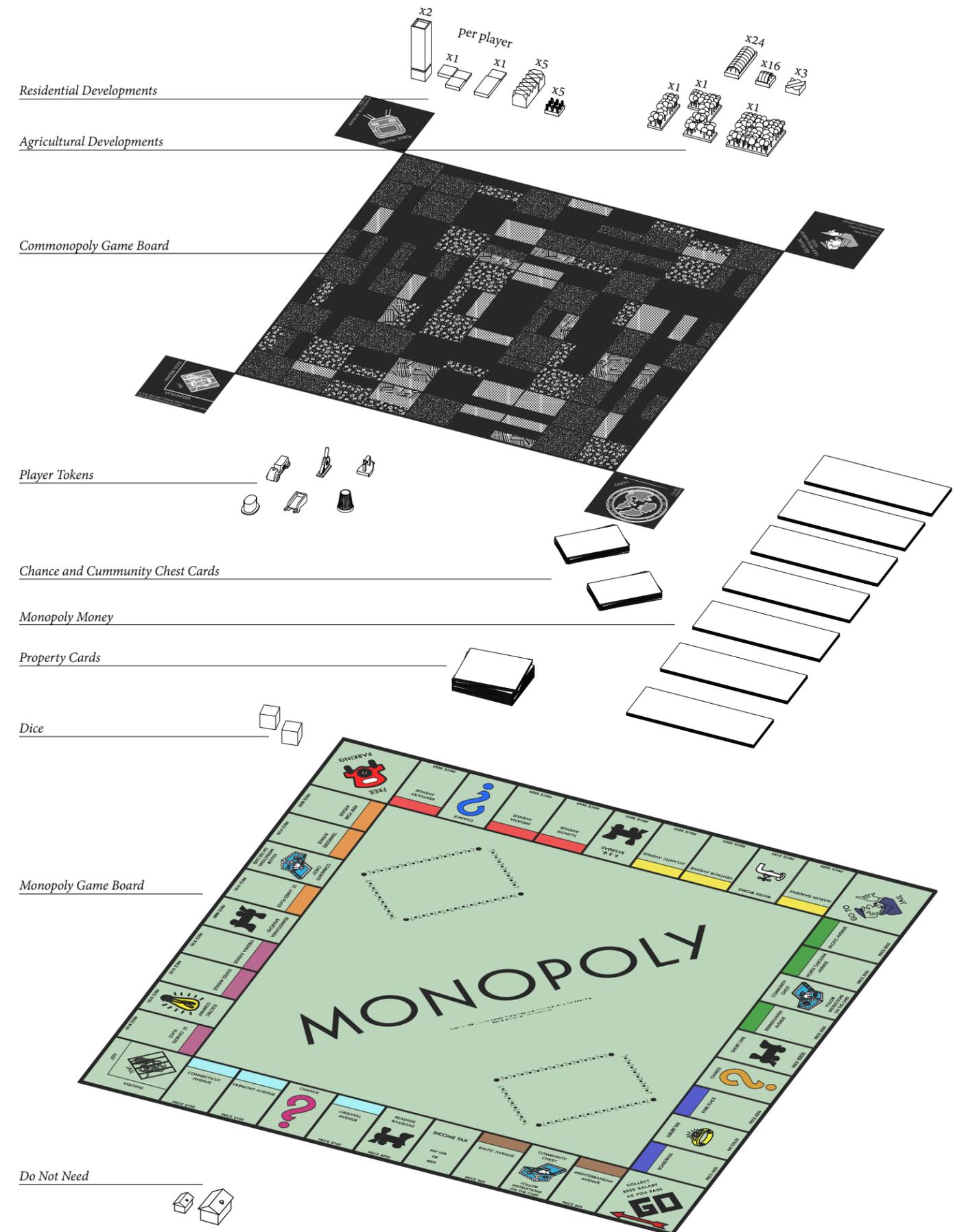
- Game manual
- Board overlay
- Corner covers
- Development pieces
- Residential:
 - Houses (5 per player)
 - High Rise (2 per player)
 - Podiums (2 per player)
 - Labour (5 per player)
- Agricultural:
 - Small agriculture (16)
 - Large agriculture (24)
 - Orchard (3)
 - Hydroponic (3)

SET UP

The Monopoly board is laid with the Commonopoly board placed in the center on top of it. The corner covers should be slipped onto to Monopoly board corners, EARTH covering GO, the new JAIL over the original, the new GO TO JAIL over the original and PUBLIC TRANSIT over FREE PARKING. Players each choose a monopoly game token and place them at EARTH, they will also collect \$1000. (See Monopoly rules for denominations, 1 less \$500 should be collected). Players then may select their development colour and collect all pieces belonging to that colour. The remaining money and the agricultural pieces should stay in the box until used. The Community Chest and Chance cards should be placed in piles close to the board.

Each player throws the Dice to determine who will start, the player who throws the highest number starts and play will move counter clockwise from them.

Starting from the player with the highest roll, the Title Deed cards are dealt to each player until there are none left. (The Rail Roads, Electric Company and Water Works should be put aside first). This has players ready to develop immediately, removing the initial buying phase of Monopoly and randomly sets players at an advantage, or disadvantage.



HOW TO PLAY

On a player's turn they will roll the dice and move their token, the number of spaces rolled, clockwise around the board. The space they land on will dictate the action that can/must be taken. Two or more tokens may rest on the same space at one time.

The space landed on may prompt the payer to either pay fees (Luxury Tax), pick up a Community Chest Card, a Chance card, pay rent to another player or go to jail. If a player lands on a Rail Road, Water Works or The Electric Company they pay the minimum rent into the Commons, a fund that is then held for the common needs of the players. It can be used for any purpose deemed fit by a majority vote.

If doubles are thrown the player should move, complete the necessary action from that move and then receive dice back and throw again. If a player throws doubles twice in a row they should go to JAIL. If a player lands in the SOCIAL PROGRAM areas while another player is in jail they may donate one, two or all of their development opportunities to the player in JAIL.

Each time a player's token lands on or passes EARTH, that player will receive their harvest for the "year" (see *Labour and Harvest*)

To make a development players must play in an activated square (see *Activation*).

Players may make a maximum of 3 developments per turn. These can be all residential, all agricultural or a combination.

The game ends when there are no more pieces to be played or no player(s) is able to make another point OR a player has made four trips around the board (or any predetermined number).

"RENT" AND MOVEMENT OF CAPITAL

This is a concept typical in Monopoly. All property cards will be held when play starts. When a player's token lands on a property held by another player the first player must pay rent. That can be a payment of rent according to the printed value on the Title Deed card and the amount of development that has already taken place, or a contribution of development by donating a development chip.

Rent should begin at the rent with 1 house level and increase with each addition of a development in the square directly above the property. (i.e 1 development in that square above means rent with 2 houses, 2 developments is rent with 3 houses and 3 developments is rent with 4 houses. The rent with hotel can not be reached)

Developments on the interior of the board do not affect rent.

RESILIENCE POINTS

As players develop the interior of the board resilience point will be awarded. To gain a resilience point, players must take part in the creation of a Neighbourhood (See *Neighbourhoods* section). These forms must always maintain the prescribed residence/agriculture balance or no point is earned (see *Ag-Residential Ratio*). In order for a player to receive points for a Neighbourhood they must have contributed AT LEAST 1 residential and 1 agricultural piece. They must also have a Labour piece in the Neighbourhood. Players may run out of Labour pieces and may move them to other Neighbourhoods for more points or to increase their harvest.

PIECE TYPOLOGIES

The cost to play each piece is noted with its image and name.

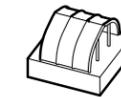


LABOUR

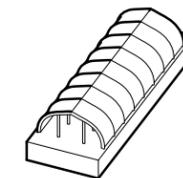
AGRICULTURE



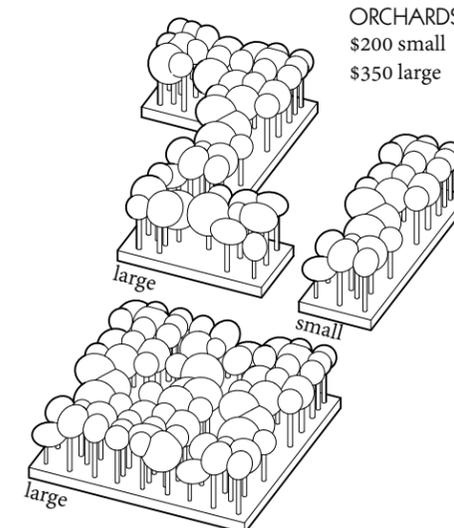
HYDROPONIC
\$300



SMALL
\$10

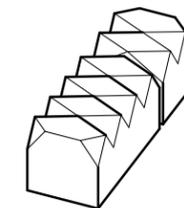


LARGE
\$25

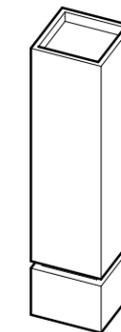


ORCHARDS
\$200 small
\$350 large

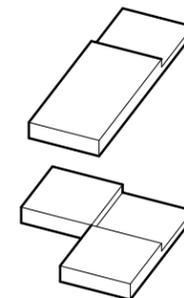
RESIDENTIAL



HOUSES
\$100



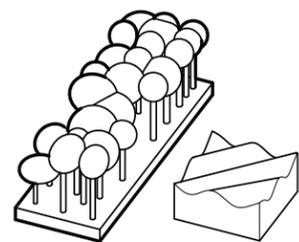
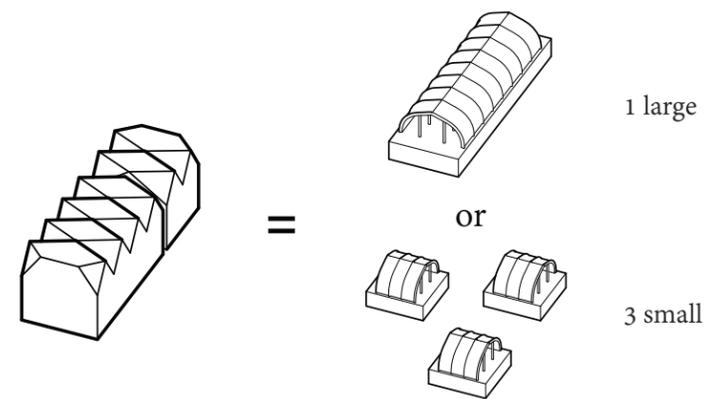
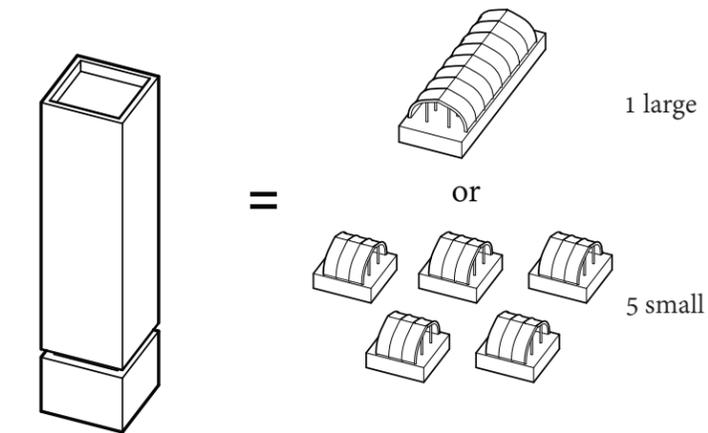
HIGH RISE
\$200



PODIUMS
inc. with high rise

AG-RESIDENTIAL RATIO

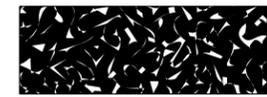
Must maintain an minimum residential to agriculture ratio



orchards and hydroponic are not used to create ratios but to add additional points. (See Neighbourhoods)

THE BOARD

The interior board lays the landscape to be developed upon. The hatches note specific conditions of land that need to be addressed before development can take place. The resolution of the space requires payment and/or a specific piece to be played in that space.



CONTAMINATION
cost: \$75



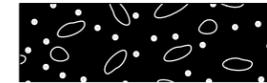
EXISTING FARM
cost: \$25 to Commons
agricultural only



OPEN SPACE
cost: \$0



HIGH DENSITY
cost: \$40 high rise only



DEBRIS
cost: \$50

LABOUR AND HARVEST

Once a player has made an agricultural development they must use a Labour piece (placed on top of the agricultural piece) to activate its harvest capability. With each complete rotation around the board players may collect their harvest, the bounty that their agricultural Labour has produces over the “year”. Players may only collect from the agriculture pieces where one of their Labour pieces resides.

If a players Labour piece is on top of an agricultural piece that is part of a complete Neighbourhood players may collect the total harvest value of all agricultural pieces in that Neighbourhood. Labour pieces can only be played on top of agricultural developments made by that same player. Multiple players may have Labour pieces on top of their own agricultural pieces in the same Neighbourhood.

To be collected:

- \$50 for small agriculture
- \$150 for large
- \$300 for hydroponic
- \$500 for orchard

ACTIVATION

A square is activated by the first development made in the square directly adjacent to a property in the hand of the player making the development. The player must develop directly adjacent to their own property if no other square has been made available to them. This move activates the square as well as all the squares abutting that one. Once a square has been activated any player with a property card in hand that has a direct linear connection to it may play within it on their own turn. Once a player makes a development in a square it has been claimed, to play within a claimed square an agreement with the original player must be made. This can, and will likely, be an agreement to build a Neighbourhood.

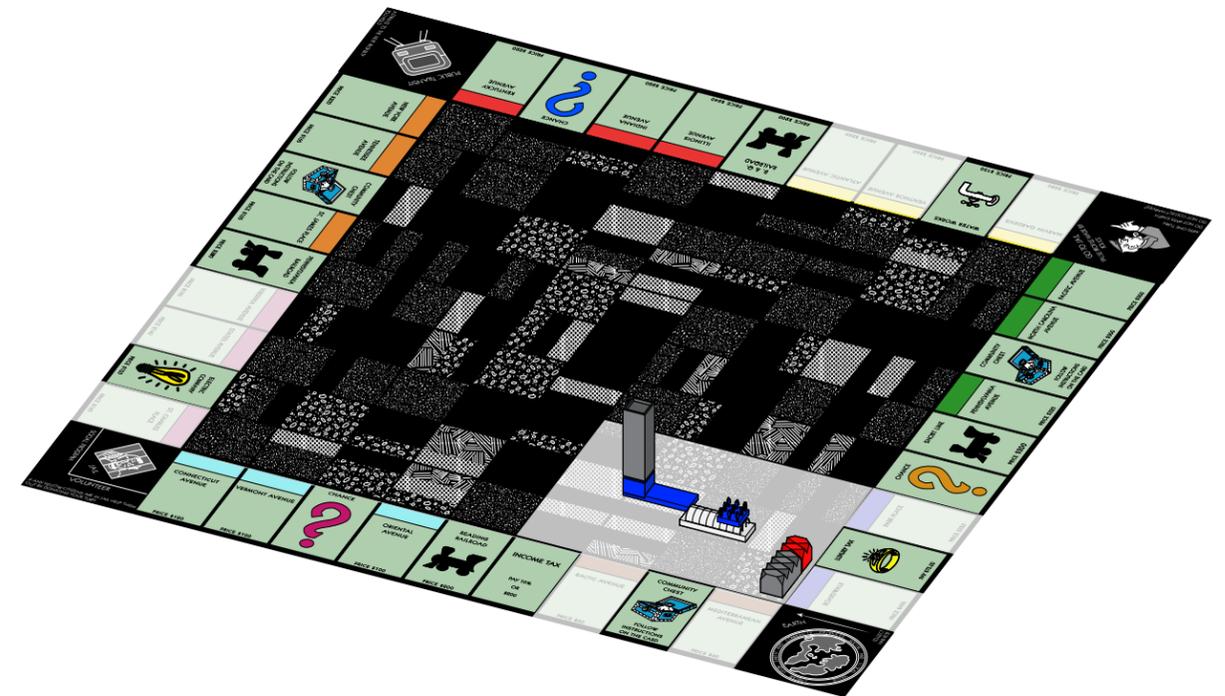
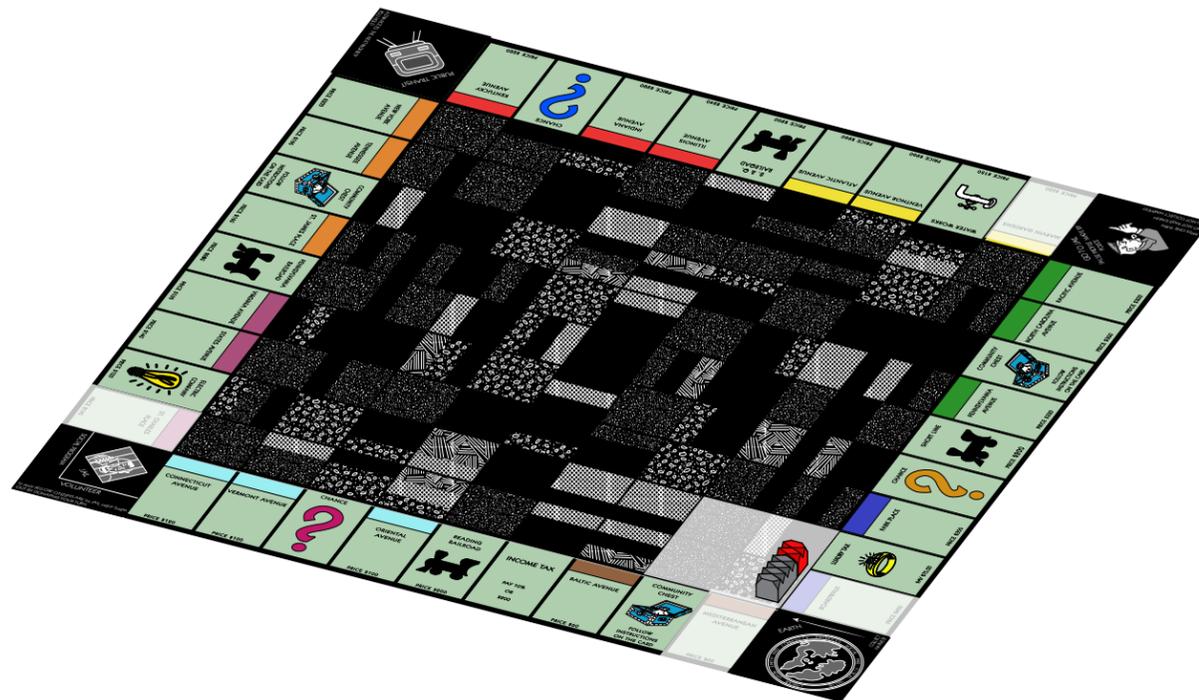
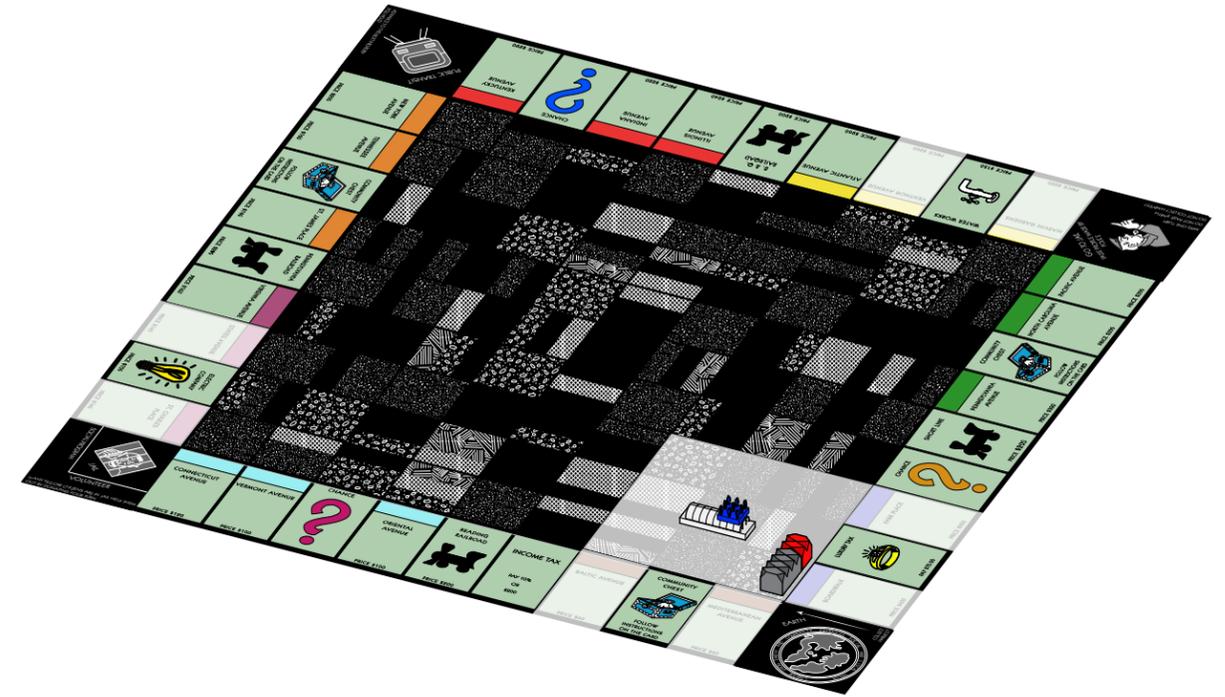
ORIENTATION OF PLAY

Play must be made in the orientation noted by the board or can be rotated provided the character of all three rows within the square are the same or remedied to the same if possible.

BANKRUPTCY

It should not be in any player's interest for others to declare bankruptcy. If a player must declare bankruptcy the game is over, and all have lost.

When players owe more than they have they may mortgage their properties with the bank, sell properties to other players, auction their properties, sell development pieces, merge properties with another player for a fee of the player's agreement or with a majority vote take from the commons.



NEIGHBOURHOODS

Points are collected by creating 1 of 7 Neighbourhoods. Within each Neighbourhood the ratio of Residential to Agricultural MUST be respected to receive the points. Any player who has sufficiently contributed gains points from a Neighbourhood.

COURTYARD: 3pts

An open square surrounded on all sides

DOWNTOWN CORE: 4pts

A courtyard that includes AT LEAST 2 High Rise pieces

FARM-HOOD: 4pts

AT LEAST a square full of farm pieces surrounded on all sides. May use both Agricultural and Residential to surround to maintain ratio.

BLOCK: 2pts

AT LEAST 4 Residential pieces grouped side to side unbroken by Agricultural

STREET: 2pts

AT LEAST 4 Residential pieces grouped end to end unbroken by Agricultural

NETWORK: +1pts

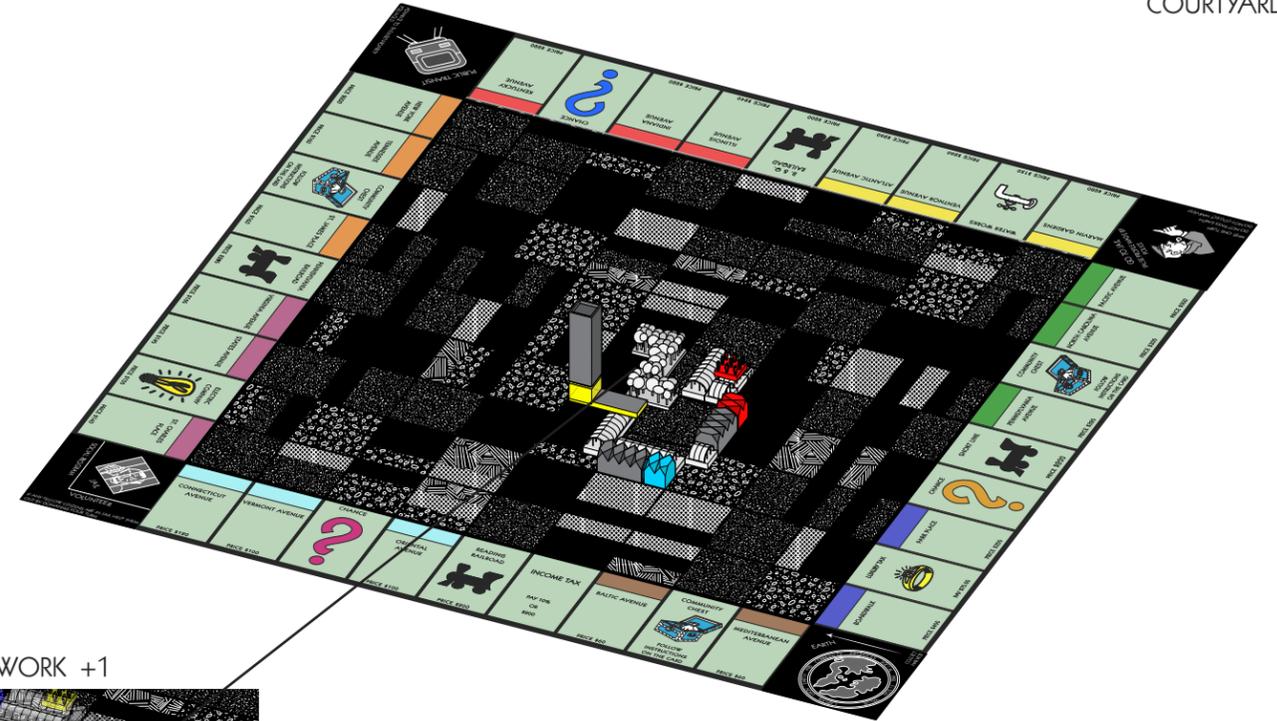
The use of an orchard to connect to Neighbourhoods adds 1 point (for all players) to connected Neighbourhoods

HYDROPONIC: +1pts

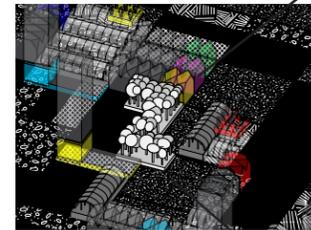
The addition of a hydroponic to a Neighbourhood adds 1 point (for all players) must be played on top of a Residential piece, can not be used to create form of Neighbourhood

When a player runs out only the pieces still held by other players may be played.
The agricultural pieces are up for play by any and all players.

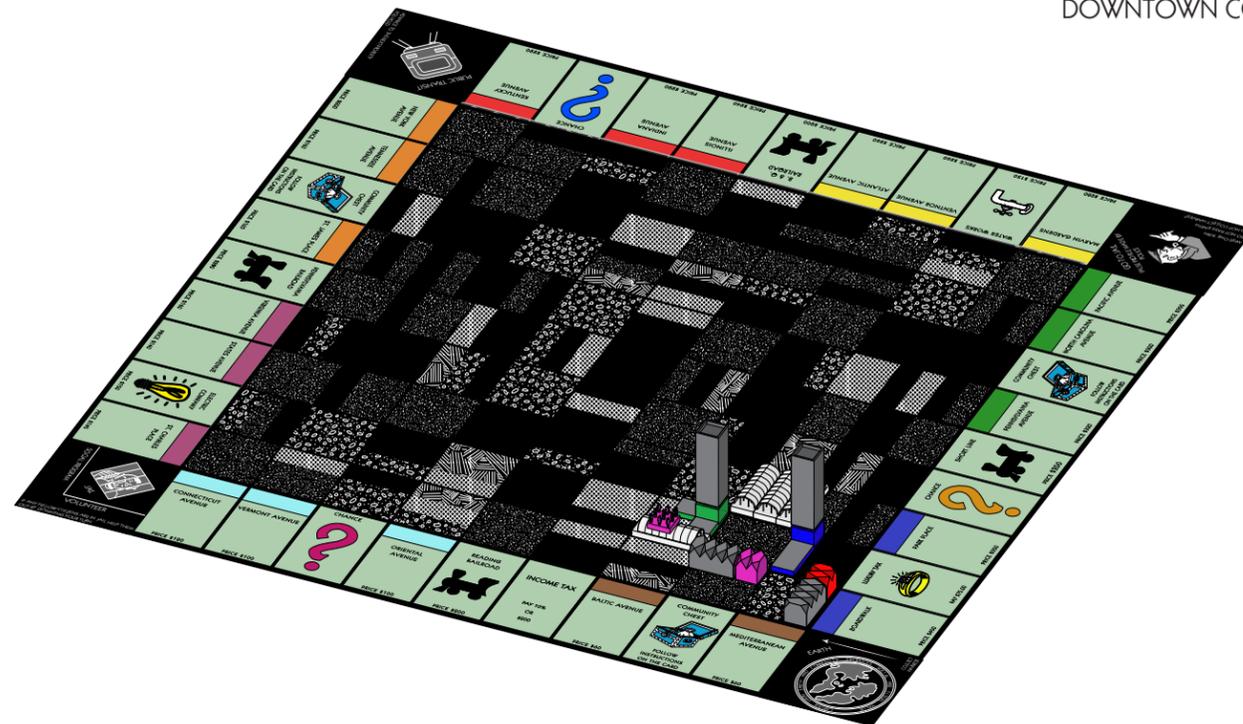
COURTYARD 3



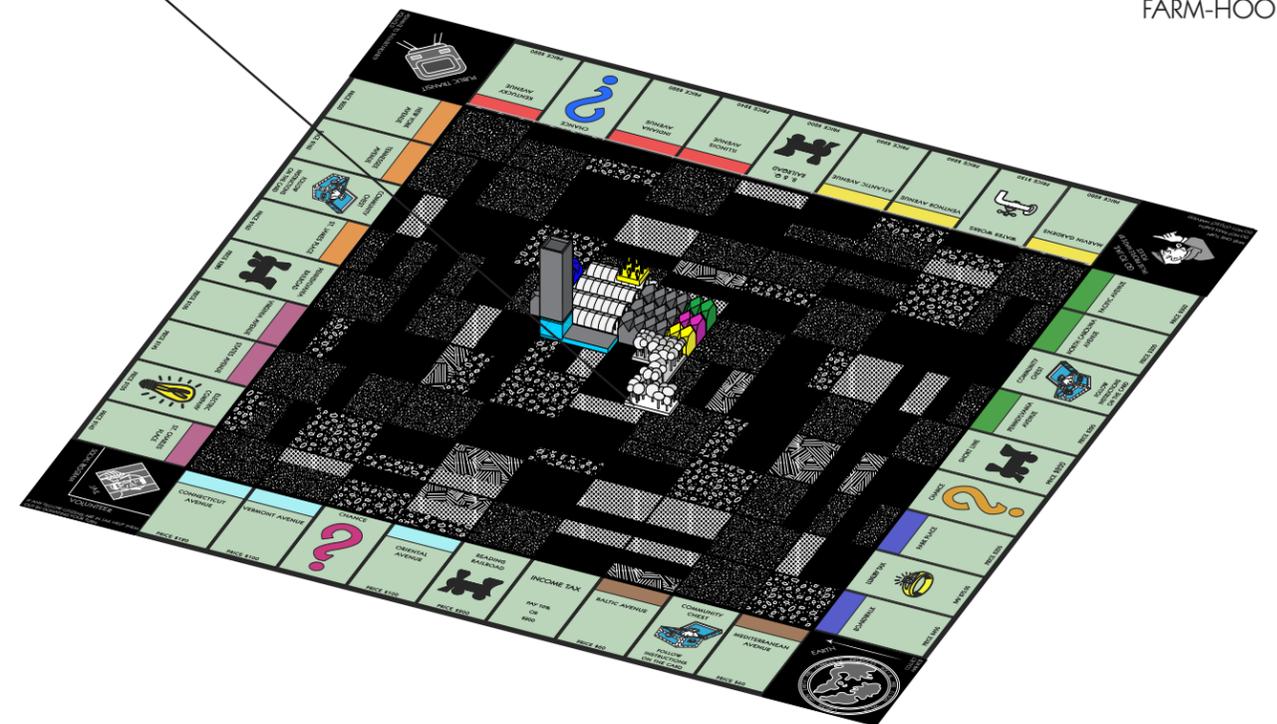
NETWORK +1



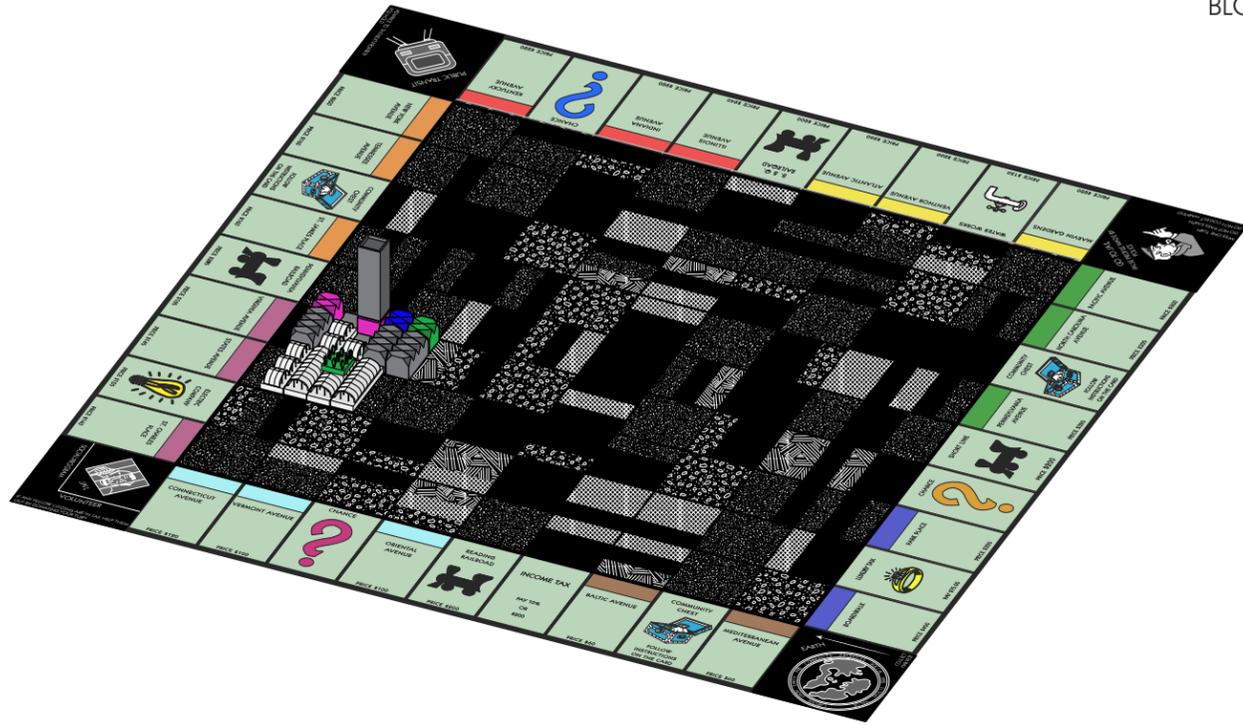
DOWNTOWN CORE 5



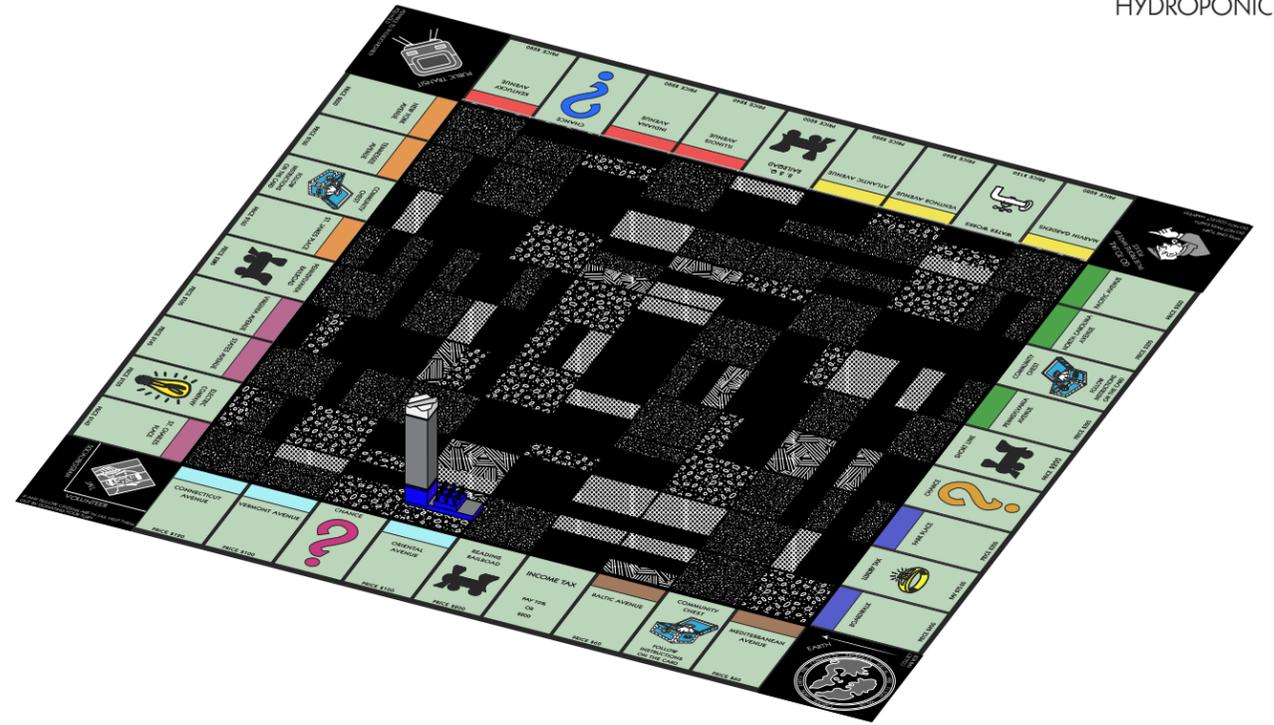
FARM-HOOD 4



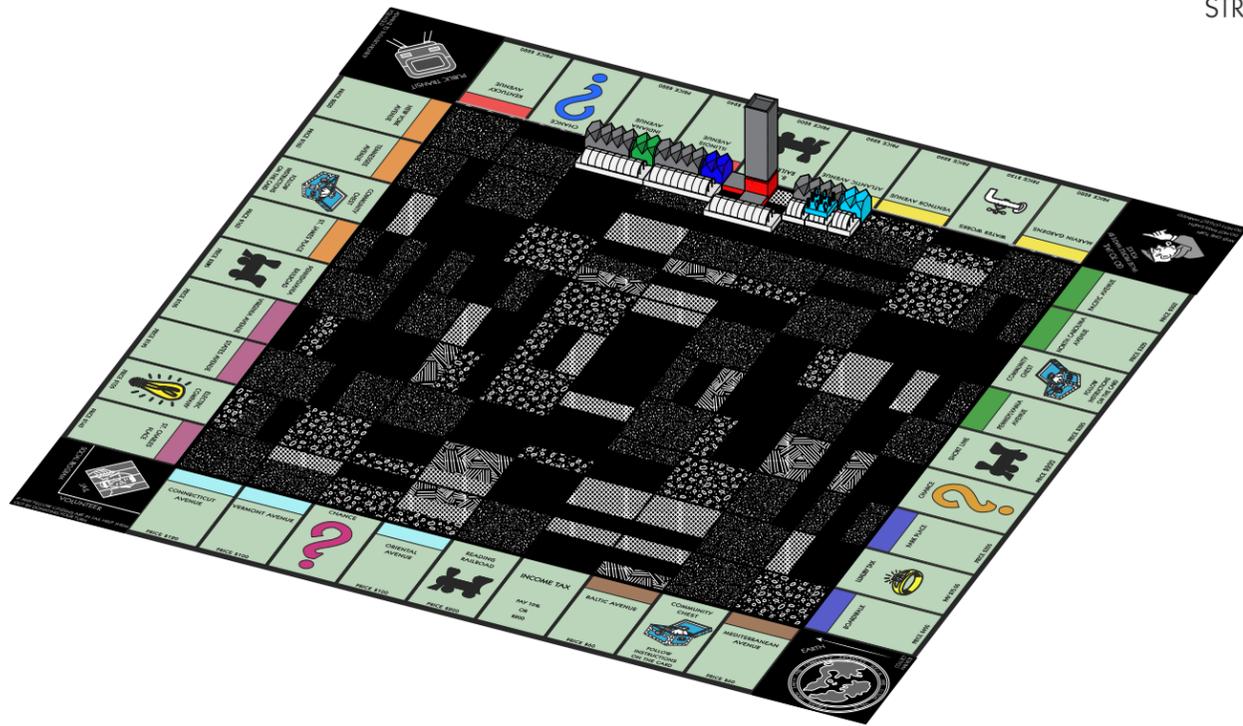
BLOCK 2



HYDROPONIC +1



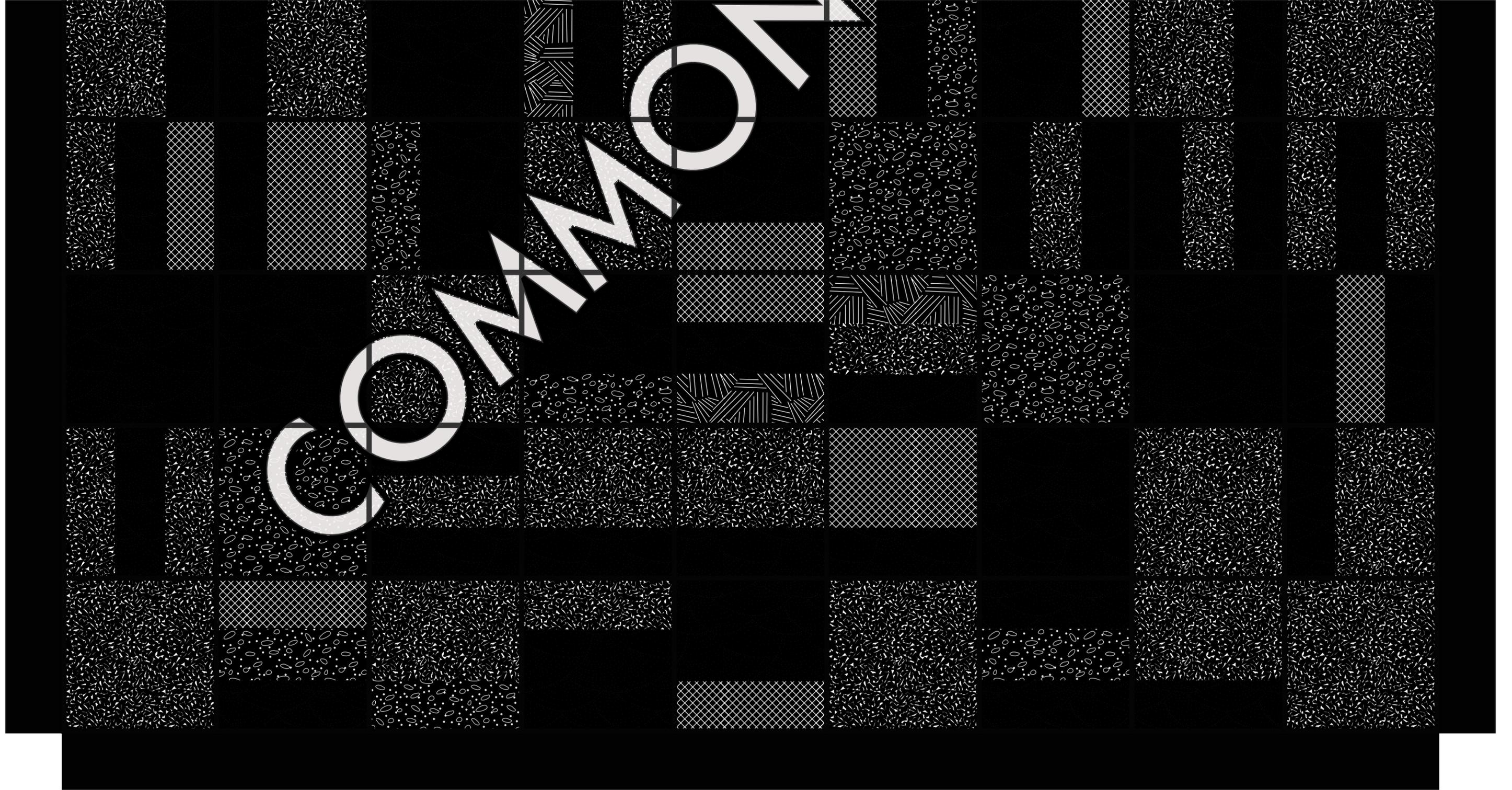
STREET 2



PRINTABLE COMMONPOLY BOARD

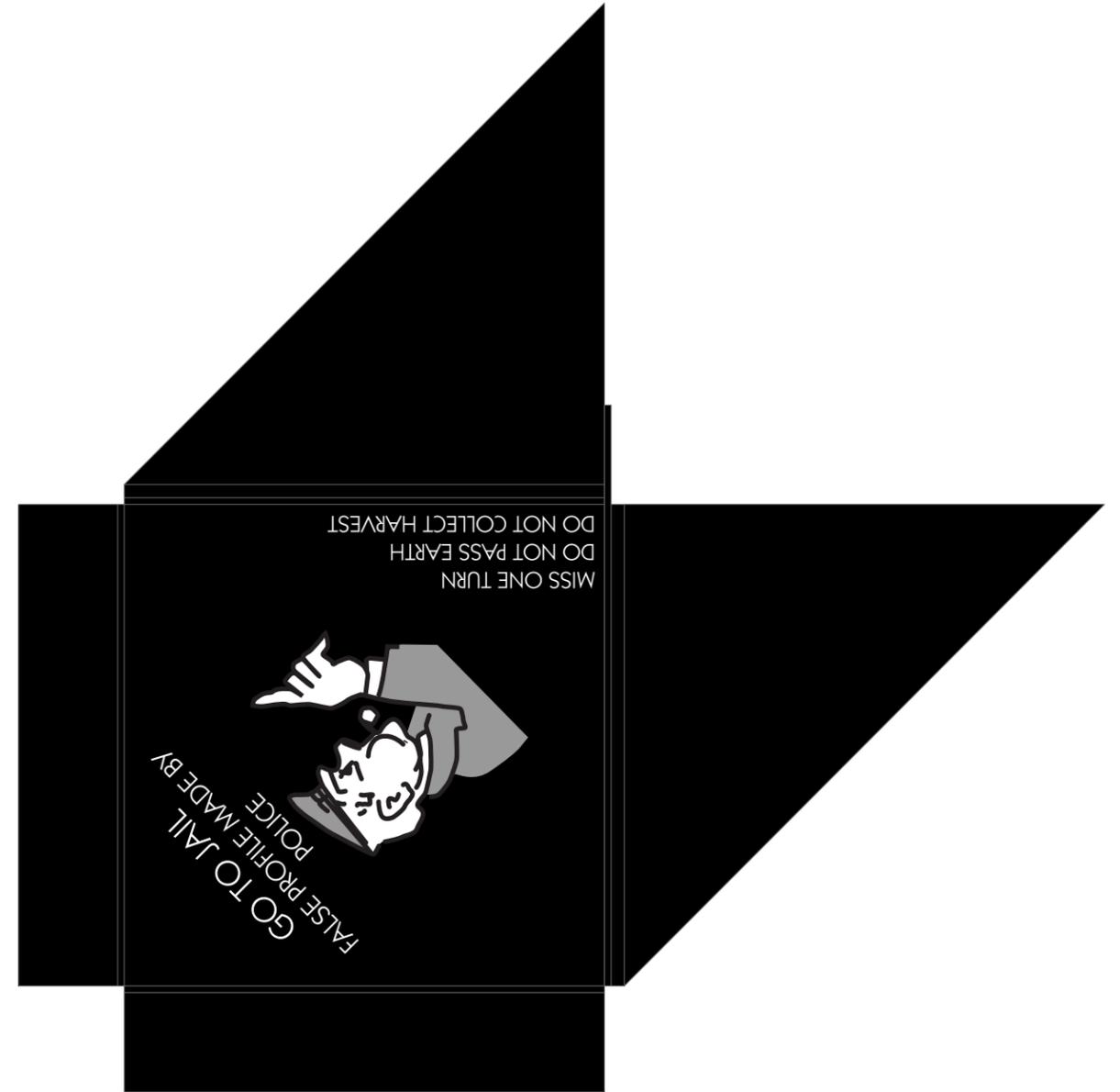
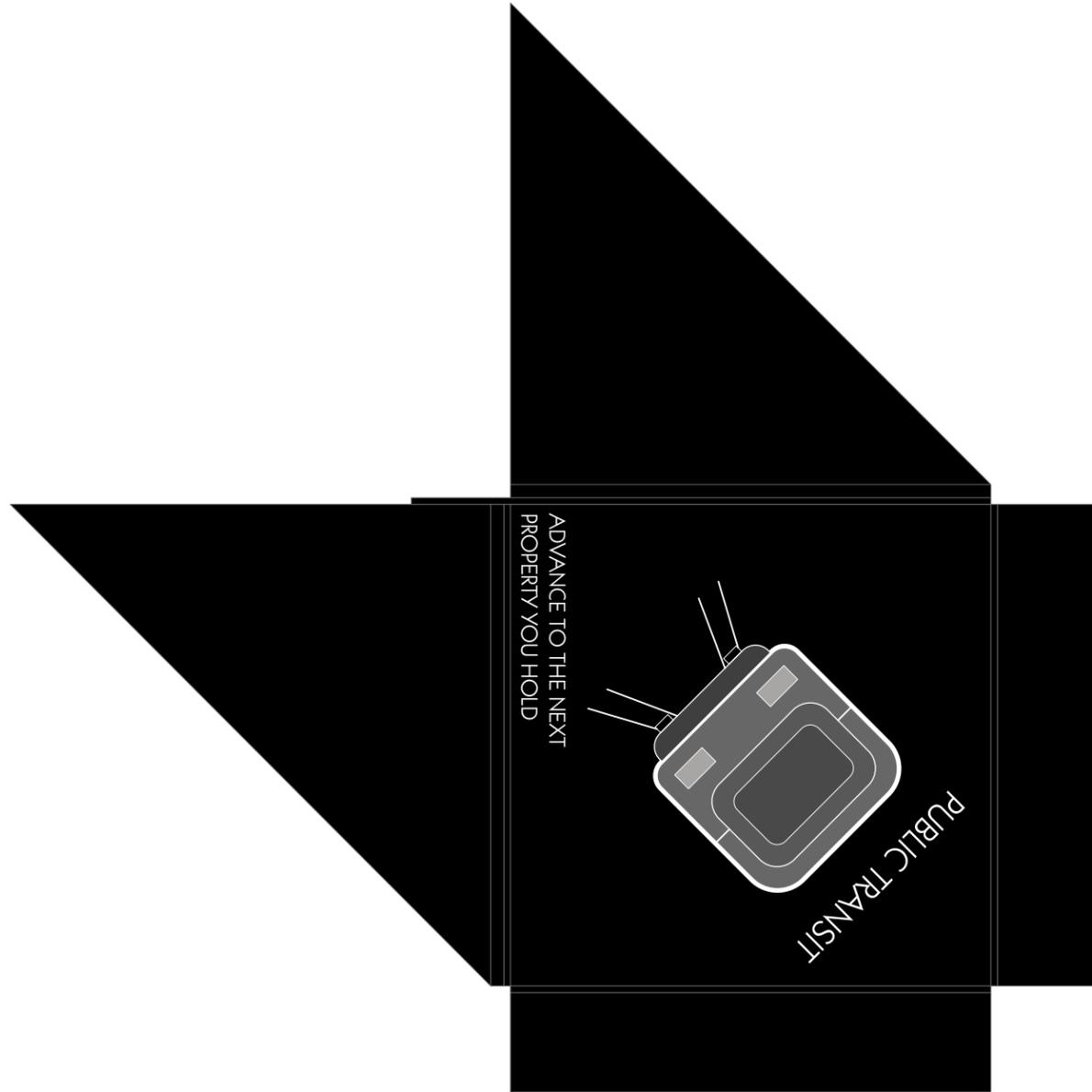
Cut along edges. Align second half and glue to square piece of card stock. Fold solid black flaps around edges.

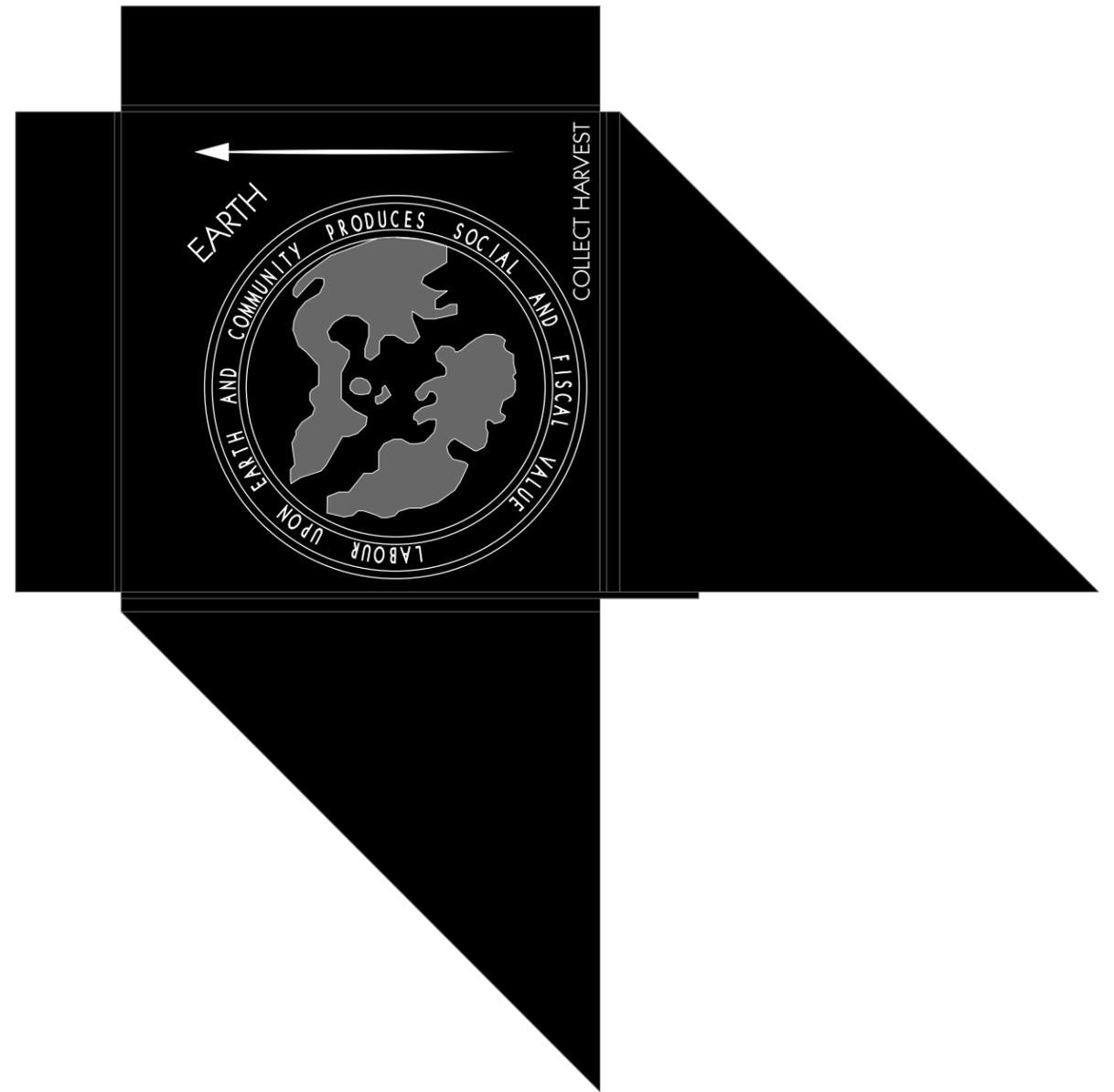
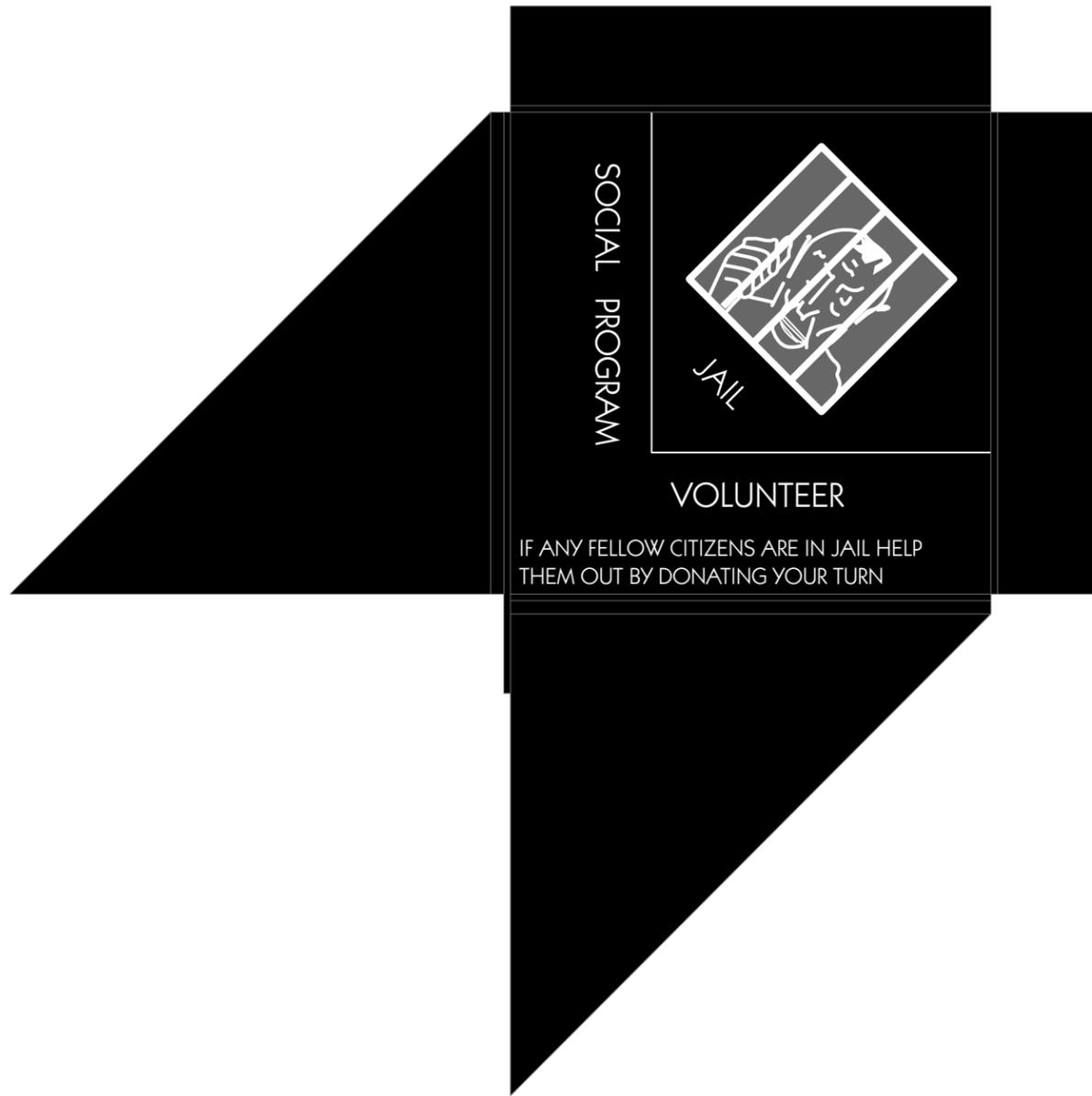




PRINTABLE COMMONPOLY CORNER COVERS

*Cut along edges. Glue to square piece of card stock.
Fold square solid flaps over card stock and glue. Fold
triangular flaps over and glue one to the other to
create a pocket to slide over Monopoly board corner.*





THE LANDLORDS GAME

PATENTED JAN 5, 1904. NO 748628 BY LIZZIE J MAGIE
ECONOMIC GAME CO, NEW YORK

*Printable Landlords Game instructions for reference.
Print pages 125 through 133.
(half size booklet is recommended)*

TO BEGINNERS

Read the rules carefully without trying to thoroughly understand them at first. Then, in order to save the time and avoid the confusion incident to the purchase of cards at the outset (See Rule I) let each player take one of the "average hands" indicated below, and \$75 in cash. The purchasing of cards is quickly and easily done by those familiar with the game, but is apt to be a trifle confusing for beginners.

The game is not complicated, although at first it may appear so. On the contrary, it is very simple, which the players will readily see after having made a few moves. The principal thing each player has to do is to look after the collection of his rents, railroad fares and wages.

FOUR AVERAGE HANDS

One.	
Beggarman's Court50
The Bowery.75
Wall Street.	100
Royal Rusher R. R.50
Gee Whiz R. R.50
	\$325
Two.	
Boomtown.50
Fairhope Avenue.75
Grand Boulevard.	100
Shooting Star R. R.50
Slambang Trolley.50
	\$325
Three.	
Lonely Lane.	50
Goat Alley.	75
Easy Street.	100
George Street.	50
P. D. Q. R. R.50
Speculation	50
	\$325
Four.	
The Pike.	50
Market Place.	75
Cottage Terrace.	100
Broadway.	50
Fifth Avenue	50
	\$325

THE LANDLORD'S GAME.

The Landlord's Game may be played by two or more.

Each player selects one checker, and, if there are two players, each provides himself with \$600; if three players, each \$500; if four players, each \$400.

All money and implements not in use by the players should be put upon the large space in the middle of the board, marked

Determine first player by throwing dice.

NOTE: The Education and Professor cards are used only when the game is being played under the Single Tax Rules.

THE OBJECT OF THE LANDLORD'S GAME.

The object of the game is to get as much wealth as possible, and the player who has the most in cash, cards and houses at the end of the game is the winner or millionaire. Every card and every house counts the holder or owner 100 at the end of the game.

RULE 1.

Buying Titles to Lots. --- Shuffle the green cards and deal out one around, to the left, until 24 have been dealt, then place the remainder of the pack on the board. These green cards represent Title Deeds to Lots, Charters for Franchises, and (one) Broker's License. The original sale price of each card is marked on the card itself as well as on the corresponding board space after the words "For Sale." Each player has the privilege or option of buying any or all of the cards which have been dealt to him, the sale price of the cards being paid into the PUBLIC TREASURY. Cards not purchased must be returned to the pack. The players own the spaces on the board corresponding to the cards they hold. As one generally needs between \$50 and \$75 to pay expenses around the board, or until he has earned his wages, it is always advisable for him to take this into consideration when purchasing cards.

After the game has begun the sale prices of all cards then in use by the players are regulated by the demand, but no card can be bought from the pack for less than the original sale price, although these cards may be bid up as high as the players please.

RULE 2.

How to Move Checkers. --- The players place their checkers upon MOTHER EARTH, the beginning point. Then the first player throws his dice, and, according to the number thrown, moves along the first side of the board and follows the rule applying to the space upon which he has stopped.

Throwing Doubles --- See Rule 17.

When the first player has finished his play, the next player throws his dice, and moves; then the third player, and so on.

If a player is on any of the spaces between the Chances he may move in either direction. Bear this well in mind as it is sometimes more desirable to make a backward move than a forward one.

NOTE: - The number of the rule applying to each space is printed in the corner or inside edge of that space.

The numbers on the outside of the spaces are placed there for the convenience of the player in moving. For instance, if he throws a 6 he moves to the 6th space, THE PIKE. If his next throw is an 8 he adds 6 and 8, which are 14, and moves to the 14th space, which is BEGGARMAN'S COURT, and so on adding or subtracting according to whether his move be forward or backward.

RULE 3.

Wages. --- When a player reaches or passes the beginning point, MOTHER EARTH, he is supposed to have performed a certain amount of labor worth \$100. This amount his "wages," is paid to him from MICELLANEOUS pile.

In all money transactions between any individual player and the board, the next player to the left may act as representative for the board, paying wages, making change, etc., before such next player makes his own throw.

RULE 4.

Taxes. -- the blue spaces; FOOD, FUEL, SHELTER, and CLOTHING, represent the absolute Necessities of life and window player stops upon one of these spaces he pays \$10 taxes into PUBLIC TREASURY.

RULE 5.

D. F. Hogg's Game Preserves and Lord Blueblood's Estate represent property held out of use, and when a player's move brings him upon one of these spaces he is "trespassing" and must go to JAIL -- that is, put his checker on the JAIL space.

RULE 6.

Jail. --- A player in JAIL must remain there until next turn. Then he may come out upon paying into the PUBLIC TREASURY a fine of \$50, or if he throws a double (which is called "serving his time") he may come out without paying the fine. If he does not pay the fine or throw a double he must wait until his next turn. He cannot, however, miss more than three turns if he has sufficient property on which to realize the amount of his fine. When he does come out of JAIL he must begin to count is move on the space immediately in front of the JAIL (Shelter).his

RULE 7.

Land Rent. --- When a player stops upon a lot owned by another player, he must pay the land rent to the owner. If he stops upon one of his own lots he pays nothing. If the lot is not yet owned by any of the players, it is "For Sale" and the player stopping upon it may purchase it at the original sale price, provided no other player bids more for it. If the player who has stopped upon it is willing to pay the highest price bid, he has the first option. If he cannot or does not want to pay the highest price bid, then the player bidding the highest price must take the lot at the price he has bid for it. If the first player does not buy a lot and some other player does, the first player pays the land rent to the purchaser. If no player buys it the land rent is paid into the PUBLIC TREASURY. If the lot is bought the purchaser or takes the corresponding Title Deed card from the pack.

RULE 8.

Speculation. --- This space represents all speculation other than land speculation. If a player's throw would bring him to this space he may refuse to move -- remaining where he is -- and the next player proceeds. If he elects to play, the ownership of Speculation card for Broker's License is determined as are Title Deeds under Rule 7. Ownership of card being settled, the player pays \$10 "ante" into the MISCELLANEOUS pile; then he throws his dice again, and if he throws a double, he wins \$100; an 11, \$90; a 10, \$80; 9, \$70; 8, \$60; 7, \$50; 6, \$40; 5, \$30; and pays 10 percent of his winnings to holder of the Speculation card, or to MISCELLANEOUS pile if no one has purchased the card. If a 3 or 4 is thrown the Broker is supposed to be caught in a "skin game," -- the speculator wins nothing and the Broker or holder of Speculation card (if it is held by any of the players) goes to JAIL and a card is returned to the pack.

Winnings are taken from MISCELLANEOUS pile.

RULE 9.

Franchises. --- The yellow spaces -- SOAKUM LIGHTING SYSTEM and SLAMBANG TROLLEY, and pink spaces: -- RAILROADS, represent public utilities owned by private parties. When a player stops upon one of these franchise spaces he must pay \$5 to the owner. If the franchise is not yet owned by any of the players it is for sale and the player stopping upon it may purchase it at the original sale price, \$50, provided no other player bids more for it. If the player stopping upon it is willing to pay the highest price bid, he has the first option. If he cannot or does not want to pay the highest price bid, then the player bidding the highest price must take the franchise at the

price he has bid. If the first player does not buy the franchise and some other player does, the first player pays to the purchaser the amount the space calls for. If no player buys it, the amount is paid into the PUBLIC TREASURY. If the is space is bought the purchaser takes the corresponding card from the pack and keeps it.

MUNICIPAL CINCH -- If a player owns both SOAKUM LIGHTING SYSTEM and SLAMBANG TROLLEY he has a "municipal cinch," raises the rates, and collects \$25 instead of \$5 from every other player stopping upon one of these spaces.

MONOPOLY. --- If one player owns 2 railroads, he charges \$10 fare; if 3, he charges \$20; 4, \$50.

TRUST. --- If two players owned all of the RAILROADS between them, they may at any time pool their railroad interests and form a Trust, charging the other players \$40 for each RAILROAD space and dividing profits.

RULE 10.

CENTRAL PARK is supposed to be maintained by public funds, and therefore a player may stop in it without paying anything.

RULE 11.

Chances. --- If a player stops upon one of the CHANCE spaces he draws a card from the red pack and follows directions on same. In each case the card drawn is returned to the pack.

RULE 12.

Poor House. --- If at any time a player has not enough money to pay his expenses, and cannot borrow any (see Rule 16) or cannot sell or mortgage any of his property, he must go to the POOR HOUSE, where he remains until his next turn. Then he throws again and moves out if he can afford to make the move.

RULE 13.

Luxury. --- If a player's throw brings him upon LUXURY, he pays \$75 into the MISCELLANEOUS pile and draws a purple card. This card, with the name of his luxury upon it, he keeps, and it counts him 100 at the end of the game. He may, however, sell the card at any time if he so desires.

The player may purchase the luxury or not, as he chooses or can afford, but if he does not purchase it he moves backward from the space last occupied by him. Example: If he is on MADISON SQUARE and throws a 6 a forward move would take him to LUXURY. If he has less than \$75 he cannot afford the luxury (unless he borrows) and therefore he moves backward 6 spaces from MADISON SQUARE, which would take him to, SLAMBANG TROLLEY. But whether his move be forward or backward he must pay whatever is called for by the space upon which he stops.

RULE 14.

Improvements. --- If a player so desires, and can afford it, he may, in his turn, improve any of his lots by the erection of a house thereon. To do this he pays \$100 into the MISCELLANEOUS pile and takes therefrom a house corresponding to the color of his checker, which house he places upon the lot he desires to improve. One or more houses may be erected upon the same lot, the owner collecting \$10 for each house, in addition to the land rent.

RULE 15.

The checkers of two or more players may occupy the same space, each paying whatever the space calls for.

RULE 16.

Borrowing. --- One player may borrow from another. If demanded he must give the mortgage on his property or his wages, making the best bargain he can as to terms of repayment, rate of interest, etc. These transactions must be kept track of by the players making them. This can easily be done by making notes on a tablet.

RULE 17.

Throwing Doubles. --- If a player is in JAIL and throws a double he is supposed to have served his time and may come out without the payment of a fine.

Throwing a double also means getting an "official pass" on the railroad, and the player throwing it may jump the nine spaces between the next two corners. If his count is exhausted, however, upon reaching or before reaching a corner, he cannot use his "pass." If he does not choose to use his pass the need not do so, but simply moves straight a head without jumping any spaces. Sometimes his pass may take him to JAIL or some high-priced or otherwise undesirable space, whereas his straight move may take him to a desirable one. He may take his choice.

A double, when a player is speculating, wins \$100.

RULE 18.

Emergencies. --- Should any emergency arise which is not covered by the foregoing rules, the matter must be settled among the players. Players may do anything which suggests itself to them provided that what they do does not conflict with the rules, just as a person may be anything he pleases which does not violate the law. He may squeeze to the utmost and the victim has no protection.

RULE 19.

End of Game. --- The game ends when one player has received his wages five times.

Players may, however, prolong the game at their own pleasure, having no arbitrary stopping point and continuing the game until the convenience or the inclination of the players suggests a cessation. Then they may agree to stop, say, at the next double thrown by any of the players.

SUGGESTIONS

All cards in use by the players may be bought, sold, mortgage or traded at the pleasure of the players. If one player has three railroads it is greatly to his advantage to own the 4th as he would then have the monopoly, and it is therefore sometimes advisable, according to the stage of the game, for him to offer even as high as \$150 or more for it, although the card itself would count him only 100 at the end of a game. In the same way, a player may seek to buy up all the lots in a certain locality, as the more he owns in a bunch the more chances he has of renting. Or a player may, upon observing another player's object, try to forestall it by buying the certain desirable card thus keeping it out of his opponent's hand, or making the opponent pay dearly for it.

FOR ADVANCED AND SCIENTIFIC PLAYERS.

When players have become thoroughly familiar with the rules and principles of the game they will readily perceive that if the game be continued long enough the inevitable result will be that one player will own everything on the board. Under the ordinary rules, however, two or three sittings would probably be necessary to reach this end; therefore it is suggested that in order to arrive more quickly at a decisive point, the following rules be observed: When 10 houses have been erected -- whether by one or more players -- taxes (blue spaces) are doubled (20): when twenty-five houses have been erected taxes are again doubled (\$40), which is the limit.

Players will note that the railroads divide each side of the board into two sections, making eight sections on the entire board. When all the lots in any one section have been improved with at least one house each the land rent on every lot in that section is doubled. When the lots in any one section have been improved with two houses each the land rent is the end doubled; and three houses doubles it again.

For purposes of the game the number of houses that may be erected on each lot is limited to three. The house rent remains fast before -- \$10 for each house in addition to the land rent.

TAX TABLE

When number of Houses on board is	Taxes are:
10	\$20.
25 or more	40.

LAND RENT TABLE

	0 houses	1 houses	2 houses	3 houses
Land Rent	\$ 2.	\$ 4.	\$ 8.	\$ 16.
" "	4.	8.	16.	32.
" "	6.	12.	24.	48.
" "	8.	16.	32.	64.
" "	10.	20.	40.	80.
" "	12.	24.	48.	96.
" "	14.	28.	56.	112.
" "	16.	32.	64.	128.
" "	18.	36.	72.	144.
" "	20.	40.	80.	160.
" "	22.	44.	88.	176.

THE MONARCH OF THE WORLD.

The Landlord's Game is based on present prevailing business methods. This the players can prove for themselves; and they can also prove what must be the logical outcome of such a system, i.e., that the land monopolist has absolute control of the situation. If a person wishes to prove this assertion -- having first proven that the principles of the game are based on realities -- let him do so by giving to one player all of the land and giving to the other players all other advantages of the game. Provide each player with \$100 at the start and let the game proceed under the rules with the exception that the landlord gets no wages. By this simple method one can satisfy himself of the truth of the assertion that the land monopolist is monarch of the world. The remedy is the Single Tax.

THE SINGLE TAX.

If the players wish to prove how the application of the Single Tax would benefit everybody by equalizing and opportunities and raising wages, they may at any time during the game put the single tax into operation by a vote of at least two of the players.

Players were left in possession of their holdings and, with the exception that the Title Deeds are of no value, the gain goes on as before under the following rules:

RULE 1.

Pay no taxes on Absolute Necessities.

RULE 2.

All land rent is paid into the public treasury to be used for public improvements. (Begin game under single tax with empty PUBLIC TREASURY.)

RULE 3.

All railroad fares and franchise rates are paid to the individual owners as before until the public takes control of them (see Rule 6), when they are FREE.

RULE 4.

When a player stops upon an unimproved lot (except Government Reservations, see following rule) he first pays the full land rent into PUBLIC TREASURY, and then, if he so desires and can afford it, he may improve the lot by erection of a house thereon. But if the space upon which he has stopped is already improved by another player's house, he first pays the full land rent into the PUBLIC TREASURY and then pays the full house rent to the owner of the house. If at anytime a player has money to invest, he may, in his turn, erect a house on any unimproved lot he chooses, whether his checker is on that space or not, provided no other player bids against him for the privilege of building there.

The "bid" money (or rent) is paid into the PUBLIC TREASURY.

RULE 5.

HOGG'S GAME PRESERVES and LORD BLUEBLOOD'S ESTATE are supposed to be reserved by the Government for Free College sites (see part c, Rule 6), and until the colleges are erected a player whose throw brings him upon one of the use spaces is trespassing and must go to JAIL.

RULE 6.

(a)

When the cash in the PUBLIC TREASURY from land rents and fines amounts to \$50 it is paid to the holder of the SOAKUM LIGHTING SYSTEM charter for the purchase of the plant, which is then owned and operated by the public, (the change to public ownership being by condemnation, excluding value of right of way). The card is returned to the pack, and henceforth the Lighting System space is free to all players. If the card is still in the pack the \$50 is paid into the MISCELLANEOUS pile.

(b)

When the cash in the PUBLIC TREASURY amounts to \$50 more, go through the same process with SLAMBANG TROLLEY; then P.D.Q.R.R.; then GEE WIZZ R. R., and so on around the board until all the railroads are free.

(c)

Then when the cash in the PUBLIC TREASURY amounts to \$50 more it is put into the MISCELLANEOUS pile from which a Free College is taken and placed on LORD BLUEBLOOD'S ESTATE and the jail penalty is annulled.

(d)

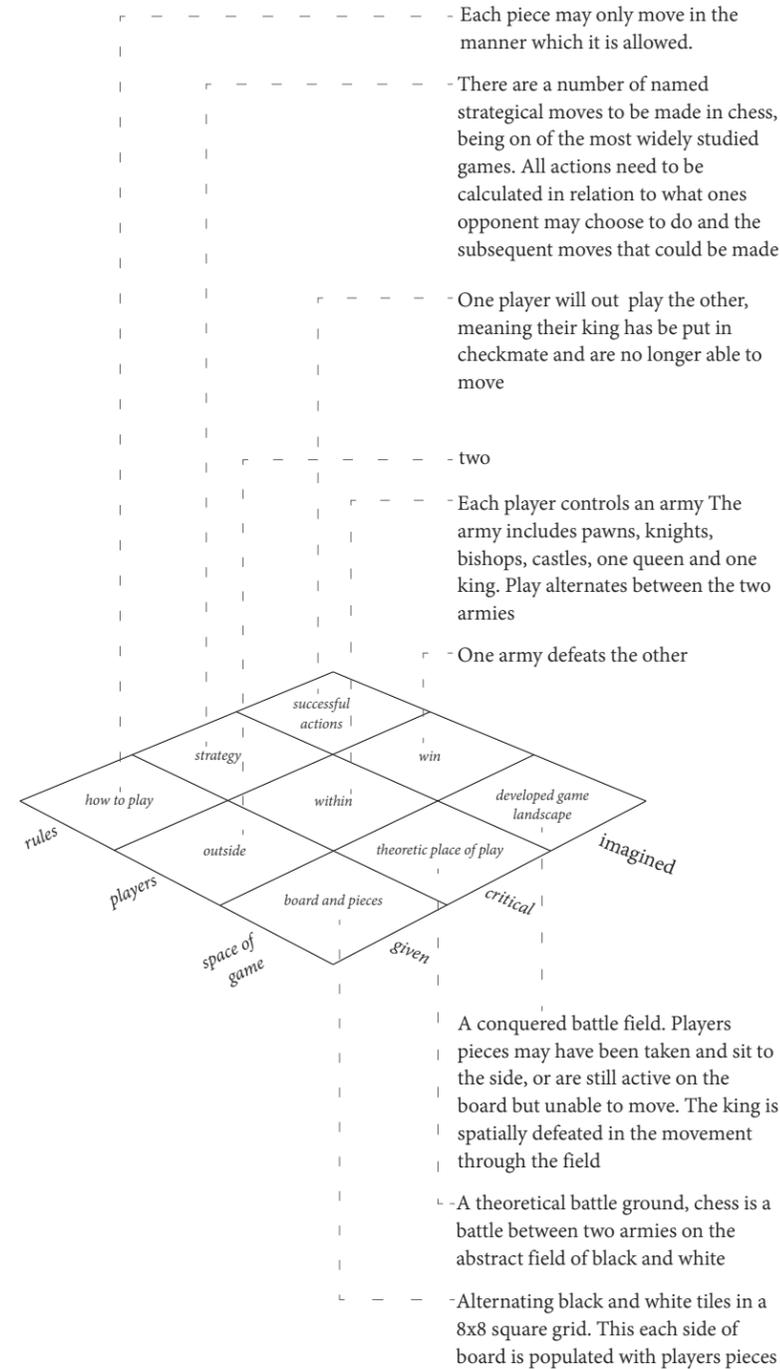
When the cash in the PUBLIC TREASURY amounts to \$50 more it is transferred to the MISCELLANEOUS pile and WAGES ARE RAISED TO \$110. When the cash amounts to \$50 more, wages are raised to \$120, and so on, raising wages \$10 for every \$50 in the TREASURY, until the end of the game.

RULE 7.

After the first FREE COLLEGE is erected, if a player goes to college he takes a blue card marked Education and when he gets four of these cards he exchanges them for a card marked Professor, which card counts him 100 at the end of the game.

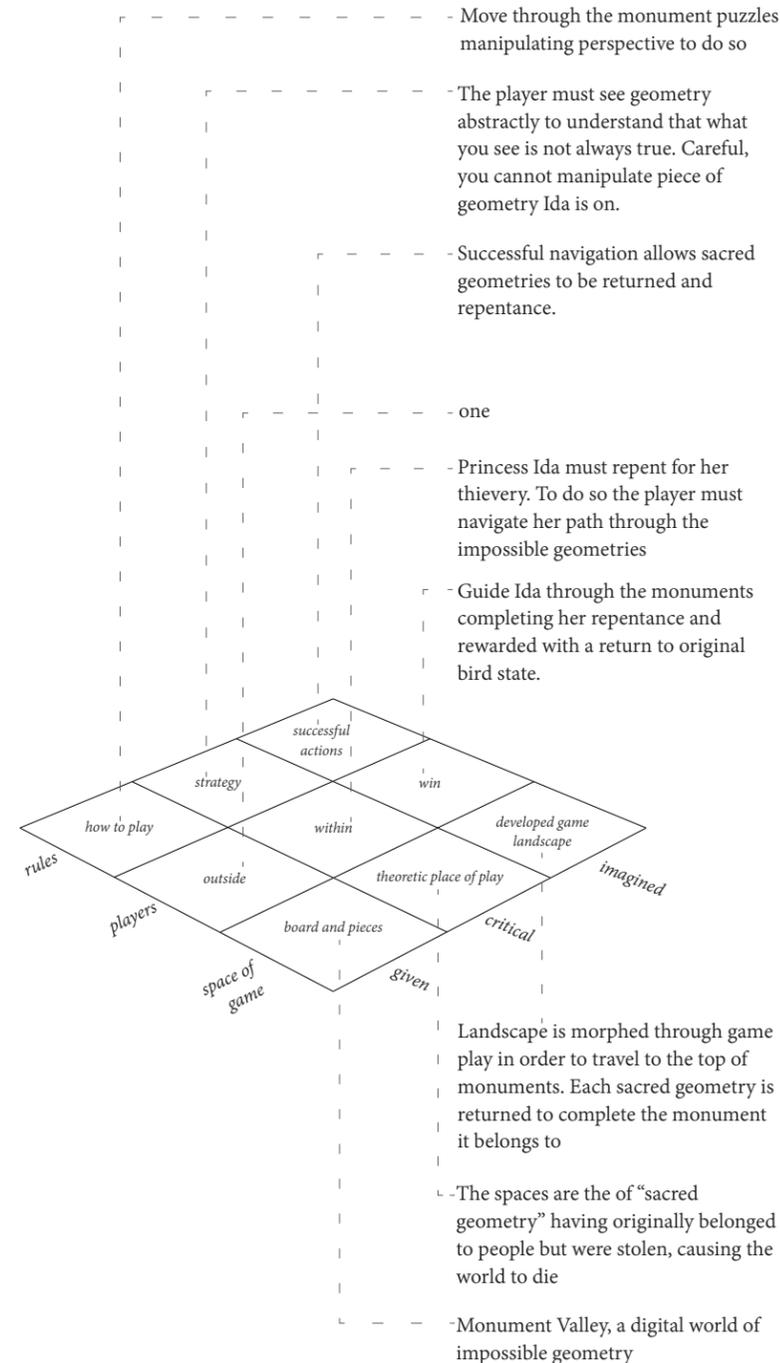
RULE 8.

Under the Single Tax the Poor House is eliminated because all players have access to land -- the natural opportunities to labor. If a player cannot afford to make the move called for by his throw, he puts his checker upon any NATURAL OPPORTUNITY space (inner corners) he may choose, back of the space to which his throw would bring him. Then just before throwing in his next turn he takes from the MISCELLANEOUS pile the wages called for by the NATURAL OPPORTUNITY space upon which he has placed his checker, pays his rent for such space into the PUBLIC TREASURY, throws his dice, and moves out. A player must make the move, if possible, even if it takes him to JAIL.



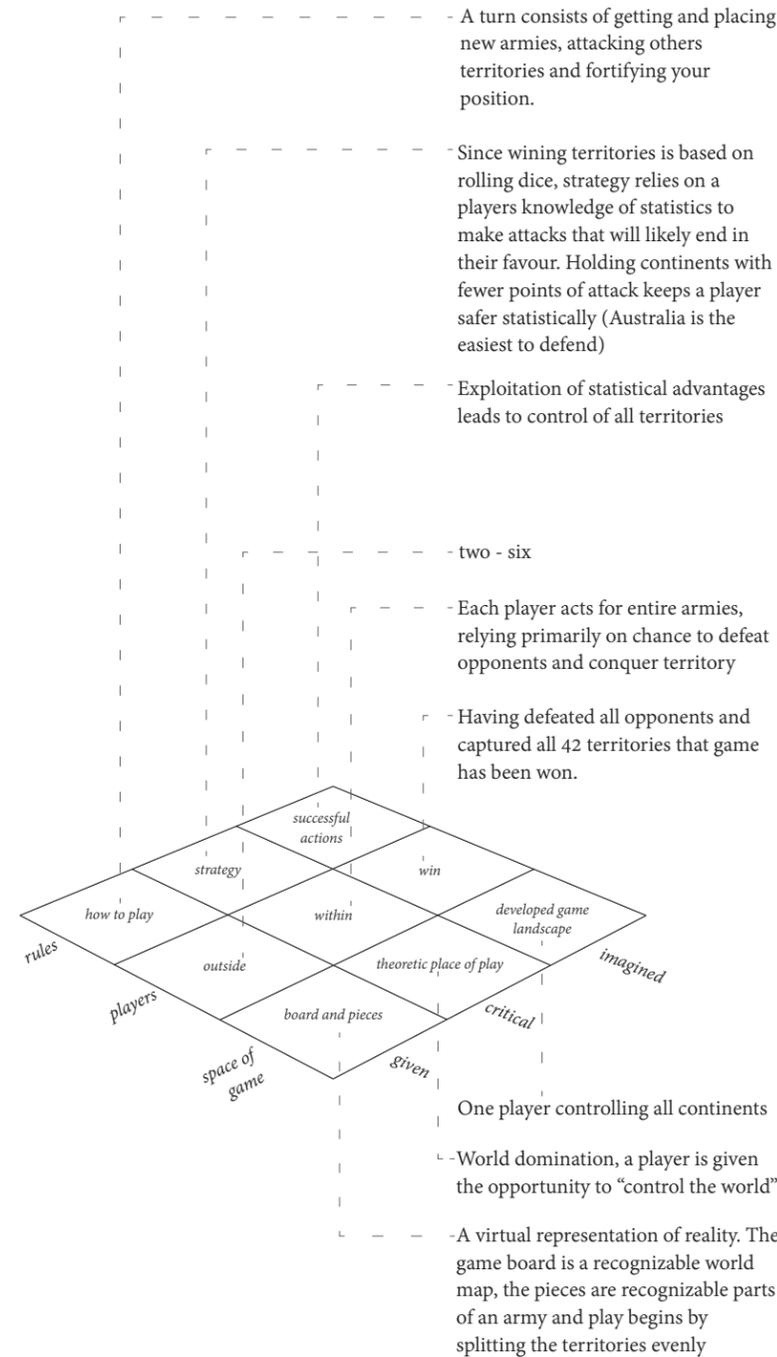
CHES

The origin of the game of chess is not entirely known. It is speculated that I may have Indian or Chinese roots from around the 6th century, but evidence is not strong enough to definitively support this. The Initiative Group Konigstein (IGK2) holds seminars during which chess scholars may present their work. One of its members suggests that the game chess we know today is actually a collection of pieces from other games. For example, the king and his behavior may be derived from the Chinese game Go while pawns are from Indian racing games and bishops from astrological or potentially even tic-tac-toe movements. There are a huge number of opinions on the origins of chess. What is known is that the game of chess we know today was likely spread and evolved by merchants of the "silk road". It is now a widely known and incredibly popular game around the world. For centuries it has spread and become what is considered to be the "intellectual" game of the upper class. There is an internationally recognized world title , attracting players from all over the globe who compete for the prestigious title.



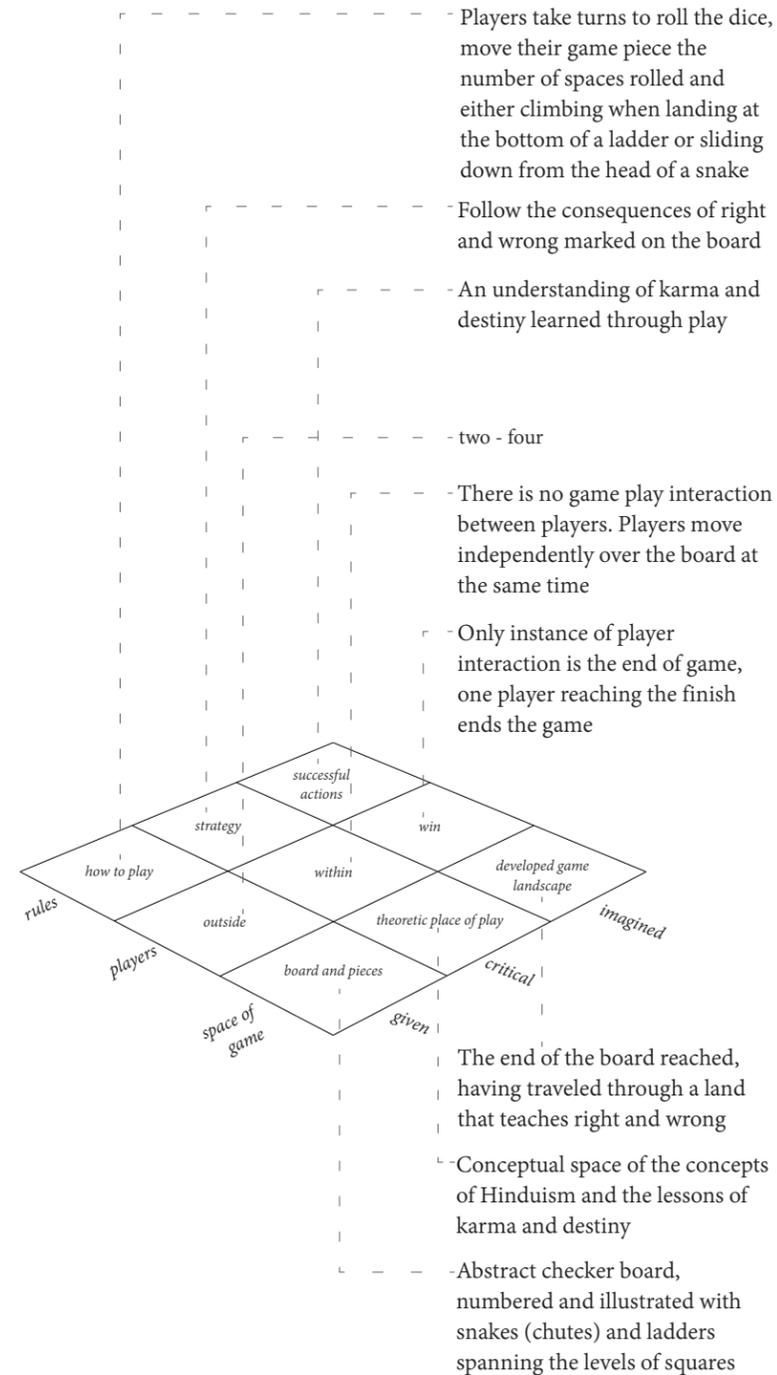
MONUMENT VALLEY

The company Us Two developed Monument Valley from an isometric piece of concept art, a building with a single figure at the bottom of it. The visually satisfying game is uses impossible geometry in the style of M. C. Escher to create the puzzle monuments for the character princess Ida to climb. A teaser trailer was released for Monument Valley in December of 2013, this sparked a huge interest in beta testing for the game and all the buzz eventually landed the award of Editors choice from the Apple App store. Originally release for iOS in April of 2014, to Android shortly after and it reach windows phones in 2015. The game has picked up 14 awards including the previously mentioned Editors choice as well as, Best 3D Visuals, Best British from BAFTA and the 2014 Apple ipad Game of the Year. The main criticism of monument Valley is its length. It is very short. The developers claim this is intentional, that they wanted to create a game that did not allow endless play but that gave satisfaction in the completion. While the graphics are mesmerizing, it took me less than an hour to move through all ten levels. The little difficulty leads one to believe the puzzle is equal to (or less than) the visual experience itself. There is even the option to take photos of your screen at intervals, so you can upload your game to Instagram. I would hazard to say this game is incredibly attractive to designers and architects but perhaps less so to those looking for a challenging game. The riddle like narrative adds another level of interest to the game, though it does not directly affect the game play itself.



RISK

First released by Miro in France 1957. Designed by the film director Albert Lamorisse the game was originally released in France with the title *La Conquete du Monde*. With its adaption to the American market The Parker Brothers renamed the game for release in 1959, calling it *RISK: the Continental Game*. Its long-standing popularity and moderate difficulty has established risk as one of the main gateway games to strategic gaming. To play RISK well a player must understand both the statistical advantages and disadvantages of each of the territories and continents as well as the roll of the dice in battle. RISK has been molded over the last half century to keep up with several current trends including two editions of Lord of the rings versions, two Star Wars editions, and even a simplified version for younger players.



SNAKES AND LADDERS

The first game of Snakes and Ladders originated in ancient India, potentially as early as 2BC. The game snakes and ladders was first titled "Moksha Patamu", this children's game was developed to teach kids the concepts of right and wrong. Hindu principles of Karma and Samskara (ritual life events) were the intended base philosophies of the game. Requiring no skill, snakes and ladders is reliant on pure luck, aligning with its focus on the concepts of fate and destiny. During their colonial rule of India, Britain appropriated the game to become their own. This English appropriation (first published in 1892) removed all Indian cultural affiliation. Instead Christian values were applied to the snakes and ladders. The game board is illustrated with images meant to portray cause and effect, exemplifying the Christian notions of virtue and vice. At the bottom of each ladder a virtue is represented, allowing the player who lands on the square to ascend the ladder. At the head of each snake a vice is shown, sending the player who happens to be unlucky enough to fall on this square sliding down the snake to a point lower on the board.

END

END