Establishing Common Ground

The State of Well-Being in America: An Innovation Lab

CC HUANG & KRISTEN BERMAN | IRRATIONAL LABS

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Foreword

When it comes to well-being in America, we have what business leaders would call a market failure.

For a century, the United States flourished with year-over-year improvements in health indicators. Yet today, as the British Medical Journal noted, "something is amiss in the health of Americans." Here at home, life expectancy has declined for three years in a row. Princeton professors point to "deaths of despair" in describing the rising number of deaths by suicide, drugs and alcohol.

Troubled by the trend lines and motivated by the commitment to *tikkun olam*, Arthur Blank is using his family foundation to make a difference in well-being – literally, to "repair the world." In our community-based grant making in Park County, Montana, we have added funding priorities for wellness and for youth suicide prevention. In Georgia, we are identifying ways to reverse the health disparities that plague rural communities.

And at West Creek Ranch, the non-profit conference center operated by The Arthur M. Blank Family Foundation, Arthur is hosting a week-long global summit designed to identify today's version of John F. Kennedy's moonshot promise. We want big, scalable solutions and the follow-through and implementation that make good on the promise.

Functioning as an "innovation lab," the West Creek Ranch program seeks to stimulate experimentation and creative problem-solving through one or more key sectors: philanthropy; local and state government; business; media and popular culture; health and

medicine. Through presentations, discussions, yoga and meditation practice, and the heightened creativity emerging from outdoor experiences at the 6,600-acre ranch, the week will challenge participants to re-imagine ways to allocate existing public and private resources to change well-being, at scale, for targeted populations. The program is designed to cover what we know from "neurons to neighborhoods" – that is, what we know about how our brains help or hinder our own personal happiness and how scores of interlocking variables shape well-being for large-scale populations.

As with any investment model, we must direct financial and human capital in new and different ways to achieve different results on well-being. As a first step in this journey, we have partnered with Irrational Labs to produce this monograph. Drawing from over a hundred articles and the recommendations of our participants, this article describes the accepted definitions and measures for well-being, the variables that enhance (or inhibit) changes and, finally, the design principles for increasing well-being.

On behalf of Arthur and his family, the Foundation staff is excited to share this resource freely and unconditionally. We invite you to immerse yourself in the content and to share it with others in your network.

Together, we can repair the world.

Penelope McPhee
ATLANTA | MAY 2019

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Setting the Scene

The Current State of Well-Being in America

People have been feeling worse. Well-being is declining not only in the United States, but around the world. Within the United States, according to Gallup's survey of 115,000 adults, well-being has declined across the country for the second straight year. Hawaii, Wyoming, Alaska, Montana, and Utah were the top 5 states in well-being in 2018. Since 2016, Gallup's data shows that career and social well-being have dropped the most.

The 2019 World Happiness Report also found that negative feelings are rising around the world. According to Jeffrey D. Sachs, "We are in an era of rising tensions and negative emotions." Moreover, globally, there are troubling trends in happiness inequality, defined as the psychological equivalent of income inequality. Since 2007, happiness inequality has been rising within countries all over the world.

Globally, the United States ranked 19th and was found to be hard-hit with an "epidemic of addictions." Around half of Americans suffer from at least one addiction — including alcohol, food, work, drugs, gambling, exercise, shopping, and sex.[1] American adults have been getting less happy since 2000, and American adolescents have been experiencing more depression, suicidal ideation, and self-harm since 2010.[2] However, Mental Health America has found that there are small but encouraging decreases in mental health problems and substance abuse problems for adults compared to four years ago.[3]

1. Sussman, S. (2017). Substance and behavioral addictions: Concepts, causes, and cures. Cambridge, United Kingdom ; New York, NY, USA ; Melbourne, Australia ; Delhi, India: Cambridge University Press.

2. Twenge, Jean M., et al. "More Happiness for Young People and Less for Mature Adults." Social Psychological and Personality Science, vol. 7, no. 2, 2015, pp. 131–141., doi:10.1177/1948550615602933.

3. "The State of Mental Health in America." Mental Health America, 1 Nov. 2018, www.mentalhealthamerica.net/issues/state-mental-health-america.

Defining Well-Being

In this summary, we use "well-being" in a variety of contexts, although it might mean different things to different experts. We use well-being in this summary to also denote what other researchers might refer to as happiness or life satisfaction.

In general, there are three main approaches in how researchers have interpreted well-being: evaluative, affective, and eudaemonic.

Source: Happiness Policy Manual UAE
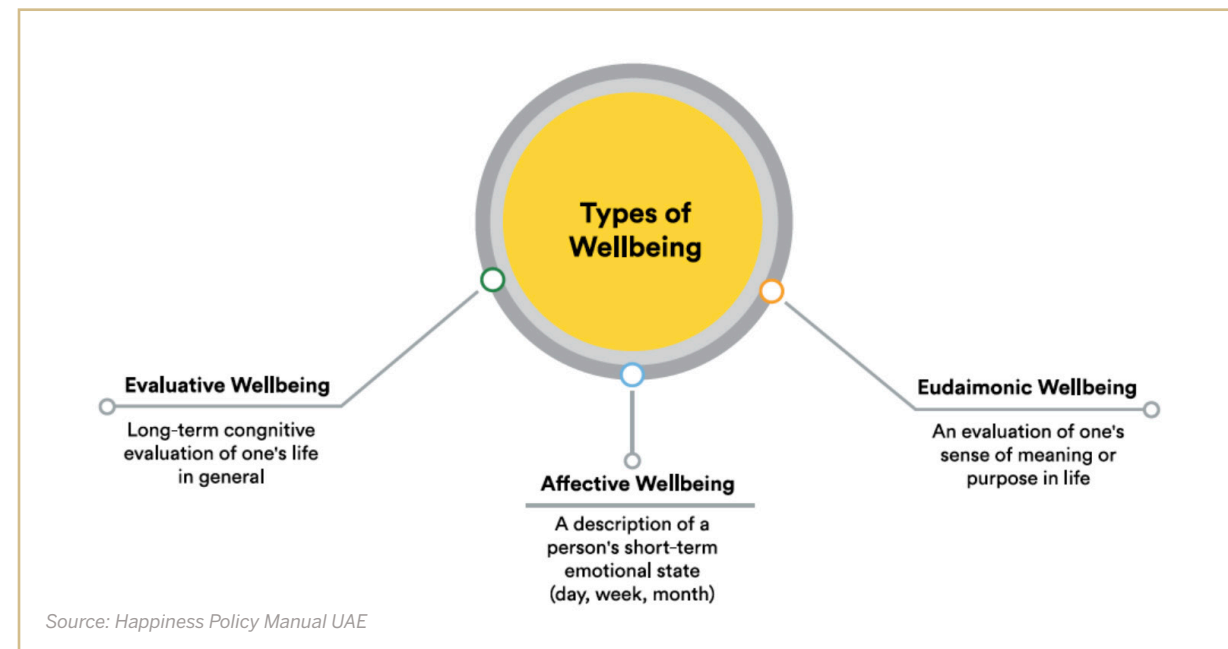
EVALUATIVE WELL-BEING is a cognitive evaluation of one's life rather than a description of a current emotional state. A typical survey item that refers to a longer-term evaluation of one's life would be a measure on life satisfaction. A typical survey question here would be "How satisfied are you with your life as a whole?" There are two advantages to these measures. First, the answers to questions such as these align most closely with people's revealed preferences when they make judgments and decisions. Second, they can also be used in different countries, which allows for cross-country comparisons.

AFFECTIVE WELL-BEING refers to the frequency and intensity of positive and negative emotions and feeling happy or unhappy. Typical survey questions that gauge positive and negative affect include "Overall, how calm did you feel yesterday?" and "How much of the time during the past week did you feel anxious?"

EUDAEMONIC WELL-BEING refers to a sense of meaning or purpose in life and also relates to notions of having a sense of control over one's life. This complex dimension of happiness was first described by Aristotle, but it is much less understood and more controversial than evaluative or affective measures. A survey measure used to capture eudaemonic well-being could be as follows: "To what extent do you feel that the things you do in your life are worthwhile?" There is research showing that happiness and meaning are related to distinct sets of thoughts, feelings, and behaviors, but the differences between them are less pronounced and more difficult to observe in everyday life.

ASSESSING WELL-BEING

Most methods of assessing well-being use a combination of questions that refer to evaluative, affective, and eudaemonic well-being, though most might emphasize one or two or all three types of measures. This list of existing assessment tools for well-being is not comprehensive and only aims to show how assessments might vary.

The **SCALE OF POSITIVE AND NEGATIVE EXPERIENCE (SPANE)** is a 12-item questionnaire and includes six items to assess positive feelings and six items to assess negative feelings.[4] For both the positive and negative items, three of the items are general (e.g., positive, negative) and three per subscale are more specific (e.g., joyful, sad).

The **PERMA PROFILER** is a validated, 23-question survey that measures five pillars of well-being known as PERMA.[5] The survey gives scores ranging from 0-10 for each pillar along with scores for overall well-being, health, and negative emotions. The survey looks at the pillars of positive emotion, engagement, relationships, meaning, and accomplishment.

GALLUP'S WELL-BEING FINDER is a survey that asks questions across five broad categories of well-being including career well-being, social well-being, financial well-being, physical well-being, and community well-being.[6] The final well-being score is the average of scores across the five categories from 1 to 10 (with 10 being the highest). These categories emerged from testing questions across countries, languages, and different life situations.

The **AUTHENTIC HAPPINESS INVENTORY** is a validated, 24-question survey that measures overall well-being covering three distinct areas: positive emotion (feeling warmth, pleasure, and comfort), engagement (staying present and in the moment), and meaning (fulfilling your life's purpose).[7] At the end of the survey, you receive a score between 1-5 (with 1 being the least happy and 5 being extraordinarily happy).

The **HUMAN FLOURISHING PROGRAM** has developed a measurement approach to human flourishing, based around five central domains: happiness and life satisfaction, mental and physical health, meaning and purpose, character and virtue, and close social relationships.[8] Each of these is nearly universally desired, and each constitutes an end in and of itself.

SIGNATURE STRENGTHS refers to character strengths that are most essential to who we are.[9] This assessment looks at six categories of virtues: wisdom, courage, humanity, justice, temperance, and transcendence. Research on the Signature Strengths show that interventions designed with the strengths in mind tend to be effective at increasing well-being.[10]

4. Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi. D., Oishi, S., & Biswas-Diener, R. (2009). New measures of well-being: Flourishing and positive and negative feelings. Social Indicators Research, 39, 247-266

5. Butler, Julie, and Margaret L. Kern. "The PERMA-Profiler: A Brief Multidimensional Measure of Flourishing." International Journal of Wellbeing, vol. 6, no. 3, 2016, pp. 1–48., doi:10.5502/ijw.v6i3.526.

6. Rath, Tom, and Jim Harter. "The Five Essential Elements of Well-Being." Gallup.com, 2010.

7. "Authentic Happiness." University of Pennsylvania, 2019, www.authentichappiness.sas.upenn.edu/testcenter.

8. VanderWeele, Tyler J. "Our Flourishing Measure." The Human Flourishing Program, 2017, hfh.fas.harvard.edu/measuring-flourishing.

9. "Know and Celebrate the Real You." Learn Your 24 Character Strengths: Free VIA Character Survey, www.viacharacter.org/www/Character-Strengths.

10. "Signature Strengths." Signature Strengths Character Strengths Overview: VIA Character, www.viacharacter.org/www/Research/What-the-Research-Says-About-Character-Strengths-Signature-Strengths.

PREDICTORS OF WELL-BEING

There are a variety of organizations helping society to narrow down and focus on the most impactful predictors of well-being. While variation exists, there are a surprising amount of commonalities shared across groups. A common and arguably the most popular theme amongst experts in the field of well-being is that mental health and social support matter - a lot.

Most experts, if not all, also agree that economic indicators do matter for well-being. However, it's not as simple as saying that higher income always suggests higher levels of well-being. Richer countries do not become happier as they get richer (in terms of total GDP), and in fact, may become much less happy when inequality increases. Most experts agree that employment is a critical driver of well-being, whether it means liking the job you're in or being able to find a job when you are transitioning. Health, including our diets, our exercise habits, and our access to medical care also play a role in our well-being.

While these factors listed below are recognized as predictors of well-being, more work must be done to understand what intervention or system of interventions might be needed to move the needle. For example, an effective intervention that increases social support might not directly be related to social support. For example, say someone's commute time was decreased by 75%. This intervention would *indirectly* provide people the ability to spend more time with family and friends. Moving from data and theory to real-world interventions requires questioning our intuition and engaging in rigorous research.

Here are examples of influential ways that researchers have organized and thought through predictors of well-being:

GALLUP-SHARECARE: Gallup-Sharecare's State of American Well-Being Index ranks 186 communities, categorizing them into 5 quintiles with the highest community scoring 67.6 for well-being and the lowest ranking community scoring 58.2.[11] The Index identifies five elements of well-being:

1. **Purpose:** liking what you do each day and being motivated to achieve your goals
2. **Social:** having supportive relationships and love in your life
3. **Financial:** managing your economic life to reduce stress and increase security
4. **Community:** liking where you live, feeling safe, and having pride in your community
5. **Physical:** having good health and enough energy to get things done each day

WORLD HAPPINESS REPORT: The World Happiness Report uses average life evaluations and measures of positive and negative affect (affective well-being).[12] The report identifies six key variables for life evaluation:

1. **GDP per capita**
2. **Social support**
3. **Healthy life expectancy**
4. **Freedom to make life choices**
5. **Generosity**
6. **Freedom from corruption**

Taken together, these six variables explain almost three-quarters of the variation in national annual average ladder scores among countries, using data from 2005 to 2018. A ladder score is simply the way someone would rate their well-being on a ladder, essentially a scale, where the top of the ladder is the highest level of well-being and the bottom of the ladder is the lowest.

Each of these predictors from the World Happiness Report have varying effects on life satisfaction. For example, per-capita income and life expectancy have significant effects on life evaluations, but not, in national average data, on either positive or negative affect. In contrast, social support can be seen to have similar proportionate effects on positive and negative emotions as on life evaluations. Freedom and generosity have even larger influences on positive affect than on the ladder. Negative affect is significantly reduced by social support, freedom, and absence of corruption.

11. "Gallup-Sharecare Well-Being Index." Sharecare, 2018, wellbeingindex.sharecare.com.
12. Helliwell, J., Layard, R., & Sachs, J. (2019). World Happiness Report 2019, New York: Sustainable Development Solutions Network.

BLUE ZONES: Blue Zones outlines 9 evidence-based common denominators among all five locations that they identified.[13]

1. **Move Naturally:** The world's longest lived people live in environments that constantly nudge them into moving without having to think about it, such as growing gardens.

2. **Purpose:** Knowing your sense of purpose is worth up to seven years of extra life expectancy.

3. **Down Shift:** The world's longest-lived people have routines to shed stress. Okinawans take a few moments each day to remember their ancestors, Adventists pray, Ikarians take a nap and Sardinians have happy hours.

4. **80% Rule:** People in the Blue Zones eat their smallest meal in the late afternoon or early evening and then they don't eat more the rest of the day.

5. **Plant Slant:** Beans, including fava, black, soy and lentils, are the cornerstone of most centenarian diets.

6. **Wine at 5:** People in all Blue Zones (except Adventists) drink alcohol moderately and regularly.

7. **Belong:** All but five of the 263 centenarians we interviewed belonged to some faith-based community.

8. **Loved Ones First:** Successful centenarians in the Blue Zones put their families first. This means keeping aging parents and grandparents nearby or in the home.

9. **Right Tribe:** The world's longest lived people chose—or were born into—social circles that support healthy behaviors.
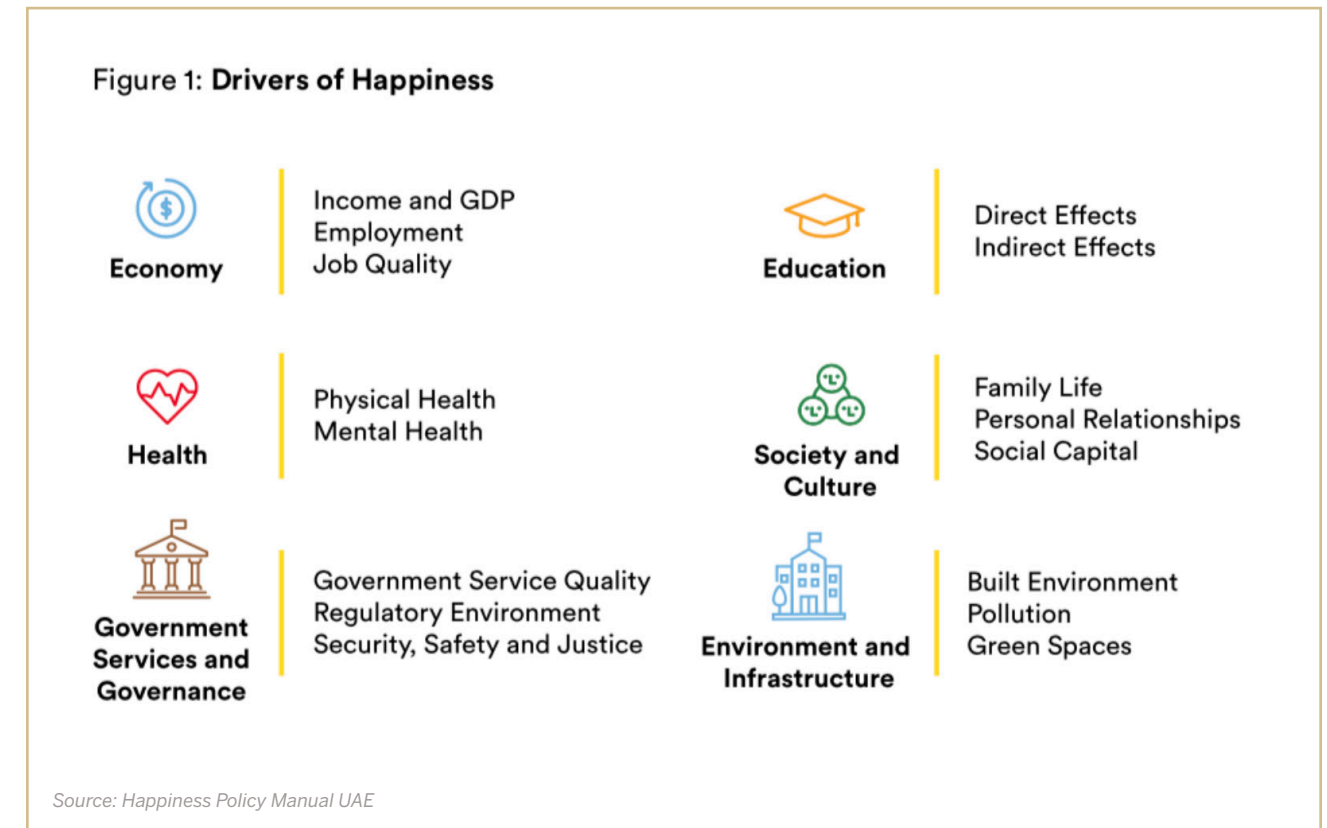
WELL-BEING TRUST: The Well-Being Trust's areas of focus looks at key levers around mental health to improve well-being at scale:[14]

1. **Clinical transformation:** Shifting the question from "What's the matter with you?" to "What matters to you?"

2. **Community transformation:** Focusing on economic inclusion, affordable housing, racial equity, food justice, and improved child development

3. **Policy and advocacy:** Increasing access to high-quality affordable mental health and addiction care and upstream supports

4. **Social engagements:** Creating national discourse and normalizing conversations of significance on mental health and addiction

UAE'S HAPPINESS POLICY MANUAL: The UAE recently created a happiness manual that outlines size predictors of happiness. The image below shows the categories and subcategories that the policy manual considers.

Figure 1: **Drivers of Happiness**

Economy — Income and GDP / Employment / Job Quality

Health — Physical Health / Mental Health

Government Services and Governance — Government Service Quality / Regulatory Environment / Security, Safety and Justice

Education — Direct Effects / Indirect Effects

Society and Culture — Family Life / Personal Relationships / Social Capital

Environment and Infrastructure — Built Environment / Pollution / Green Spaces

Source: Happiness Policy Manual UAE

HARVARD STUDY OF ADULT DEVELOPMENT: For nearly 80 years, the Harvard Study of Adult Development has tracked longitudinal data on physical and mental health, relationships and life satisfaction.[15] It's findings suggest the main predictor of well-being is good relationships, with an emphasis on quality over quantity.

13. "The Blue Zones Story." Blue Zones, www.bluezones.com.

14. "Well Being Trust Is a National Foundation Dedicated to Advancing the Mental, Social and Spiritual Health of the Nation." Well Being Trust, wellbeingtrust.org.

15. "Harvard Second Generation Study." Harvard Second Generation Study, www.adultdevelopmentstudy.org.

Themes for Well-Being

THEMES FOR WELL-BEING

A number of themes are present in the readings that attendees sent us. The coalescence of themes suggest that there is an emergent consensus on the ways of life that are conducive to well-being. This is a life of prioritizing good relationships, spending time meaningfully, healthy eating, activity and play, and opportunities to be in nature. And of course, there is also important scaffolding that makes these lives possible - access to the outdoors, lush and human-scaled built environments with good transportation options, clean air and water, good government policy, social support systems, among others.

However, what becomes an obvious challenge in thinking about system shifts and interventions is the sheer number of factors that affect well-being, the different contexts in which these factors operate, and the powerful social, economic, political, and environmental forces that we must grapple with.

In this section, we will give a brief overview of the themes from these readings. We will look at levers for well-being within each theme from a dual perspective - in terms of the forces that **inhibit** well-being and in terms of forces that **enable** well-being.

These themes are not meant to be exhaustive and the way we divided these levers is not meant to impose artificial boundaries on the topics. Our goal here is quite simple - to provide a readable and concise survey of the issues that these recommended articles bring up.

| FINANCIAL STABILITY & HOUSING |
| COMMUNITIES |
| NATURAL & BUILT ENVIRONMENT |
| RELATIONSHIPS & CONNECTION |
| MENTAL & PHYSICAL HEALTH |

Financial Stability & Housing

One foundational aspect of well-being is financial health and stability and secure housing are core components. Financial stability tends to ensure that we can meet our basic needs and housing, in particular, is increasingly understood to be key to well-being, especially in light of urban growth, ageing populations, and climate change.[16]

INHIBITORS

Inequality, poverty, and debt seem to be a major inhibitors of well-being in the United States. Of course, the ways that inequalities evolve and the reasons for these inequalities are complex. The place-based population health approach provides deep insight into inequality.[17] Their data-driven strategies focused on the root causes of health issues in neighborhoods high in "toxic stress" are proving to be effective. One example is growing the food economy by building food stores, farmers markets, and neighborhood gardens. All these measures can improve access to healthy food and promote green jobs.

Structural inequality, particularly through our history of racism and exclusion, is a core component of this. The Urban Institute proposes closing the racial wealth gap, eliminating racial inequities in public school quality, closing employment and earnings gaps, and ending punitive policing as key measures to address this history of discrimination.[18]

Inequality is also enhanced through relative positioning - the question of who we compare ourselves to in terms of financial well-being. In many cases, research shows we're motivated by relative positioning.[19] This means that, as long as we are the top dog, we are happy even if we are earning less. But sadly, with the growing wealth gap, more and more people are feeling as if they are at the bottom.

Student debt is another major force that inhibits financial stability.[20] Currently, over 44 million Americans are in repayment for $1.5 trillion in loans. This debt is decreasing well-being in a number of ways - debtors are more likely to live in high-stress conditions, struggle financially, and are less likely to save for retirement, own homes, or achieve career goals.

ENABLERS

Jan-Emmanuel De Neve's research looks at the possibility that well-being can affect income as much as income affects well-being.[21] Not only does his research show that income is highly correlated with well-being, but it also shows that people who are well-off are also more likely to be higher earners.

Communities

In the readings, we see a strong theme of communities being an important "system" in terms of enabling well-being. Of course, communities vary greatly and Dante Chinni and James Gimpel's important work in *Our Patchwork Nation* categorizes communities in the United States into 12 categories.*

INHIBITORS

Neighborhoods, even when they are next to each other, have a major influence on adult outcomes.[22] These inequalities between neighborhoods are also persistent and many well-intentioned government policies and programs have yet to make a meaningful impact in alleviating the problem. There are still questions around what can convert struggling neighborhoods into striving neighborhoods and what characteristics of thriving neighborhoods are the most influential for well-being.

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Blue Zones offer a comprehensive community-level view of what makes for well-being at both the individual and community-level. Blue Zones are regions that reflect the lifestyle and the environment of the world's longest-lived people. Dan Buettner looks at life on Ikaria, Greece, and other blue zones and finds that a dozen "powerful, mutually enhancing" factors contribute to longevity that appear in individual-level behaviors but become long-term habits through community-level behaviors. Plant-based diets, sleeping and napping, community ties, purpose, are among a host of factors that exist in a time-tested and fulfilling ecosystem of social defaults and norms in "blue zones" such as Ikaria, Greece; Okinawa, Japan; and Loma Linda, California.

Understanding communities at a granular level is another enabler of better well-being interventions. Grand Rapids, Michigan is a pioneer in using data at the neighborhood level to find the social determinants of health.[23] These determinants are often also the barriers that are causing disparate outcomes. Their work has led to the creation of a City Health Dashboard that allows users to compare data from any of the 500 largest U.S. cities on a number of social, economic, environmental, and health factors.

*These categories include: Boom Towns, Immigration nation, Monied 'Burbs, Campus and Careers, Industrial Metropolis, Mormon Outposts, Emptying Nests, Military Bastions, Service Worker Centers, Evangelical Epicenters, Minority Central, and Tractor Country.

Natural & Built Environment

Our well-being is also highly influenced by the environment we are in, whether that is our built environment or the natural environment.

ENABLERS

There are key design principles that help create built environments that are better for connection, health, and accessibility. Social capital, defined as the social connections among individuals or groups that facilitate collective action, can be enabled through better built environments. In *Creating Healthy Neighborhoods*, the authors recommend that communities create a variety of environments, arrangements, and events such as neighborhood organizations, spaces for meeting and gathering, and programming of spaces for interaction.[24]

Of course, the natural environment is a vital part of a system of well-being as well - and the research on the role of nature is providing us with more affirmation and nuance on the ways that nature can contribute to well-being. Oliver Sacks gives us a provocative aphorism: "In many cases, gardens and nature are more powerful than any medication."[25] Forest bathing and forest therapy are one specific example of how we are coming to see the experience of the natural environment as a mode of healing.[26] Nature can also help children learn, be more active, have higher self-esteem, and in general is shown to promote brain functioning.[27] "Greenness" in general has been shown to improve birth weights, physical activity, and lower mortality rates and depression.[28] Oliver Sacks describes both biophilia (the love of nature and living things) and hortophilia (the desire to interact with, manage, and tend nature) - perhaps research is just affirming something fundamental to the human condition.

Relationships & Connection

Meaningful relationships are a key indicator for well-being and are also one of the most complex.

INHIBITORS

Overall, social isolation in the U.S. is on the increase. David Hsu's primer discusses social isolation and potential solutions.[29] According to the primer, one in four Americans in 2004 said they have zero people in their network with which to discuss important issues. Forty percent of Americans report feeling lonely on a regular basis. Twenty-eight percent of Americans live alone. He recommends "five fronts" in the fight against social isolation - built environment, technology, civic engagement, "new" forms of hospitality, and new institutions.

And perhaps a portion of this social isolation comes from a mistaken preference for solitude. Epley and Schroeder look at the phenomenon of strangers routinely ignoring each other and find that, on average, strangers on trains and buses who connected had a positive experience, even though they expected to enjoy solitude more.[30] They found the same type of outcome for people who were both instructed to talk to strangers and were talked to in a laboratory setting.

The rise of our interactions with technology has seen an interesting debate about the best role for technology in enhancing our social experiences. Yet, it seems that we should be wary of our smartphones, especially when we are interacting face-to-face. Researchers have found that phone use during face-to-face interactions cause distraction, boredom and worsened moods.[31]

ENABLERS

Robert Waldinger's research on perceived health and happiness for older adults finds that social connections are key drivers for well-being, and marital satisfaction provides a unique buffer for day-to-day links between poorer perceived health and happiness.[32] The way that we relate to our marital partners, especially when we are older, is also important.

Waldinger further looks at mental models of attachment between older spouses and finds that security of attachment is one of the most important factors for marital satisfaction, mood, and depressive symptoms.[33] Security of attachment is defined as comfort with closeness and the willingness to depend on others.

The research on learning how to better emotionally relate and connect to others has also become mature and robust. An OECD report argues that these skills for emotional connection and prosocial behavior will be increasingly important as traditional social networks are being dismantled and our lives become faster-paced, more urban, and more diverse.[34] This report looks at the "Big Five" domains of social and emotional skills, including engaging with others, open-mindedness, collaboration, emotional regulation, task performance. The fifth category, "compound skills," includes critical thinking, meta-cognition, and self-efficacy. The report reveals a number of studies that show the relationship between social and emotional skills across a number of outcomes, including occupational outcomes, grades, and overall health. The study finds that these skills have a strong relationship with well-being, in addition to being malleable, assessable in school-age children, and relevant in different cultural and social contexts.

In terms of building these relationships, there are groups doing the difficult and necessary on-the-ground work of bringing people together. One example is Action for Happiness, an organization that aims to promote relationship-building through bringing people together face-to-face and toolkits and curriculum around happiness and well-being.[35]

Mental & Physical Health

The decline of mental and physical health in the United States has been one of the major topics inspiring well-being researchers. As a developed country, the US ranks among the lowest for mental and physical health outcomes despite spending more on healthcare per capita. For example, Singapore spends about a fifth of the U.S. on healthcare per capita. Yet, it ranks second in Bloomberg's Healthcare Efficiency Index while the U.S. ranks fifty-first.[36]

INHIBITORS

Overall, as Benjamin Miller and Tyler Norris point out, there are worrying trends for how we treat mental health issues and even more fundamental problems in terms of how we conceive of mental health in the first place.[37] They define mental health as being inclusive of emotional, psychological, and social well-being. In terms of inhibitors to better mental health outcomes, they identify two key factors. First, the failed realization of community mental health systems, and second, the stigmas around mental health that separated it from traditional healthcare services. Moving forward, they recommend that we look at mental health both as a coordinated systems issue and as a byproduct of community conditions.

Beyond our policies and perceptions of mental health, the American mindset toward time could be one of the causes of stress and overall lower well-being. Ashley Whillans looks at the reasons behind our "time poverty" and explains the sociocultural factors that drive our inability to prioritize time.[38] For example, Americans view "busyness" as signalling higher social status. Americans also tend to suffer from "future time slack," believing that we will have more time in the future than we do in the present. She recommends that we plan for the future, spend more time eating, meeting new people, and helping others as ways to maximize well-being.

ENABLERS

Social and emotional learning (SEL) is a proven enabler of better well-being. For example, there is research showing that socio-emotional skills have a higher effect on occupational outcomes than parental income and socioeconomic status. While it is currently mostly applied to children, SEL could also be applied to adults and there is already research affirming the relationship between emotional intelligence and well-being.[39]

The rise of mindfulness and meditation could be one positive trend in terms of mental health. For example, according to the CDC, 14.2 percent of American adults said they meditated in the past year in

2017, a threefold jump from 2012.[40] In line with this, Waldinger speaks to the importance of embracing quiet in our everyday.[41] He posits that moments of quiet can help us clarify what is important, be in tune with the pleasure of being alive, understand the emptiness that might be inherent in our pursuits, and feel content with less and not more. He recommends that we unplug from electronic media, listen to guided meditation, and sit still as three starting points for quiet time.

In terms of technology, Glen Tullman's look at the informed, connected health consumer sheds light on the forms of technology that might better aid healthcare to enable well-being.[42] Tullman argues that the impactful change will come from smart, self-diagnosing technology because they can help consumers obtain real-time, personalized information. He argues that a patient must have the ability to help themselves and to be able to manage their own health conditions.

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18. The Urban Institute, "What would it take to overcome the dmanagement effects of structural racism and ensure a more equitable future?," 2019, https://next50.urban.org/sites/default/files/2019-05/2019.05.12_Next50%20structural%20racism_finalized%20%281%29.pdf.

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22. Badger, Emily, and Quoctrung Bui. "Detailed Maps Show How Neighborhoods Shape Children for Life." New York Times, 2018, https://www.nytimes.com/2018/10/01/upshot/maps-neighborhoods-shape-child-poverty.html.

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25. Sacks, Oliver. "The Healing Power of Gardens." 2019.

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Design Principles for Increasing Well-Being

DESIGN PRINCIPLES FOR INCREASING WELL-BEING

Irrational Labs often uses two approaches to think about change - at the behavioral level and also at the systems level. These two approaches can reinforce each other and make interventions more robust and powerful. Just as it is important to understand the system, or context, in which a person is acting (a city, a social organization, a school), it is also important to understand the dynamics of our mental systems - our biases, irrationalities, strengths, and weaknesses.

| ACHIEVING BEHAVIORAL CHANGE |
| --- |
| ACHIEVING SYSTEMS CHANGE |

Achieving Behavioral Change

In an ideal world, our decisions would be the result of a careful weighing of costs and benefits and informed by existing preferences. Behavioral economics has found this is not the case. Most of our choices are not the result of careful deliberation.

Instead, there are a number of heuristics (a shortcut that eases the mental load of making a decision) that influence the way we make decisions:

DEFAULTS
People will usually choose the default when presented with an option, which is generally the option that they will obtain if they do nothing.
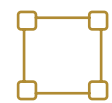
FRAMING
People often make decisions depending on how options are framed. For example, if options are framed as a loss or a gain, people will react differently. In general, people are more averse to losses even if the potential gain is equivalent.

ANCHORS
If we have an initial exposure to a number or concept, our subsequent judgements are also heavily affected.

RECENCY
We are influenced by readily available information in memory. This heuristic is generally called the recency bias.

These are just a few examples of a longer list of psychological barriers - the irrationalities and biases that affect our behavior. We also live in the moment, which makes us tend to resist change. We are also bad at predicting our future behavior, subject to distorted memory, and affected by physiological and emotional states. Finally, we are social animals with social preferences, such as those expressed in trust, reciprocity and fairness; we are susceptible to social norms and a need for self-consistency.

Because these are systematic across all humans, behavioral scientists generally recommend practitioners to shift attention away from attempting to fundamentally change human psychology towards changing the environment to account for these irrationalities and biases.

EXAMPLE: PUTTING THIS INTO PRACTICE

How would you increase the savings rates of low to moderate income people? A popular approach is to change how people think about savings, i.e., change people's preferences and beliefs. However, behavioral science would not suggest starting there. The argument goes as follows: people are not saving because they don't want to save, many times they aren't saving because it's not easy to save. Instead, the preferred approach is to change the environment and make savings easier.

A behavioral science team at Duke University, Common Cents, worked with a national credit union to increase the number of members depositing a portion of their paycheck into an account rather than entirely cashing it out. By changing elements within the credit union (i.e., the actual built environment of the credit union) and making it as easy to save money as it was to cash the check in full, 10 percent of the check cashers saved an average of $160. This was merely one small change to a form. When fully scaled, this small change to the environment could potentially increase deposits at this bank by more than $2 million each year.

THE BEHAVIORAL DIAGNOSIS

To successfully change behavior, behavioral scientists (and any designer) starts by identifying which psychological barriers are most present within the context they are studying. To do this, behavioral scientists will conduct a behavioral diagnosis of the environment surrounding each intended behavior.[43] A behavioral diagnosis is a map of all the small details within an environment that uncovers the reasons that push us to act or not act in certain situations. It helps us understand what people actually do as opposed to what people say they do.

Here is a general outline of to conduct a behavioral diagnosis:

1. BEHAVIOR IDENTIFICATION
Start with behaviors. What very specific thing do we want people to do?

2. MAPPING
Next, move into mapping what actually happens. What are people doing? Mapping should be done with a high-level of attention to detail.

3. IDENTIFY BARRIERS & BENEFITS
After outlining the behaviors that actually happen, identify the psycho logical and logistical barriers and the associated benefits that currently exist in the system. What friction is preventing people from doing the behavior and what benefits are motivating people to do the behavior? Describe each step with the relevant psychological and logistical barriers and benefits that might get in someone's way of completing the key behavior or motivate them to complete.
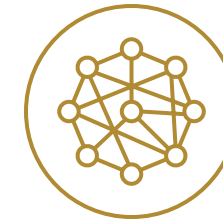
4. HYPOTHESIZE
Then, generate hypotheses about how to solve a problem based on psychologies and the actual behavior.

5. TESTING
Finally, test ideas and hypotheses for potential solutions through both quantitative and qualitative research.

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43. Doing a Behavioral Diagnosis, Irrational Labs, https://irrationallabs.org/content/uploads/2018/02/Irrational-Labs-Behavioral-Diagnosis.pdf.

Achieving Systems Change

One reason we are so excited to bring experts together from such wide-ranging domains is that we will be able to engage more holistically with levers to increase well-being. While systems-level approaches are often more difficult, we hope that the vocabulary and principles can give us some useful tools and framing in discussions to discover more synergies, interconnections, and the potential for emergent phenomena.

Teams that have used systems thinking approaches typically result in more transdisciplinary and integrated approaches that focus on creating effective long-term change. For example, a recent paper in *Nature* uses a systems lens to conclude that individually-focused care will not be as effective as group-based ventures that emphasize identity, citizenship, and social capital to address the mental health impacts of climate change.[44]

Here, we want to quickly provide some interesting strategies to think about how systems influence well-being.

SYSTEMS CHANGE IN PRACTICE

A number of the articles that we received look at well-being from a systems perspective.

1. The **BLUE ZONES** work suggests that scaling changes toward well-being and longevity require creating community-level behaviors to set long-term defaults, or norms of the system, whereas successfully changing individuals might only lead to exceptions and outliers.[45] A community is a great example of a type of "system" that well-being work must typically grapple with. A family or a neighborhood could be other systems that highly influences well-being.

2. The **HUMAN PROGRESS AND HUMAN SERVICES 2035** report looks at a set of complex interactions between various trends to understand what might emerge from them in terms of future scenarios.[46] For example, they hypothesize that a rise in extreme weather events would impact lower-income areas the most, which would strain human service organizations. This is an example of looking at unique and complex interconnections between systems that are typically not put together (in this case, weather systems and human service organizational systems).

3. The **LIVING LEGACIES** approach of the Well-Being Trust is an example of looking at the interconnections between variables from transportation to belonging and specifically posits that well-being must be seen as "a coordinated systems issue."[47]

4. The approach of **PLACE-BASED POPULATION HEALTH** uses data to take into consideration the unique system dynamics of different communities to allow cities to better focus on and understand the root causes of problems rather than merely the events.[48] This is exactly the message behind the Iceberg Model, which is explained below.

PRINCIPLES OF SYSTEMS THINKING

We will quickly review some principles of systems thinking. This list of concepts is adapted from an article from Leyla Acaroglu, resources from The Systems Thinker website, with additional insights from *Thinking in Systems* by Donella Meadows.[49] [50] [51]

Source: Tools for Systems Thinkers: The Six Fundamental Concepts of Systems Thinking, Leyla Acaroglu.
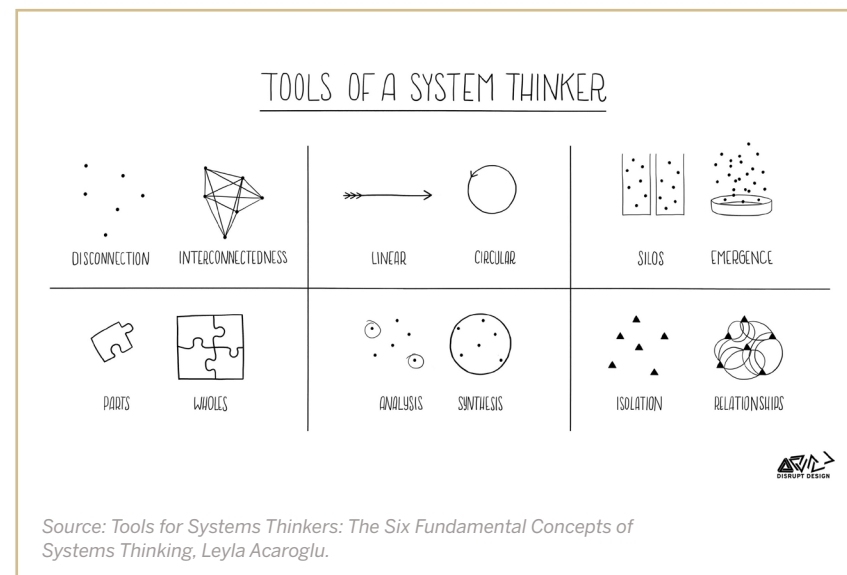
1. Stocks and Flows

Any system has both stocks and flows. A stock is the quantity of material or information that has built up over the time (i.e. the water in a bathtub). A flow is the rate at which a stock might increase or decrease over time. Hence, stocks change through flows. Stocks can be shock absorbers in a system. It is important to think about inflows and outflows that might affect a particular stock and how a system's stocks and flows are limited. Distinguishing, listing out, and diagramming the stocks and flows in a system can be a good thought exercise to better understand units, relative magnitudes, and relative rates of change.

EXAMPLE: The reason savings, even if they are not in large amounts, are so important to financial stability is that they act as a shock absorber to unexpected situations (broken car, losing a job, etc.).

Source: Thinking in Systems, Donella Meadows
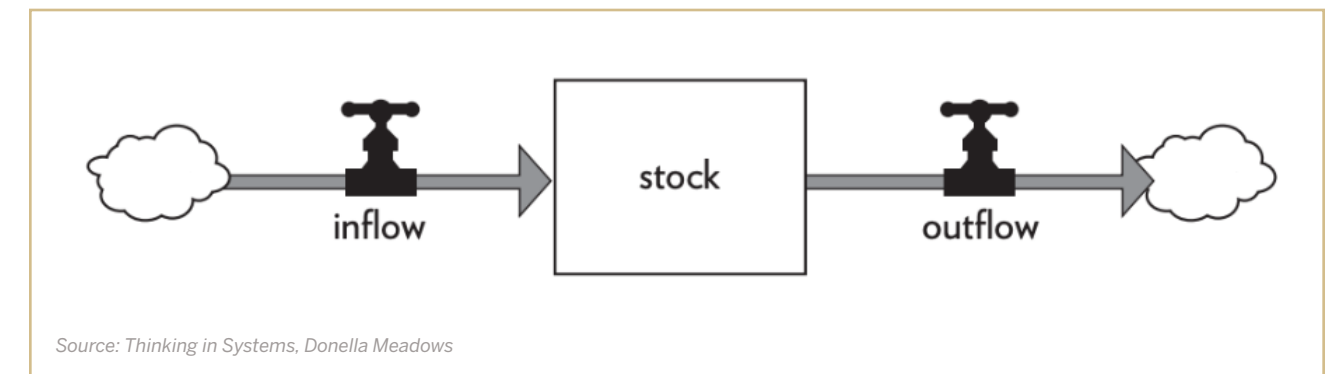
2. Interconnections

Discovering interconnections in a system is when effects are found between seemingly unrelated components. For example, urban sprawl is a major contributor to longer commutes, which has been found to have a major on impact on rising rates of obesity. However, urban sprawl is often not well integrated into policy recommendations for obesity. These interconnections are valuable because they can also become unexpected levers for systems change and specific outcomes that might not have been obvious initially.

EXAMPLE: Having access to a public transit system might be the barrier to someone's access to healthy food, just as much as the price of healthy food.
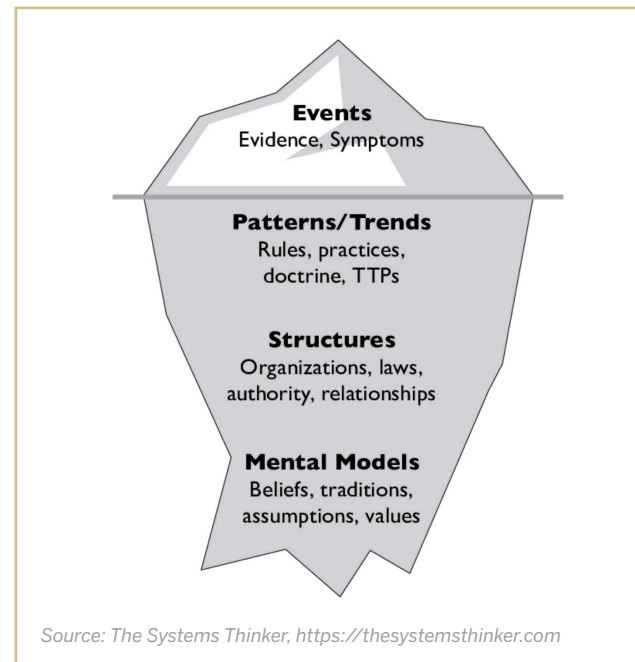
3. Feedback Loops

There are typically feedback loops that often exist between any two parts of a system. It is important to think about the size, speed, and evolution of these loops. There are typically two types of feedback loops - reinforcing loops which is a loop where a certain type of change is furthered. An example would be population growth - as population increases, so do births. Balancing loops, also called goal-seeking loops, since they often work in the opposite or negative direction until a certain limit is reached. A thermostat is a good example of a balancing loop, as it will always have a particular target that the system's flows of heating or cooling are optimizing for. There are also often loops that are unexpected in a system and looking at these can help us understand unintended consequences.

EXAMPLE: An increase in your well-being could increase your co-worker's well-being, which then in turn could then increase your well-being.

4. The Iceberg Model

We often only see the tip of the iceberg - events and symptoms that are obvious and apparent. Yet, it is important to see the patterns, structures, and mental models are the deeper causes or reasons for what we see.

EXAMPLE: The way that Miller and Norris look at mental health in "The Mental Health Imperative" is a great example of the Iceberg Model.[52] Beyond looking at the increase of mental health problems and arguing for more treatment, they trace back to how our beliefs, or mental models, about mental health as being distinct from physical health to begin with are problematic.

Events
Evidence, Symptoms

Patterns/Trends
Rules, practices, doctrine, TTPs

Structures
Organizations, laws, authority, relationships

Mental Models
Beliefs, traditions, assumptions, values

Source: The Systems Thinker, https://thesystemsthinker.com

5. Emergence

Emergence is when a particular phenomenon results from a set of varying and interactive factors that are part of a system. It's not always obvious when looking at a particular component. This is also often called "self-organization" - an example would be when a flower comes out of a plant due to the combination of sun, water, and biological materials.

EXAMPLE: Blue Zones often emerge from a complex set of causal mechanisms, rooted in a number of social norms, historical factors, and environmental factors and cannot be reduced to any particular cause.
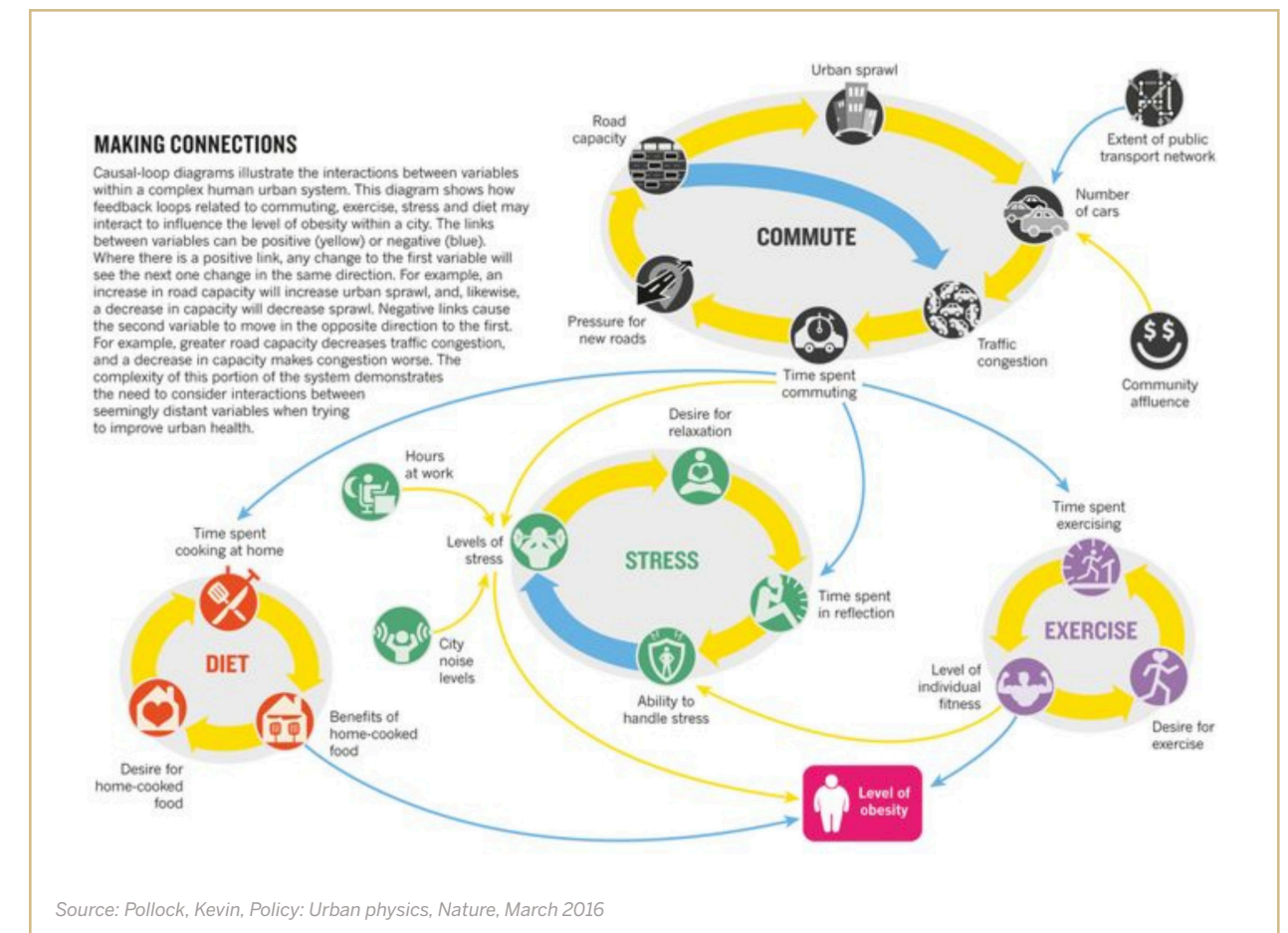
6. Boundaries of a System

Looking solely at one part of a system can often lead one to come up with incomplete or ineffective solutions. If we only looked within the boundaries of a neighborhood to understand a person's well-being, we would not see the impact that government corruption might have on well-being. In this case, it makes sense to expand the boundaries of the system that is being analyzed. When the interconnection between different parts of a system or even different systems are understood, emergent properties can be discovered.

EXAMPLE: Mental health outcomes are now often found to be linked to diet and environmental factors. Only looking at the mind is not sufficient to induce better mental health outcomes.

7. Systems Mapping

Systems mapping can help with synthesizing the component parts of a system. Synthesis is being able to look at the parts and the whole at the same time and see the interconnections between the parts to create the dynamics of the whole.

EXAMPLE: The image below is from a wonderful article called "Urban Physics" in which two physicists try to think about the problem of urban design and is a great example of using both analysis and synthesis to look at obesity.[53]

MAKING CONNECTIONS

Causal-loop diagrams illustrate the interactions between variables within a complex human urban system. This diagram shows how feedback loops related to commuting, exercise, stress and diet may interact to influence the level of obesity within a city. The links between variables can be positive (yellow) or negative (blue). Where there is a positive link, any change to the first variable will see the next one change in the same direction. For example, an increase in road capacity will increase urban sprawl, and, likewise, a decrease in capacity will decrease sprawl. Negative links cause the second variable to move in the opposite direction to the first. For example, greater road capacity decreases traffic congestion, and a decrease in capacity makes congestion worse. The complexity of this portion of the system demonstrates the need to consider interactions between seemingly distant variables when trying to improve urban health.

Source: Pollock, Kevin, Policy: Urban physics, Nature, March 2016

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