



“We Are Here”



From Personal Narratives to Collective Insight

Applying SenseMaker® in Palm Health Foundation's
Healthier Together Communities



From the cover:

Understanding the dire circumstances seniors found themselves in, having to choose between food and life-saving medication, Keith Straghn founded the Thanksgiving Day Feed the Hungry Project at Pompey Park. Keith collected food donations and often delivered meals to seniors in need who lived in Carver Estates and other areas.

Photo courtesy of The Spady Museum Cultural Heritage Museum, Delray Beach, Florida.

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July 2020
Palm Beach County, Florida



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About Palm Health Foundation

Palm Health Foundation is Palm Beach County's community foundation for health. With the support of donors and a focus on results, the foundation builds strong community partnerships, respects diverse opinions, advocates for its most vulnerable neighbors and inspires innovative solutions to lead change for better health now and for generations to come. The foundation supports health equity for Palm Beach County residents of all backgrounds, heritage, education, incomes and states of well-being. Palm Health Foundation has invested more than \$83 million in Palm Beach County health since 2001. For more information about Palm Health Foundation, visit palmhealthfoundation.org or call (561) 833-6333.

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Introduction

Young people from three of Palm Health Foundation’s Healthier Together communities in Palm Beach County, Florida, collected stories from older residents in 2018 as part of the project, “We Are Here.” With the aim of improving health and well-being throughout these communities, multiple organizations led by Palm Health Foundation sought to connect youth with first-person accounts of life in their neighborhoods, particularly from a historical perspective, and give communities a voice.

To begin, youth gave residents in each community the following prompt:

Please tell us about an important moment in your life that would help someone understand what it’s like living in your neighborhood.

Their stories revealed a history replete with both hardship and hope. Follow-up questions allowed participants to interpret their own stories and share the personal meaning of their experiences. This included a question about the emotional tone of the story from the point of view of the person telling it. Stories interpreted as positive were those in which, for example, solutions to problems came from within the community.

Members of the community involved in the We Are Here project were integral to assessing, evaluating, and responding to the challenges in their neighborhoods. They met to identify the patterns and themes woven throughout the 484 collected stories, and they received funding and support to craft next steps toward a healthier future. They became, in that sense, the ethnographers of their own experiences.

Through We Are Here, communities were able to share their voice. Members of each community reviewed the stories in 2019 (almost nine months after story collection began) as part of a sensemaking workshop. The review began with the printing and posting of every story on the wall to create a “gallery walk” for workshop attendees. With moderate guidance, community members began a rich dialogue aimed at creating a new narrative. The result was a new, ongoing approach to understanding and improving the lives of community residents.

Objectives

We Are Here was designed to *challenge current narratives* about the participating communities. Each community faced socioeconomic challenges, but while federal poverty rates and unemployment statistics told one story, residents told another. Many stories involving trauma or loss were, for example, characterized as positive in tone, an interpretation that seemed to contradict the content of the stories. These stories concluded with poignant moments of growth and

“No story went unheard.”

– Emanuel “Dupree”
Jackson, Sr.

transformation which have undoubtedly contributed to the hope, strength, and determination of each community to rebuild and thrive. With their stories, local leaders were able to recognize this strength and convey this to young people. As a result, youth involved in the project became more interested and invested in the future of their communities.

In addition to helping youth learn about their community's history, another goal of the project was to identify each community's strengths and concerns. Palm Health Foundation began with a desire to identify attitudes and cultural differences relevant to improving health outcomes. In particular, given the deeply collaborate approach of Palm Health Foundation, they set out to *develop a better understanding* of the differing perspectives and environments of each community in order to work together more effectively to create change.

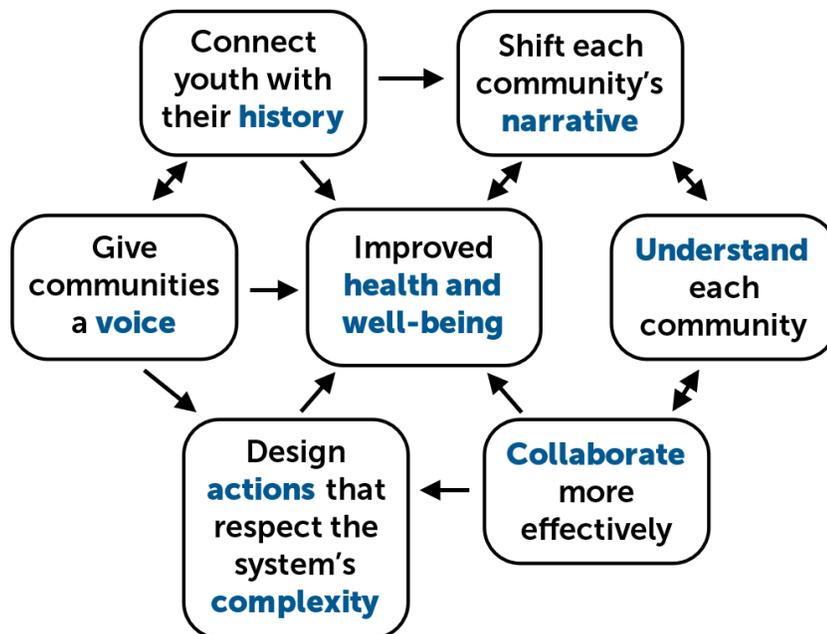
The overarching goal of We Are Here, which the preceding objectives helped to serve, was to *improve the health and well-*

"Although the impact of living in high-poverty neighborhoods has been well-documented, it's hard to fully explain the toll it takes on a person's body and soul."

– Storyteller in Boynton Beach

being of the communities (see Figure 1). Recognizing that the path to this goal is not one straightforward, linear journey (like an interstate highway) but a complex network of fluctuating pathways (like routes across a turbulent sea), the purpose of We Are Here was to empower community members and organizations to navigate this path in real time. Equipped with insights kindled by rich, personal stories that illuminated the landscape, communities were able to move forward. Instead of creating large-scale, long-term interventions too big to adjust to shifting conditions, communities created smaller-scale actions capable of heeding and harnessing the many forces influencing success.

Figure 1. Objectives of the We Are Here project.



How to Read This Report

In addition to recounting the steps of the We Are Here project, this report describes the implementation of SenseMaker®, a research tool and methodology developed by Cognitive Edge. After sharing their stories, residents were asked follow-up questions through which they were able to interpret their own stories. This unique strategy for gathering and linking qualitative and quantitative data, a key feature of the SenseMaker tool, ensures that communities remain connected to their own stories and play a central role in deriving meaning and direction from their narratives.

This report is written for multiple audiences. It invites readers from a variety of roles (e.g., community residents and local leaders, funders, researchers, youth workers, etc.) to join an ongoing sensemaking process. While traditional research reports typically end with generalized (or generalizable) findings, conclusions, and next steps or recommendations, this report represents a different approach to understanding and responding to social challenges. The purpose of data obtained using the SenseMaker tool is not to establish a definitive link between an intervention and specific outcomes or determine what specific interventions will solve the community's problems. Instead, rich information about social conditions facilitates the development of portfolios of interventions designed to propel these conditions in a desired direction. In systems that are inherently unpredictable (e.g., human communities), these safe-to-fail interventions catalyze change. The process is intrinsically ongoing.

Importantly, data are more illustrative than representative. Although it is possible to collect stories from a representative group of people, the particular stories that individuals share are not necessarily

representative of their life experiences. Instead of making generalizations about the central tendencies of a system based on representative samples, the data in a SenseMaker project provides the impetus for communities and stakeholders to form a deeper understanding of current conditions, to “make sense” of their experiences, and use this new understanding to choose actions with the potential to steer the community in a new direction. This means that, while patterns are informative, outliers or rare cases are also considered valid sources of information, at the very least, illustrating what is possible. Some experiences, for example, may be infrequent or improbable but carry profound consequences for a system (e.g., a global pandemic) and illuminate pervasive features of the system as a whole.

Data obtained using the SenseMaker tool are more **illustrative** than representative.

The SenseMaker tool and methodology is designed to account for the uncertainty inherent in social systems. The approach illustrated in this report involves a considerable paradigm shift from traditional methods in the social sciences, which rely on the assumption that the system under study is ordered or merely complicated. Instead, SenseMaker is rooted in complex systems thinking. Paradigm shifts are challenging, because they require changes in hidden assumptions, or mental models of the world, we often do not realize we have, and the tendency to try inserting ideas from a new paradigm into one's existing model of the world can give the false impression that the new idea has been assimilated. For this reason, the reader is encouraged to adopt a “beginner's mind,” a state of mind characterized by openness and a lack of preconceptions.

The Communities

We Are Here began in the summer of 2018 in Delray Beach in a historic area known as The Set, 993 acres of diverse neighborhoods which comprised 19% of the city’s population. Within two months, the project expanded to include Boynton Beach. Four months later, youth in Pahokee, Belle Glade, and South Bay (a.k.a., “the Glades”) began collecting stories. By the following spring, youth across the three communities had gathered 484 stories, and the first sensemaking session occurred in the spring of 2019.

Each community that participated in We Are Here has faced a similar set of socioeconomic challenges that impact health and well-being (such as housing cost burden, high unemployment, and lower high school graduation rates). In addition, low rates of health insurance and reduced access to health care have compounded the negative health consequences of these socioeconomic stressors.

At the same time, the communities have unique concerns, resources, and health priorities. The Delray community has focused on improving behavioral health. Residents, stakeholders, and leaders in Boynton Beach have focused on improving the health and well-being of caregivers. In the Glades, local leaders have focused on helping residents cope with life stressors and improve mental wellness. These priorities were set and addressed as part of

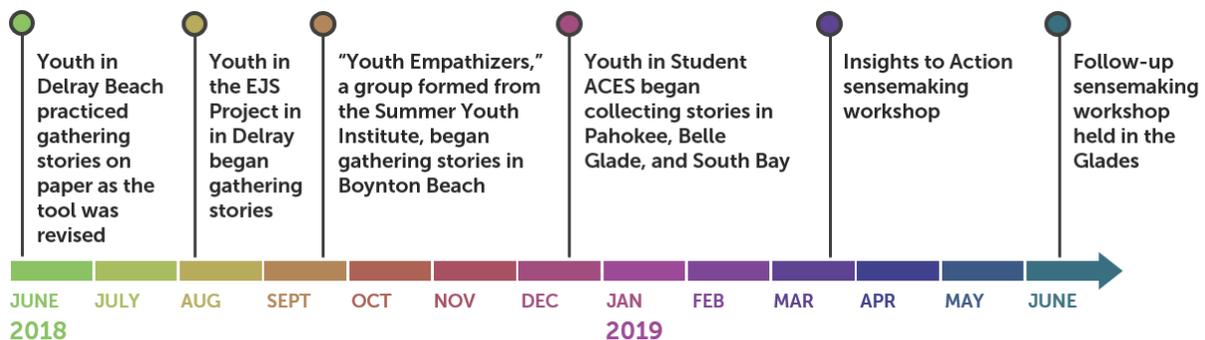
Healthier Together, a community-led initiative launched by Palm Health Foundation.

Palm Health Foundation

We Are Here was funded and led by Palm Health Foundation, a “hospital conversion foundation” which formed from the charity assests of two historic, West Palm Beach hospitals (Good Samaritan Foundation and St. Mary’s Medical Center Foundation) after they were bought by a for-profit health care system. As a public charity with support from philanthropy, Palm Health Foundation has invested more than \$83 million in Palm Beach County health since 2001.

Palm Health Foundation works collaboratively alongside communities and neighborhoods, advocating for the county’s most vulnerable residents to

Figure 2. Timeline of the We Are Here project.



support their full health potential. Guiding the foundation's efforts is a framework which recognizes the many social, economic, and environmental factors that influence health and wellness (i.e., "social determinants of health"). This framework emphasizes the connections between experiences like financial security, social cohesion, education, or employment and positive health outcomes. As a result, stories from the community involving economic hardship, violent crime, or social isolation, for example, are deeply relevant to the foundation's mission of inspiring and funding solutions for better health.

Among the foundation's highest values are innovation, strong community partnerships, and respect for diverse opinions. These values made the narrative approach of We Are Here both suitable and successful.

Healthier Together

To help communities achieve better health, Palm Health Foundation launched Healthier Together. This multi-year initiative began in 2014 in six communities: Delray Beach, Boynton Beach, the Glades, Lake Worth, North West Palm Beach and Riviera Beach (one community), and Jupiter. Communities were selected based on a needs assessment that identified areas in Palm Beach County with low health indicators, high risk factors, and low access to health services. Each community established a local version of Healthier

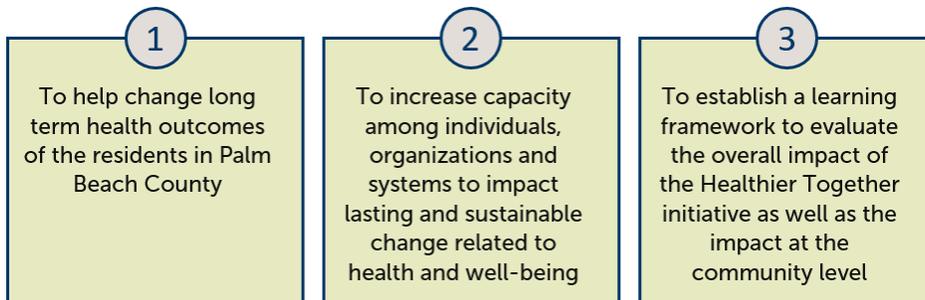
Together with mission statements unique to their area. We Are Here was implemented in collaboration with Healthier Delray Beach, Healthier Boynton Beach, and Healthier Glades.

The goal of Healthier Together is to reduce health disparities in Palm Beach County. To accomplish this, Healthier Together "convenes neighborhood leaders and residents, listens to their needs, and provides financial support and resources to help the neighborhood make positive, healthy changes." Over five years, Palm Health Foundation invested \$1 million in each of the six selected communities, representing a new, place-based grantmaking approach aimed at empowering communities to make positive changes. The initiative is now funded for its sixth year with renewal subject to annual review.

Delray Beach

In Delray Beach, the We Are Here project was initiated through a proposal from The Emanuel Jackson Sr. Project, a 501(c)3 nonprofit organization that works with local teens to inspire leadership and civic engagement. Led by Emmanuel "Dupree" Jackson Jr., the EJS Project was a participant in Healthier Together since its inception. Mr. Jackson invited ten youth in the community to interview older residents.

Goals of Healthier Together:



Boynton Beach

The Program Director of Healthier Boynton Beach, Ricky Petty, met with local high school students in September, 2018, and invited them to be a part of We Are Here. The students had attended the Summer Youth Institute in 2017, a life-skills program created through a partnership between Healthier Boynton Beach, Pathways to Prosperity, Inc., Genesis Community Health, the City of Boynton Beach Utilities Department, Community Caring Center, and American Association of Caregiving Youth.

The program focused on family caregiving as well as professional skills and personal growth. Youth who attended the institute formed a group called "Youth Empathizers." Of these youth, eight were selected to collect stories for We Are Here.

The Glades

As a result of partnerships between local leaders, We Are Here expanded to include the Glades, which includes Belle Glade, Pahokee, and South Bay. The Program Director of Healthier Glades, Inger Harvey, met with Krissy Webb, Executive Director of Student ACES, a 501(c)3 non-profit organization whose mission is to "inspire and develop high school student athletes

to become men and women of character, honor and integrity." The character education program and curriculum developed by Student ACES helps youth develop leadership skills, soft skills, respect, trustworthiness, humility, and integrity to be leaders of their families, communities, teams and of the Country.

Student ACES began working with high school athletes in the Glades in 2016. In 2019, the Student ACES Center ("The SAC") opened daily from 11 am to 7 pm. The center has become an integral part of the community, serving hundreds of teens. Ms. Harvey and Andy McAusland, a representative of Palm Health Foundation, presented the We Are Here project to youth in Student ACES. Students discussed the changes they'd want to see in their community. The presentation helped students understand how the project could capture the voices of young people. This opportunity to play an active role gave students motivation to get involved. Twenty students were selected to contribute to the project.

Through collaboration and local leadership, We Are Here was successfully launched and implemented in each of these three communities. Within nine months, communities had rich narrative data and collective insights relevant for importing health outcomes.

Improving Health Outcomes

The overarching goal of We Are Here, central to the mission of Palm Health Foundation, is to improve health outcomes for participating communities. This goal is particularly challenging, because the health of communities is not determined by a small set of simple, straightforward causes with simple solutions. Instead, numerous causes interact over time to produce a variety of health outcomes.

This section introduces concepts and research which provided the rationale for the narrative methodology and sensemaking approach in the We Are Here project.

Social Determinants of Health

Relevant to any public health intervention, health outcomes are determined by a myriad of social, economic, and environmental factors that influence, among other things, both the biology and behavior of individuals. These include income, employment, education, housing, crime, social cohesion, incarceration, civic engagement, and discrimination.¹⁻² These form what are called social determinants of health (SDOH). Poverty, for example, contributes to chronic disease, mental illness, and lower life expectancy.³⁻⁸ Housing cost burden (occurring when families must spend more than 30% of their income on housing) contributes to poor physical health.⁹ Neighborhoods with a greater sense of solidarity and empowerment enjoy better health and experience less violence.¹⁰

These factors are interconnected, meaning that changes in one (e.g., increases in housing costs) often lead to changes in another (e.g., increased unemployment), and the links between these factors and health may unfold over days, months, or decades.¹ Housing cost burden, for

example, means that families have less money to cover health care costs and food. They may turn to substandard housing, facing issues like mold or pests, or move into houses or apartments with other families. This overcrowding, in turn, causes stress, impairs sleep, and strains relationships. The risk of evictions or foreclosures rise, which can lead to homelessness, suicide, multiple moves, or moves to areas with higher crime rates. Homelessness is linked to higher mortality. Multiple moves contribute to chronic health conditions in children. Witnessing violent crimes can cause trauma, and foreclosures erode the social cohesion of neighborhoods, further damaging health.

One factor can unleash a cascade of negative outcomes. Students in low-income neighborhoods, for example, are less likely to graduate from high-school or enroll in college.¹¹ This reduces their earning capacity and raises the risk of unemployment. Both low income and lack of education are linked to poor health outcomes, such as heart disease and diabetes.^{4,12}

An understanding of the social determinants of health, as a framework, forms the basis for the grantmaking, initiatives, campaigns, and learning and action networks of Palm Health Foundation.

Health Inequity

Social determinants of health vary between communities. The social and economic resources vital for health and well-being are not equally distributed. Marginalized groups consequently experience worse health outcomes.¹³ The CDC defines health disparities as “preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health that are experienced by socially disadvantaged populations.”¹⁴ Efforts by Palm Health Foundation to support better health for community residents are thus guided and informed by data on social and economic opportunities.

The communities that participated in We Are Here experience extreme social and

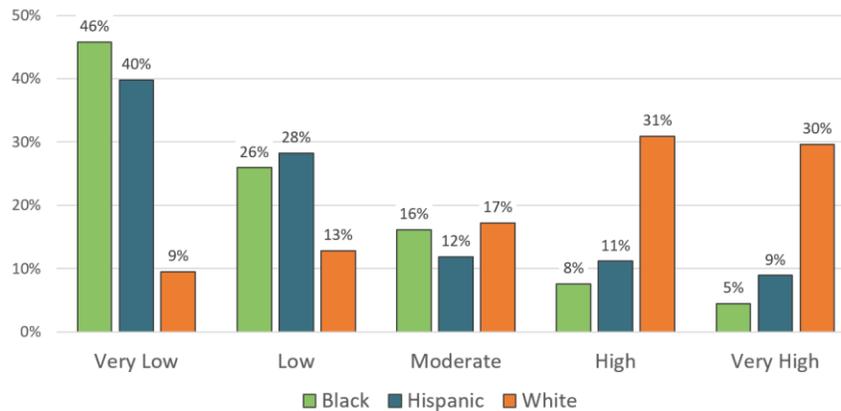
economic challenges relevant to health and well-being. Table 1 shows data from the Child Opportunity Index (COI) for the most challenged areas (census tracts) in five participating communities. The COI “measures and maps the quality of resources and conditions that matter for children to develop in a healthy way in the neighborhoods where they live.”¹⁵ The COI was developed by diversitydatakids.org in collaboration with the Kirwan Institute for the Study of Race and Ethnicity at Ohio State University.

COI 2.0, released in 2020 using data for 2010 and 2015, combines 29 indicators (six shown in Table 1) to form an overall score and subscores in three domains: educational opportunity, health and environment opportunity and economic

Table 1. Socioeconomic indicators from the most challenged areas (census tracts) in participating communities from the Child Opportunity Index 2.0 (2015).

		Delray Beach	Boynton Beach	Belle Glade	Pahokee	South Bay
	Stories from the most challenged census tracts in this community	42	176	84	23	4
CHILD OPPORTUNITY SCORES (1 TO 100)	Overall	13	11	1	2	1
	Education Domain	41	22	1	3	3
	Health & Environment Domain	20	9	1	5	6
	Social & Economic Domain	9	12	1	3	2
SPECIFIC INDICATORS	Adult educational attainment	7.2%	17%	8.1%	6.3%	5.9%
	Housing vacancy rate	8.3%	6.6%	21.0%	17.4%	23.8%
	Home ownership rate	65.6%	44.7%	17.5%	41.2%	49.9%
	Health insurance coverage	63.7%	76.7%	76.1%	77.7%	71.7%
	Employment rate	65.4%	72.7%	53.1%	44.8%	42.4%
	Poverty rate	41.5%	33.5%	60.4%	39.7%	29.8%

Figure 3. Percent of black, hispanic, and white children in neighborhoods in Palm Beach County according to the Child Opportunity Index (from "Very Low" to "Very High") of the neighborhood.



opportunity. Scores are rankings bound to census tracts. Each census tract is categorized relative to other tracts in the metro area, state, or nation as having "Very Low," "Low," "Moderate," "High," or "Very High" child opportunity. Table 1 shows data for the census tract in each community with the lowest overall Child Opportunity Score. These correspond to areas where most stories were collected.

In Palm Beach County, 46% of black children live in "Very Low" opportunity neighborhoods compared to 9% of white children (see Figure 3). Conversely, 5% percent of black children live in "Very High" opportunity neighborhoods compared to 30% of white children. The COI predicts later life outcomes, including life expectancy.¹⁶ In Palm Beach County, the life expectancy for children in "Very Low" opportunity neighborhoods is 76.9 compared to 83.2 for "Very High" opportunity neighborhoods.¹⁷

The COI (and similar data resources such as the Opportunity Atlas) provide a basis for generative strategy discussions about social determinants of health. Such granular data is necessary for

understanding patterns of inequity in Palm Beach County. The COI also encourages communities, systems, and governments to use their data to explore local policy solutions to health inequities.

Complex Adaptive Systems

The term "outcome" implies an end result, but the health of any community as well as the conditions which give rise to it are constantly changing. The social determinants of health and the neighborhoods and communities in which they evolve can be viewed as complex systems (or complex adaptive systems).^a Although complexity science is not a single theory but instead involves multiple variations, each with slightly different implications, one defining feature of complex systems is the inability to predict the future with complete accuracy regardless of how much data one collects.¹⁸⁻²² Small changes can result in large events. Major shifts can occur quickly if the system reaches a tipping point. In such a system, no single, fixed strategy or intervention is likely to reduce health inequity, and it is difficult to accurately

^a "Complex systems" and "complex adaptive systems" are often used interchangeably, but see Mowles (2014).

Table 2. Some key features of complex systems.

Dynamic interactions	The parts of the system continuously interact in extensive ways.
Non-linearity	The same event can produce a variety of different outcomes depending on the overall state of the system.
Sensitivity	Small, isolated events can lead to big, systemic changes.
Feedback loops	The effects of an event may feed back on itself (i.e., recurrency)
Locality	Parts of the system respond only to interactions or information available locally
Emergence	The system is more than the sum of its parts.
Perpetual novelty	The system is constantly changing in unexpected ways.
Unintended consequences	Unexpected outcomes are unavoidable.
Unclear boundaries	The borders of the system are open and difficult to define.
Propensities	The system is <i>somewhat</i> predictable.

predict how any intervention will affect health outcomes. Importantly, this uncertainty is intrinsic to the system.

The narrative, sensemaking approach in the We Are Here project was adopted by Palm Health Foundation to address these features. Although community indicators and summary measures provide a powerful starting point for looking back and tracing the path through which neighborhoods arrived at their current station, they cannot tell the full story of how communities evolve over time. The full story is instead available in the only place it can be stored or saved—in the people living it.

Complexity poses a formidable challenge to evaluation and the design of effective interventions. Health outcomes are predictable to some extent, but unexpected outcomes are unavoidable. Analyzing the parts of a complex system does not yield a full understanding of the system, because some conditions arise as a result of interactions between the parts, a process called emergence.¹⁹ Current conditions of the system can inform future actions (meaning, the system has certain

propensities), but unintended consequences and perpetual change are the rule, not the exception.

For complex systems, simple notions of cause and effect are no longer adequate. For example, certain pesticides appear to have no negative health effects. However, through repeated exposure or in combination with other factors (e.g., the presence of heavy metals), diseases emerge.²³⁻²⁵ Multiple factors are likely to alter, dampen, or augment effects of a single cause in unforeseen ways.

Ordinarily, desired outcomes are achieved by determining what caused the same outcome in the past then reproducing the cause. This strategy does not work well in a complex system. Instead, the system can be moved in a desired direction by acknowledging the interconnectedness of countless factors, watching the patterns that emerge, and involving communities with measurement and problem-solving. Many traditional methods of evaluation are inadequate for this task. Instead, a different approach is needed.

The SenseMaker® Tool and Methodology

To meet the challenges associated with complex systems, Palm Health Foundation piloted SenseMaker as part of the We Are Here project. SenseMaker is both a tool and research methodology developed specifically for use in complex systems. Described as a “crowdsourcing method for human judgment, meaning, and feeling” or a form of “distributed ethnography,” a major feature of SenseMaker is the ability to learn from rich, individual differences in the lived experiences of hundreds or thousands of people.

SenseMaker® represents a unique approach to understanding and responding to social challenges. Created by David Snowden, founder of Cognitive Edge, the methods that form SenseMaker include gathering personal stories from members of the community and allowing them to interpret their own story by answering follow-up questions. Hundreds of stories can be visualized together according to how these follow-up questions are answered. The stories and visuals are then presented back to the community to stimulate dialogue and deepen understanding of local conditions. This ongoing process is connected to a decision-making framework that guides the development and implementation of interventions. Through this process, communities not only make sense of their past and present but author their future.

Of paramount importance in this methodology is the primacy of self-interpretation over the perspectives or analysis of researchers. In a study using SenseMaker, the tool is first adapted to solicit stories (i.e., micronarratives) from community members which address an issue of interest. The custom story prompt is followed by questions called signifiers through which storytellers communicate the significance of elements in their story.

With the goals of connecting youth with older residents and shifting community narratives, SenseMaker was well-suited for the We Are Here project. A grounding in complexity science also made SenseMaker a promising tool for addressing social determinants of health and health disparities.

What Sets SenseMaker Apart?

From the perspective of traditional program evaluation or research in the social sciences, SenseMaker involves a paradigm shift. Whereas traditional approaches often culminate in measures of central tendency (e.g., group averages) that downplay variation, SenseMaker places variation at the forefront. Self-coding done by storytellers (using signifiers) helps make this feasible.

Even in the search for patterns in the data, special attention is given to stories that diverge. For example, if most stories characterized as positive involve hope for

“In ‘cutting up’ a system, the analytical method destroys what it seeks to understand.”

Paul Cilliers, *Complexity and Postmodernism*

Table 3. Comparison of traditional evaluation and SenseMaker.

	Traditional Evaluation	SenseMaker
Data	Many types of responses or observations obtained using, for example, surveys or assessments	Micro-narratives and responses to follow-up questions (i.e., signifiers)
Sampling methods	Random sampling methods are critical to ensuring that the gathered data is representative of the population	Random sampling is less critical, as data need not represent the population, and prompts influence what stories are shared
Analysis and interpretation	Performed by an evaluator, often using descriptive and inferential statistical methods	Performed by the storyteller using signifiers and community through sensemaking
Goal of analysis	Establish correlations or causation between one or more elements of the system (particularly interventions and outcomes)	Prompt collective insights, provide feedback about the current state of the system, and discover what is possible
Unusual data	Outliers are often removed or transformed	Stories and responses that fall outside of patterns are explored and often yield insights
Interventions	Intended to achieve short- and long-term outcomes based on what worked in the past	A portfolio of safe-to-fail probes
Strategy for change	Design interventions to achieve a desired end-state	Manage complexity by continuously nudging the system in the desired direction (e.g., toward the “adjacent possible”)

the future, why might one “strongly positive” story entail little hope? Learning from these unexpected narratives can catalyze creative solutions sensitive to the complexity in which they occur.

Table 3 offers some comparisons between SenseMaker and traditional evaluation. The reference to “traditional evaluation” is not intended to be comprehensive. Many other methodologies, tools, and statistical techniques not described here would fall somewhere between the “traditional” approach (as described) and SenseMaker. The purpose of the comparison is to show

how SenseMaker differs in reference to more common approaches.

Finding Patterns, Creating Meaning

Using SenseMaker, interpretation of narratives occurs both individually and collectively by community members. As stories are shared, this occurs through the use of signifiers. After gathering stories, community members review and discuss the stories, identify patterns, and give meaning to their combined experiences. In applying this methodology, although

meaning must not be imposed by outsiders, facilitators can assist the community in processing the stories without introducing cognitive biases.

Crucially, the goal is not to comprehensively describe the system. In complex systems, this is not only impossible but not particularly useful. In a system with ever-changing conditions and unpredictable relationships between causes and outcomes, comprehensive data will not remain comprehensive for long. Instead, the goal is to fuel collective sensemaking.

Sensemaking as a process extends beyond the apprehension of meaning to include a creative element. From a philosophical standpoint, sensemaking decides the collective narrative as much as it identifies it. Describing the ideas of Karl Weick, a theorist who introduced the concept of sensemaking to the study of organizations, Langenberg and Wesseling (2016) wrote, "The finding that there is no stable and uniform external world, but that our own interpretations and judgments shape the world, presupposes a trust in a 'self-fulfilling' mechanism which guarantees the creation of an organisational reality based on interpretations."²⁶ In other words, making sense of community narratives helps to shape the future narrative. This is underscored by the fact that evaluation can in itself affect the system under evaluation. The evaluation or evaluators do not stand outside of the system looking in but form an inseparable part of it and influence the outcomes under investigation.²⁷⁻²⁸

A Way Forward

At a time when evidence-based programs and practices are considered the gold standard for solving social challenges, how does the narrative data obtained through SenseMaker drive the development or

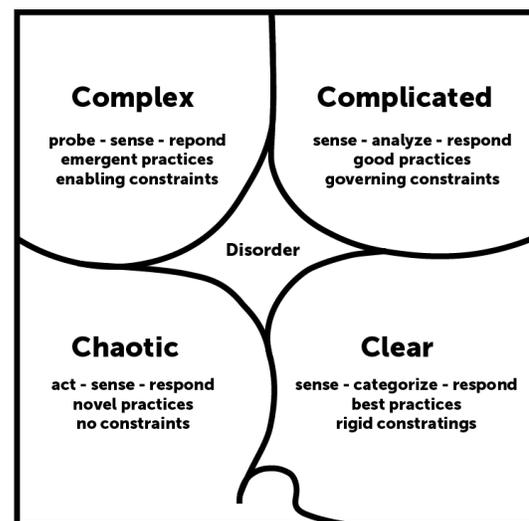
selection of effective interventions? This question gets at the heart of the paradigmatic differences between traditional evaluation and a complexity-informed approach.

To translate narratives and insights into action, SenseMaker includes a decision-making device called the Cynefin framework.^b Created by David Snowden, the framework depicts the types of contexts communities may face and suggests how to respond to each. In addition to complex contexts, the framework depicts clear, complicated, and chaotic contexts around a fifth, disorder, which represents ambiguity.²⁹

In contexts defined as clear or complicated, effective strategies are those that have worked well in the past. Clear systems are characterized by simple links between causes and effects. An evidence base, created through careful study of what worked in the past, establishes which practices are likely to succeed in the future.

In contrast, in complex contexts, positive outcomes of past practices cannot form the basis for future action without involving a

Figure 4. An overview of the Cynefin framework.



^b Cynefin, pronounced ku-*nev*-in, is a Welsh word meaning 'place of our multiple belongings.'

profoundly flexible approach and responsiveness to changes in the system.

Evidence of past, positive outcomes offer an inductive argument for repeating the same actions. In contrast, sensemaking operates using abductive reasoning. This distinction is important for understanding the SenseMaker methodology. While inductive reasoning involves generalizing findings from a specific set of experiences to a broader, similar set of experiences, abduction involves seeing connections, particularly ones that aren't obvious.

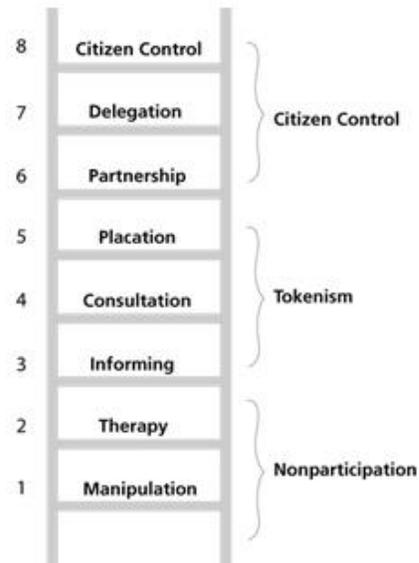
In complex contexts, outcomes-based measurement is less useful than experimentation. According to the Cynefin framework, the most effective strategy for positive change in the complex domain is to develop portfolios of safe-to-fail interventions that can be implemented in parallel. Each intervention acts as a probe into the system. The goal is not to solve the community's problems but manage the complexity and allow solutions to emerge.

Listening to the Community

A program operating effectively in a complex system is one that continuously senses or listens to the system in order to respond. To improve health outcomes, listening to the community is vital. At the same time, because this approach engages communities and inspires social cohesion, it can in itself contribute to improvements in health. Gathering stories is simultaneously an act of measurement and one that affects the system being measured.

One social determinant of health especially relevant to We Are Here is the degree to which individuals and communities have the ability to solve challenges on their own rather than having solutions imposed from outside. The We Are Here project was both an exploration of current social conditions

Figure 5. Arnstein's Ladder of Citizen Participation.



and a vehicle for civic engagement and improved social cohesion.

A useful model illustrating the spectrum of civic engagement is Arnstein's Ladder of Citizen Participation.³⁰ At the bottom of the ladder, "manipulation" and "therapy" aim to "cure or educate" members of a community. At the top is "citizen control" in which community members plan and implement solutions using community-owned resources. As a tool and methodology centered around community voice and participation, SenseMaker promotes citizen control. This made SenseMaker an ideal methodology for the community-led Healthier Together initiative.

We Are Here occurred in four stages: (1) adaptation of the SenseMaker tool, or the development of prompts and follow-up questions for storytellers, (2) gathering stories, (3) sensemaking, and (4) shifting the narrative (developing small, safe-to-fail interventions, or "probes"). These stages are detailed in the following sections.

Developing the Questions

The first stage in the We Are Here project was adaptation of the SenseMaker tool to fit the needs of the project and ensure that stories provided information relevant to the project's goals. This began with development of a prompt for the story. Follow-up questions were then crafted, giving participants the means to interpret their own story.

To respond to challenges, do residents see solutions coming from within or beyond their community? Do they see their community as others do? Is the past history of their neighborhood valued? The story prompt and follow-up questions were carefully designed to yield insights into these questions.

The Story Prompt

During the summer of 2018, a consultant from Cognitive Edge, Jules Yim, met with Dupree Jackson and Sara Selznick, a member of the Healthier Delray steering committee, to develop the language for the story prompt. The prompt was intended to elicit a personal story about conditions in their community.

The prompt:

Please tell us about an important moment in your life that would help someone understand what it's like living in your neighborhood.

Using SenseMaker, prompts are carefully phrased to elicit rich micronarratives without swaying the storyteller in a particular direction. The above prompt, for example, elicited emotionally positive, negative, and neutral stories.

Follow-Up Questions

SenseMaker provides a set of existing follow-up questions known as signifiers which allow storytellers to interpret their own story. The specific concepts and phrasing that make up these questions, which are based on core concepts in cultural anthropology,³¹ can be adjusted to align with the research questions and social issues motivating a project.

Because responses to these questions are given numerical values (based on their position along a continuum), the addition of signifier questions allows quantitative data to be connected to qualitative data (the narratives). As a result, stories can be mapped onto the space defined by a signifier (see figures in later section, "Patterns and Perceptions").

Dyads

Dyads are a form of follow-up question in SenseMaker that allow participants to place their story along a continuum between two extremes. For example, participants were asked if their story taught that people should look to traditions of the past or look ahead to the future. By moving a circle marker or "bubble" along the line between option A (e.g., "tradition") and option B (e.g., "future"), storytellers could show the degree to which each option characterized their story.

Figure 6. Example of a dyad question.

My story is about



One dyad was developed to gauge how communities hoped to find solutions. Palm Health Foundation sought to understand the attitudes of community residents toward outsiders. Do communities prefer to find solutions on their own? Residents were asked whether their story involved community problem-solving or help from an outsider (see Table 4).

Three dyads were created to determine whether community members felt they had the skills or capacity to effect change (see Table 4). Specifically, participants indicated whether their story depicted a stable, resilient community with total control or a vulnerable, volatile community with no control.

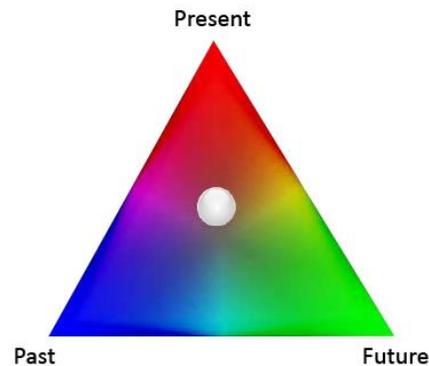
Triads

SenseMaker offers a question type called “triads” in which participants interpret their stories based on three related concepts (see Figure 7). These concepts are placed at the points on a triangle, and the participant may move a circle marker anywhere within the triangle to indicate which concepts applied to their story (and in what proportions).^c

Four triads were created to allow storytellers to convey the motivations and responsibility of individuals involved as well as the orientation in time and

Figure 7. Example of a triad.

The lesson in this story applies to the



perspectives on change. The first triad gauged whether actions were motivated by good intentions, best effort, or no apparent reason (or any combination of these three, depending on where the storyteller moved the circle marker). Another triad tackled individual responsibility and upbringing. These questions helped to capture the attitudes of community residents toward life in their neighborhood. See Table 4 for the full list of questions.

Additional Questions

In order to give the stories some context, storytellers were also asked how long they had lived in their neighborhood and whether they were a multi-generational resident. They were asked to indicate their age, gender, primary language, ethnicity, zip code, country of origin. Finally, they were asked whether they consent to use of their information in projects and whether they consent to be photographed or recorded on video.

^c Another form of follow-up question offered through SenseMaker, “stones,” were not used in this project.

Table 4. Follow-up questions in the We Are Here project.

Topic	Type	Question	Possible Responses
Motivation	Triad	In your story, why did people act the way they did?	(a) They did what they believed (top) (b) They just did it, no reason (bottom left) (c) They did the best they could in the situation (bottom right)
Change	Triad	The lesson in your story is:	(a) Keep tradition (b) Things should change (c) Take the good, lose the bad
Past, present, or future	Triad	My story relates to	(a) The traditions of the past (b) Here and now (c) Dreams for the future
Responsibility	Triad	Why did things happen in the story I told?	(a) The way people were brought up (b) The individual is responsible (c) Upbringing, yes, but also a choice
Solutions	Dyad	In my story, problems are solved by:	(a) Members of the community (b) Those outside the community
Resilience	Dyad	My story teaches us that:	(a) The community is vulnerable (b) The community is resilient
Tradition and the future	Dyad	My story teaches us to:	(a) Always look to the traditions of the past (b) Always look ahead to the future
Stability	Dyad	My story teaches us that:	(a) The community is stable (b) The community is volatile
Control	Dyad	My story teaches us that:	(a) The community has total control (b) The community has no control
Frequency (or prevalence)	Multiple choice	How common do you think this story is?	(a) Very rare (b) Once in a while (c) Commonplace (d) Happens all the time
Emotional tone	Multiple choice	How do you feel about your story?	(a) Strongly positive (b) Positive (c) Neutral (d) Negative (e) Strongly negative
Audience	Multiple choice	Who do you think should know about this?	(a) Everyone (b) Family and friends (c) My community (d) Local government (e) National government (f) Charities (g) No one

Gathering Stories

In each community, teens from local organizations gathered stories and contributed to conversations about their meaning and impact. In addition to including youth in the research process, reaching out to neighbors and listening to their stories strengthened the connections between young people and older residents and taught them about the history of their communities.

In each community, between 10 and 20 youth ages 15 to 18 became story collectors for We Are Here. Many stories were collected at community events or senior centers. Others were collected through friends or family. In all cases, communities used a convenience sampling method (obtaining data based on participant availability). The number of stories gathered in each community varied, and incentives were managed by local leaders. The format for collection (paper, tablet, audio) also varied across communities. In each community, however, youth were vital for gathering stories and played an integral part in the project.

Delray Beach

Ten youth from the Emanuel “Dupree” Jackson, Sr. Project in Delray Beach began collecting stories in August of 2018 after



the story prompt and the follow-up questions were tested and revised. Each teen was tasked with collecting 30 stories. An earlier project in which youth were interviewing senior residents provided an ideal segue to We Are Here. Youth recorded residents telling their stories then transcribed the stories later.

Boynton Beach

In Boynton Beach, eight youth from “Youth Empathizers” began collecting stories in early September. They were given the option of capturing stories on paper or using their own smartphone or tablet. Some stories were collected by phone.

Stories were first obtained from older residents then efforts expanded to include younger adults. Youth visited faith-based organizations, connected with adults through family and friends, and gathered stories at local events.

After an initial round, two of the students in Boynton Beach continued collecting stories and later attended the Insights to Action workshop. Some youth were caregivers, and although many wanted to participate, only a few were able to dedicate significant time to the project.

The Glades

In the Glades, 20 high school students participating in Student ACES began collecting stories. Ten students were

selected from both Pahokee and Belle Glade.

Glades students gathered stories at four community events held in the spring of 2019, and community members attended one of the Student ACES meetings where youth were able to interview them.

In addition, second-year students from the Florida Atlantic University Schmidt College of Medicine visited Quiet Waters in Belle Glade, a section 8 senior housing facility, and interviewed residents. This dedicated group of students also gathered stories at a church fundraising event and a restaurant in Pahokee.

Training and Compensation

Youth received a brief training to acquaint them with the SenseMaker tool and give them an opportunity to practice administering the story prompt. To convey the importance of their role, Palm Health Foundation and local leaders explained why the stories were needed and how their work contributed to the project. Youth were not simply recruited to assist but considered vital participants in the project.

Palm Health Foundation provided funding to each community, and incentives for youth were determined at the local level. In Delray, youth were compensated for their efforts based on the number of stories they collected. In Boynton Beach, youth received a stipend, and in the Glades, compensation was based on the amount of time students dedicated to the project. Krissy Webb, Executive Director of Student Aces, attributed the success of the project in part to this financial component, which communicated to students that they were valued and respected.

In addition to learning more about their communities through their role, youth developed communication skills (e.g., making eye contact and greeting people

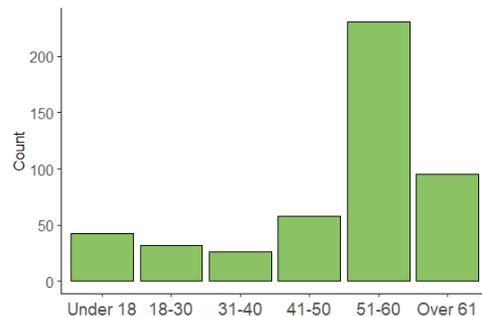
appropriately). Some students were shy when the project began but developed confidence and succeeded in gathering many stories.

About the Storytellers

Youth in Palm Beach County collected 484 stories between August, 2018, and February, 2019. More than half were gathered in Boynton Beach (52%), 13% were from Delray Beach residents, and 24% were from the Glades. Some stories were gathered in surrounding communities, including Lake Worth (8%) and Riviera Beach/North West Palm Beach (3%).

While most storytellers were over the age of 50 (67%), 15% were under the age of 31 (see Figure 8). About half were women (244 women and 240 men). The majority were African American (66%). Ten percent were Haitian, 4% Latino, and 6% White.

Figure 8. Most storytellers were over the age of 50.



Almost half (48%) had lived in their community for 30 years or more. Only 11% had lived in the community for less than six years.

Stories submitted by residents became the raw materials for community sensemaking, a process in which community members generated collective insights based on patterns and themes in their stories

Sensemaking

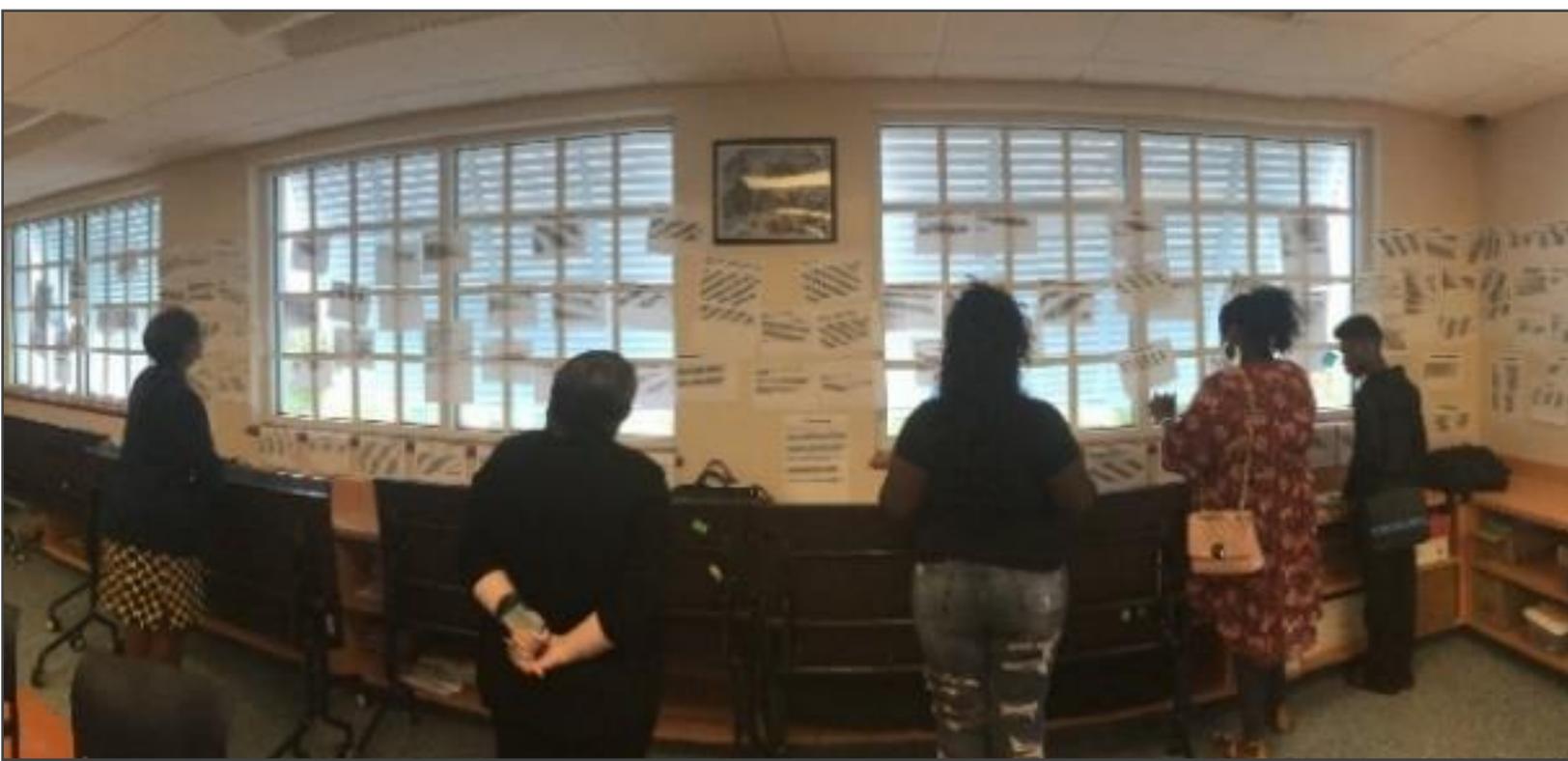
After gathering stories, local leaders and youth from all three communities participated in conversations aimed at understanding and deriving meaning from the data. A sensemaking session facilitated by Palm Health Foundation created a space for open dialogue between teens and adults and generated collective insights.

Through the process of sensemaking, community members collectively give meaning to their experiences. The complex multitude of factors influencing life in each community develops into a shared narrative through dialogue evoked by the stories. In the We Are Here project, sensemaking began with a review of the data followed by workshops in which participants explored meaningful patterns and themes. The stories and corresponding data visualizations (depicting the position of stories within each dyad and triad, or signifier question) provided a starting point for discussions about key themes and desired change.

With a more traditional approach, stories and responses to follow-up questions might be analyzed using various coding methods and statistical techniques. In

coding, for example, a researcher may read each story, apply a specific code to portions of each story (e.g., "this statement is an instance of 'giving money'"), categorize sets of codes ("helping others"), identify themes based on these categories ("neighbors showing compassion"), and form overall conclusions or theories based on these themes ("neighbors are a source of compassion in difficult times"). Conclusions originate primarily from this process, handed down from the researcher. These conclusions may or may not reflect the lived realities of community members.

In contrast, sensemaking gives community members and local leaders the ability to interact with the raw data (the stories themselves and their interpretations by storytellers) and identify patterns and



themes as a group. Snowden refers to this as *disintermediation*.³² Rather than evaluators or subject-matter experts acting as intermediaries between source data and meaning, community members have direct access to the data and are able to form their own conclusions. For example, given a collection of stories recounting help from neighbors, a few stories involving neighborhood violence may mean different things to residents than it would to an evaluator.

This section introduces the stories, beginning with a gallery walk which replicates in miniature the experience of community members at the sensemaking workshop. Responses to the signifier questions are then presented through visualizations similar to those generated by SenseMaker software and made available to the community.

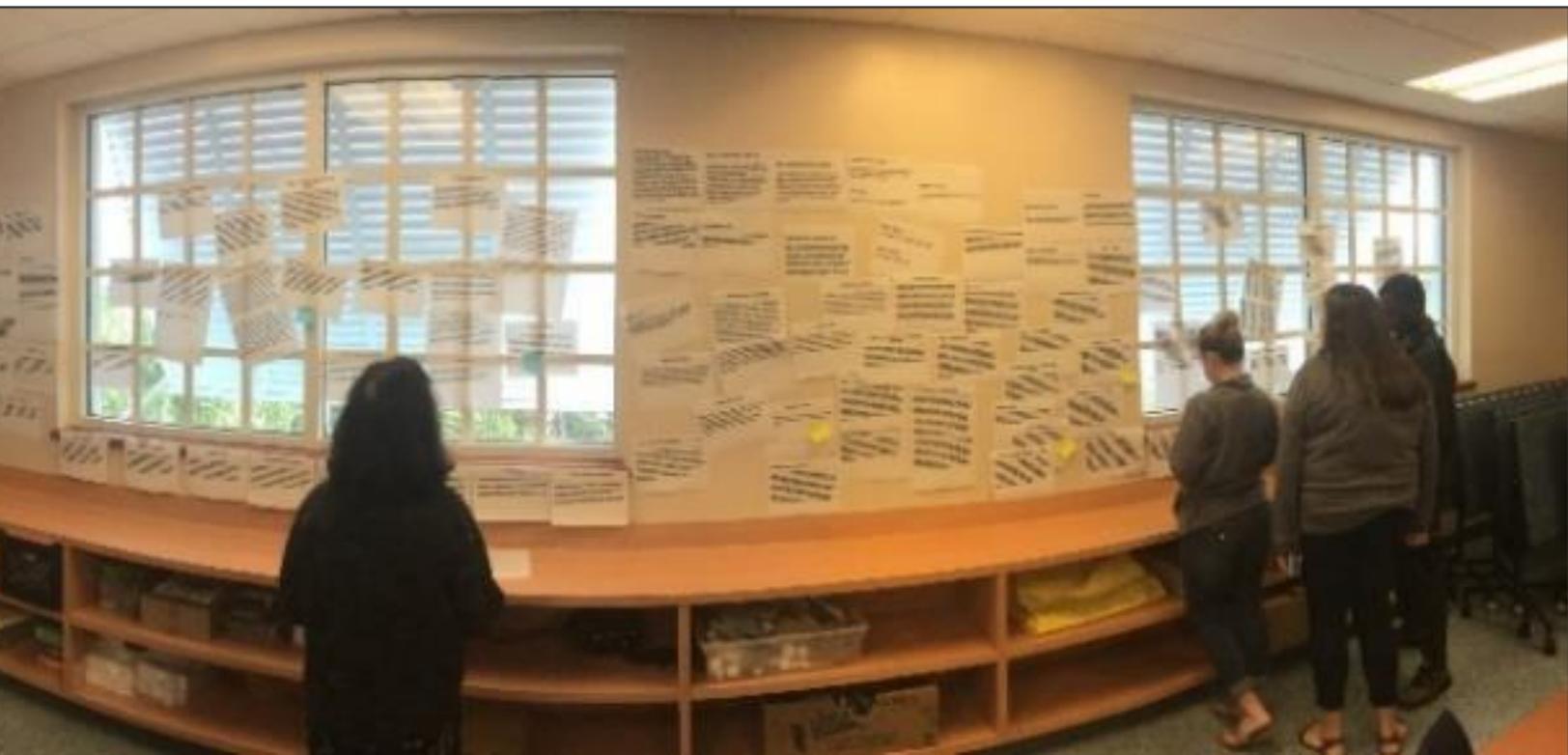
A summary of insights from the community is presented last in order to give the reader an opportunity to first experience the data more directly, without interpretation, and partake in some small measure in the sensemaking process.

Initial Groundwork

Prior to the sensemaking workshop, each community gathered to review the data. For each review, Palm Health Foundation shared stories and visuals (histograms depicting responses to the dyad questions).

In Boynton Beach, long-time residents and Healthier Together steering committee members, Gerda Klein and Margaret Newman, participated along with Deeanna Warran, the Executive Director of Genesis Health. The stories and visuals prompted more than two hours of in-depth discussion. In Delray Beach, Dupree Jackson, Jason Laramore, and several youth in the EJS Project participated, and in the Glades, eight students explored the data and stories on iPads.

Planning for the workshop was led by Inger Harvey and Andy McAusland with support from Vivienne Read, a consultant from Complexability in Brisbane, Australia. The process outlined by Reade in her report, *Youth Voices*, acted as a template for *We Are Here*. Reade provided materials and guidance for facilitating the sensemaking process. This included guidance around the agenda, sequence of steps, and the



flow of the workshop as well as forms for planning safe-to-fail probes.

Workshop Overview

The first sensemaking workshop, *Insights to Action*, was held on March 21, 2019. Community leaders, including Dupree Jackson, Ricky Petty, Krissy Webb, and other members of the Healthier Together networks participated alongside youth who had gathered the stories. The workshop was facilitated by Inger Harvey, Andy McAusland, Jason Larimore, and Joanna Peluso, project director of Healthier Jupiter.

Youth discussed their experiences collecting stories. Participants were then asked to view the stories as part of a “gallery walk.” Both adults and youth engaged in discussions about the ideas, issues, and themes they evoked. They recognized experiences common to all of the communities and identified experiences they wanted to see more or less of in the future. While youth naturally formed their own discussion group, extensive dialogue between youth and adults led to new insights and a sense of direction for the communities.

The workshop concluded with conversations about potential, safe-to-fail probes that could shift the community narrative in a new, positive direction (see following section).

The Gallery Walk

Every story was printed and posted around the room, and participants were invited to view them without engaging in any detailed analysis. The goal of this portion of the workshop was to introduce participants to the stories and inspire discussion. Participants were given sticky notes and instructed to write down

anything that “jumped out at them” or “stuck in their brain.”

Describing the stories as an art installation was fitting. One tendency that communities may have when presented with narrative data is to regard it as traditional data and analyze or generalize it in some way. For example, seeing several stories involving gun violence may lead someone to conclude that violence characterizes the lives of most community members or that everyone experiences it in the same way. Regardless of whether this is true, making this assumption early in a sensemaking session can interfere with more creative insights later on.

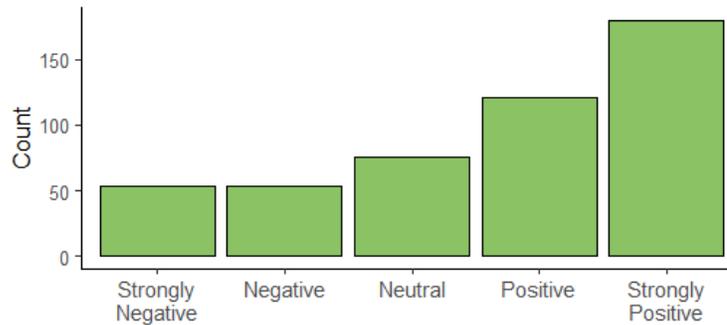
In an art exhibit, works of art tend to inspire more open, flexible perception and thinking. This openness is important at the beginning of a sensemaking session, because it helps participants avoid premature conclusions or knee-jerk solutions, a phenomenon Snowden called *premature convergence*.³² Pages 24 and 25 provide a sample of stories in a gallery-like display.

The Stories

No single story can capture the breadth of experiences of community members, but one by one, they begin to show what life was like in their neighborhoods. A woman in Pahokee described her roots: “I grew up in a close knit farming community where everyone knew each other. My family’s origin goes back to my great grandmother migrating to the Glades from Eleuthera, Bahamas, in 1897 to Pahokee. Most families traveled to the Glades seeking work.” A man in Belle Glade said, “I am a farm worker... If I am sick, my neighbors will be there for me because it is a small community.”

A woman in Boynton Beach shared a story about “the neighborhood of renters” in which she said, “When I was driving home

Figure 9. The emotional tone of most stories were positive or strongly positive.



from work, I realized there was somebody breaking in to a car as if it was their own.” In contrast, another woman in Boynton Beach told a story about her neighbors helping her search for her little sister. Though she was only missing for a few hours, ten members of the community helped to find her at a nearby park. A grandfather in Delray Beach credited the community for his grandson’s positive development. “He grew up to be an intelligent responsible young man,” he said. Another community member described local residents helping her family take groceries into her house.

Honoring the role of the storytellers as the interpreters of their own stories, these excerpts are shared with minimal commentary.

Emotional Tone

The vast majority of stories were characterized as positive or strongly positive (although the stories were not collected at random, meaning that another round of story gathering might lead to an entirely different result. Among the stories collected, 62% were characterized as positive or strongly positive, and just 54

were strongly negative (22% were negative or strongly negative).

Positive stories included experiences of going to college, finding a job, or buying a house. Others described positive social connections. One woman said, “I have lived many places because of the hype others speak about but I always end up back here where it all started. Many places had nice homes, scenery, and a lot of people, but those places were missing soul and character. Here I have my family and my church, and at this age, that’s all I need.”

Among the strongly positive stories were, paradoxically, accounts of loss and survival. One participant at a data review said, “I don’t understand why some of these stories are coded as positive; they feel like survival to me.” For example, a woman in Belle Glade who titled her story, “A Hard Life with a Good Ending,” spoke about the death of her husband, becoming disabled, living in the projects where childrens’ shelters were just “stick houses,” and being evicted. Yet, her family persevered. “Everyone showed love,” she said, and she is looking forward to her next family reunion.

“Youth Growing Up in the Heart of Boynton”

Growing up in the heart of Boynton Beach and a young man was challenging for me. I grew up in a home with no positive male figures and no positive role models. I was raised by a single parent and it was no easy task. My mother did the best she could with the limited resources she had.

“Dangerous Community”

It was 3-4 years ago when I first moved here back to Delray. We've just recently purchased and moved into the home when a deadly shooting happened down the street. I remember prepping the kids for church while my husband was outside waiting when we heard gun shots go off, following police sirens a few seconds after. I wouldn't say I'm comfortable living in an area like this, and I dislike it, but sometimes life just tosses you around, and you gotta go with the flow.

“Safety First”

I remember one night I was at home. Next thing you know I hear gunshots. I thought nothing of it until I went to watch the news the next day and seen somebody was shot and killed by my house. It worried me about my safety.

“Look Outs”

I started early. One of the most important moments in my life was when I met the coach of Carver High Football team. He saw me playing in the streets with my friend and told me I have a talent. Everyday he would pick me and my friends up and take us to football practice and take us home at night because my parents couldn't drive and most parents in the neighborhood did not have cars. He remained my coach all the way through high school and helped me get a scholarship to go to college. That where I'm from, a time when people actually loved and cared not kill.

“After the Storm”

After Hurricane Jeanne and Frances, all the neighbors were checking on each other, sharing resources and in general reaching out to support each other, even though on a day to day basis, there may not be much interaction.

“The Cop”

One time I was driving home from work, and a police officer pulled me over because he claimed my window tints were too dark. He asked me to step out the car, and when I stepped out the car, he roughly pulled me and put me in handcuffs. He later explained that he also thought my car was stolen. This happens very often where I'm from. Many cops racially profile people and mistreat them, especially in my neighborhood. It was probably the 30th incident.

“The Day at the Store”

I remember as a young adult about 18 to 20 when me and my mother were at a local store and I was referred to as "boy" by a white man. My mother didn't react calmly at all to this. She yelled at the man for his disrespectful attitude and words. At first I had no clue why my mother would react like that. As time passed by and I grew older, I realized she felt him calling me a "boy" was degrading. Because our past during segregation she explained how that reference would always be degrading no matter what.

“Great Hearts”

I lived in Boynton all my life. Beautiful city but ugly people. There are people that have great hearts, and I've met plenty of them, but one time I went to the corner store, and I saw a mother and a child outside. She had one bag of chips. Her daughter cried she was hungry, and she pushed her the chips. She looked up and asked her mom if she was hungry, and mom shook her head no, but when I asked, she said yes. I gave her money. I went back to that same spot a couple months later. She gave me \$40 and told me thank you. And she looked great.

“Beautiful Belle Glade”

It's a beautiful community and good environment. It was alright growing up here. We would go to the movies, library and park with my kids. We have a Martin Luther King parade every year we go and watch. The kids really like it they throw candy and have fire trucks.

“Angels Surrounding Me”

They were arguing about a girl. He left and I was standing there talking to one of the guys. Someone came from behind and hit me with a baseball bat. I had seizures and was foaming from the mouth. I was in a coma for nine months and two weeks. Then I woke up and stayed in the hospital for another month in Jackson Memorial. I couldn't play high school football after that.

“Belle Glade Should Be a Better City”

I wish the community was better. They need to get more resources. More places for people to go. Not much is in Belle Glade to do and enjoy. You can make a living in Belle Glade. I moved from Georgia in 2001. I liked Georgia better because it was cheaper. But I still like it here. A young boy got killed back in 2016. He was running and the police shot him 3-4 times. We need more enforcement here in Belle Glade, because that's not supposed to happen. The officer is still in the force. The force used to be good back in the days. But not anymore.

“A Hole Left in Me ”

When Corey Jones was shot in a drive-by shooting on I-95. It impacted me and my brother a lot because we grew up with him and that shooting made me look at life different. I started doing things different and staying out of trouble.

“All Together as One”

An important time in my life was when my whole neighborhood came together as one. It felt great to see us all come together. Through all the pain, suffrage, killings and all, we still was able to come together as a black community, as we should. It was important for me because in my time, it wasn't like this. It was different. I wasn't able to swing on that purple swing right there. I wasn't able to drink from that water fountain, but now my grandkids can. My nephews my kids. Everyone all together are able to be as one.

“A Great Send Off!”

An important moment in my life was the time when all my neighbors and I came together and held a big party for all the graduates in my neighborhood. We all brought them gifts and even put money towards his college experience.

“A Family Community”

The neighborhood was a family, Every child was each other's. Whenever there were needs, the others would help. My mother died in 1977. My neighbor had four girls but made sure we had decent clothes to wear. Born one of thirteen children, dad worked on the farm. Woke up at 3 am and came home late. Mom was authority figure, caring for one another. Did not have much but made sure we had enough. We didn't see ourselves as being poor. If someone was sick, we helped each other.

“Weekend Yard Work”

I have lived in the same place on and off for most of my life with the same neighbor. Maybe about ten years ago sadly her husband past. Now I'm 42 with a son so what we do on weekends, we cut her grass for her like he husband use to do.

“Getting My House Back”

I have lived in my house for 35 years. When my husband passed away about 20 years ago, my income was too low, and I lost the house. I eventually ran into money problems and stop paying the mortgage. The lender foreclosed the property, and the house was sold, leaving me without a home. My neighbor/friend from a few doors down, Shelley, couldn't stand the thought of me living in a hotel room, so she and a few other members from my neighborhood put down \$167,450 to buy the house back for me.

“Getty”

I can remember when I was about 12, my grandma had made food and invited everyone in our neighborhood to get some. Not only did they come get food, they also brought more food that they had prepared at their house, and it turned into a little getty.

A man in Belle Glade also shared a story blending dark and lighter sides of life in his community. He described sitting in early morning sunshine in a McDonald's with his coffee and laptop then walking into areas with "red and yellow tape, blue and red lights... shaking hands with the good fellows with a smile but also with their hand behind their back having a knife."

The strongly negative stories involved violence, poverty, or racism. "My son was recently killed at a house party," one father said. He added that the "saddest thing about it was no one seen anything which I don't believe. This community needs to let go of the whole idea 'snitches get stitches.'" Another man shared a similar sentiment: "Every time there is a shooting, no one knows anything." A woman in Boynton Beach said that her younger brother was shot and killed at 15. "All he was doing was playing outside with his friends."

Some had witnessed a shooting. One woman learned of a shooting while walking to school and described it as "especially a traumatic experience for me, because I simply was never introduced to violence."

Others commented on the prevalence of crime. One man said, "One shooting happens then later on another shooting happens... That could've been one of my grandchildren or anybody else's."

Several stories described racism from police officers. "My race has always given me a problem," said one man. "Police always tend to look me up and down, stop me in stories, and ask questions." One story described destitution and personal change: "I made a lot of errors in life. When I changed me, I changed my life. I've been homeless. I've been in and out of jail. I've been down to my last dollar and had it stolen from me when that was all I had to eat with. My neighborhood was selfish. I changed me."



Patterns and Perceptions

In addition to the stories themselves, responses to the signifiers (the follow-up questions listed in Table 4) were made available at the workshop and examined in earlier data reviews. These responses were presented in visualizations in which stories were mapped according to where they were placed between one option and another.

The visualizations for each signifier are shown in the following pages. Responses to dyads are depicted in histograms. For each portion of the dyad (representing where the storyteller may have moved the circle marker between the two options), the histogram shows how many stories were given that interpretation (represented by the height of the bars).

Responses to triads are presented in scatterplots (positioned within the same triangle in which the storyteller gave their response). In these plots, each point represents one story.

The recommended method for using data visualizations for sensemaking is to notice any patterns (or exceptions to the patterns) and consider the ideas they evoke. Community members may then read stories that illustrate the pattern. This is possible through cross-referencing that occurs between the visuals and narratives—by selecting sections of the visuals in SenseMaker Analyst (which then lists all stories in that section) or by filtering the stories using another software tool such as Excel. This cross-referencing makes it

possible to connect specific quantitative data (represented in the visuals) with corresponding qualitative data (the stories) during the sensemaking process.

Solutions from the Community vs. Solutions from Outsiders

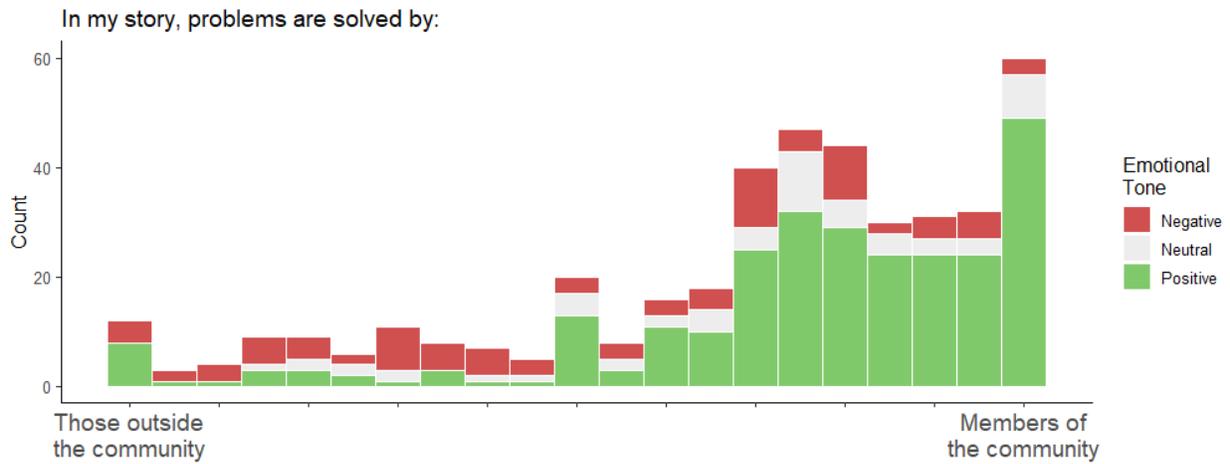
At the heart of what Healthier Together and Palm Health Foundation hoped to learn through the We Are Here project was how community members experience solutions to problems. Where do solutions originate? From within the community or from those outside of it? Figure X shows that in the vast majority of stories, problems were solved by members of the community.

In exploring the visual in Figure 10, one might ask whether problems being solved by members of the community is a good thing. Should more solutions come from those outside the community? After connecting the visual with specific stories, a participant in the data review and member of the Healthier Boynton Beach steering committee, Margaret Newman, commented, “The stories coded as ‘community solves its own problems’ have resolutions even if they are difficult stories. The stories coded as ‘outsiders solve the communities problems’ often have no resolutions. Maybe the community is collateral damage that results from decisions and actions taking place outside of the community.” Another participant noticed that “Sometimes police are members of the community, and sometimes they are outsiders.”

“Sensemaking is not about truth and getting it right. Instead, it is about continued redrafting of an emerging story so that it becomes more comprehensive, incorporates more of the observed data, and is more resilient in the face of criticism.”

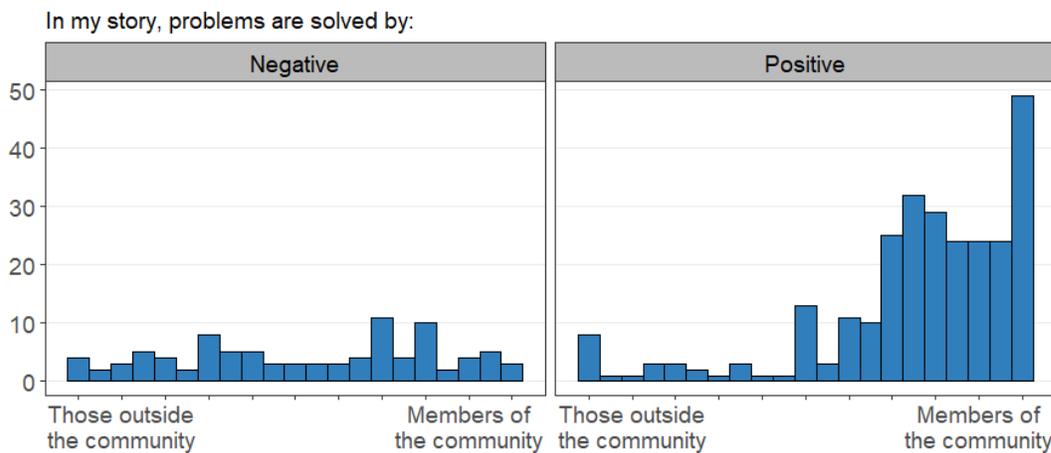
– Karl Weick, Kathleen Sutcliffe, and David Obstfeld
Organizing and the Process of Sensemaking (2005)

Figure 10. In the majority of stories, solutions to problems came from members of the community.



By splitting the histogram into two based on whether stories were “positive” or “strongly positive” vs. “negative” or “strongly negative” (see Figure 11), one can see that most stories in which problems were solved by members of the community were also considered positive in tone.

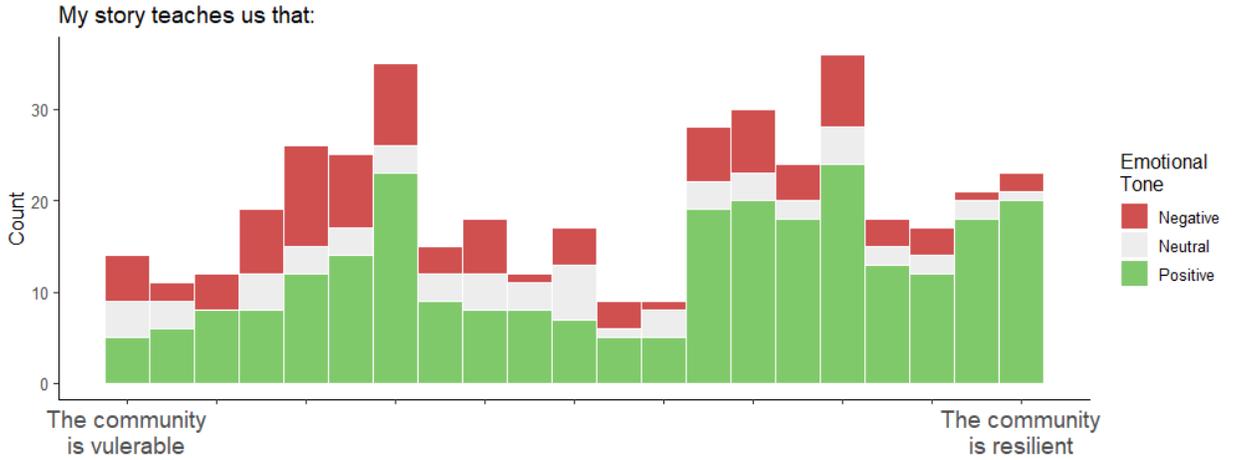
Figure 11. Most positive stories involved those in which problems were solved by the community.



Resilience vs. Vulnerability

Do communities see themselves as vulnerable, resilient, or somewhere in between? This question may show how events or experiences in the stories influence communities’ sense of strength, hope, and ability to recover from challenges. In the visual below, a bimodal distribution is evident, meaning that most stories (though not all) were interpreted as showing that the community is resilient or vulnerable but not somewhere in the middle.

Figure 12. In some stories, the community is resilient, while in others, the community is vulnerable.

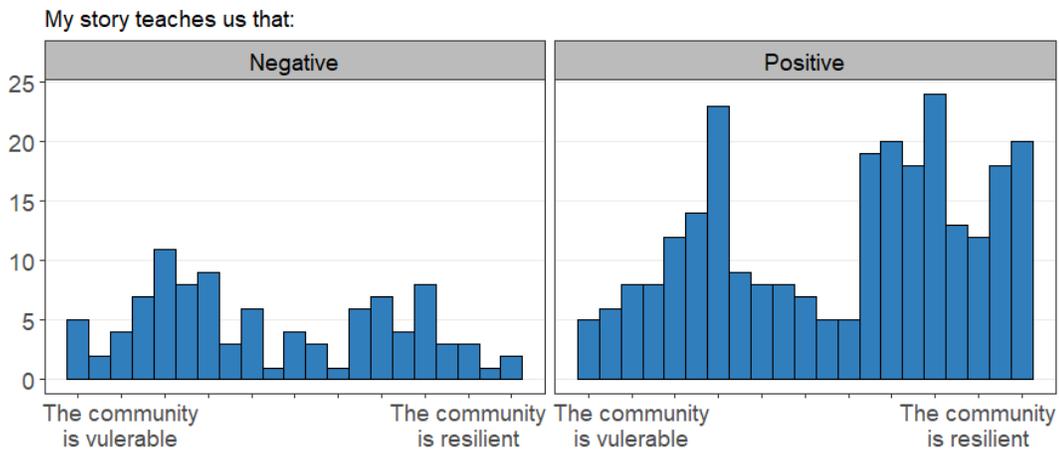


In a story in which “the community is vulnerable,” a long-time resident of Boynton Beach said, “Things changed out here. The streets used to be full of kids. Now days kids are getting killed and on all type of drugs. Things have got tougher around here also. The community can’t come together for nothing.”

One observation which arose during the data reviews was that the positive stories involve resilience and connection as opposed to a sense that big issues will improve. Everyone hopes that circumstances will change but accepts things as they are. Following is an excerpt from a story in which “the community is resilient”:

“I have been here since 1991, and I like living in the Glades because everything is so close, and I know where to go if I have a problem, and my neighbors I can interact with. My brother and I were sick, and all the people in the Glades were always there to care for me, to take me to the hospital, and to take care of us. If it weren’t for the people of Glades we wouldn’t be alive.”

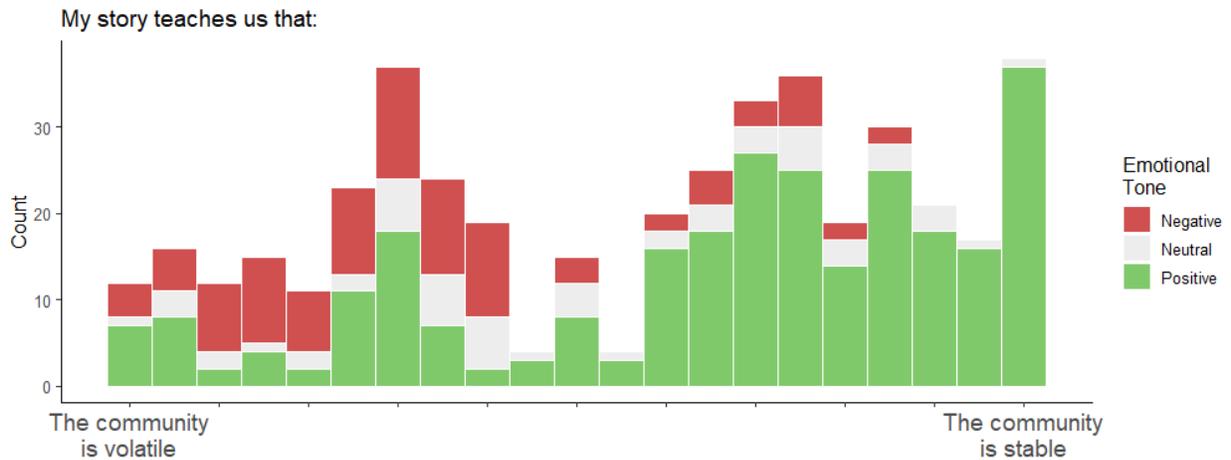
Figure 13. Resilience of the community for positive vs. negative stories.



Stability vs. Volatility

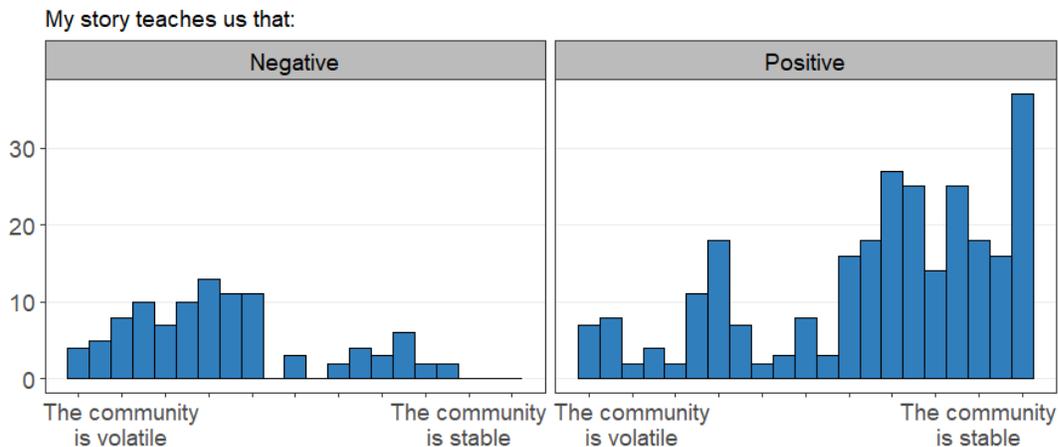
Do stories depict communities that are stable or volatile? Like responses for resilience vs. vulnerability, the distribution was somewhat bimodal (having two peaks). This pattern was less evident when the visual was split based on the emotional tone of the story.

Figure 14. Many stories were interpreted as showing that the community is stable, while others show the community as volatile.



In the majority of stories with a positive tone, the community was described as more stable than volatile. Among negative stories, this was reversed. Few negative stories described the community as stable.

Figure 15. What positive vs. negative stories show about the stability of the community.



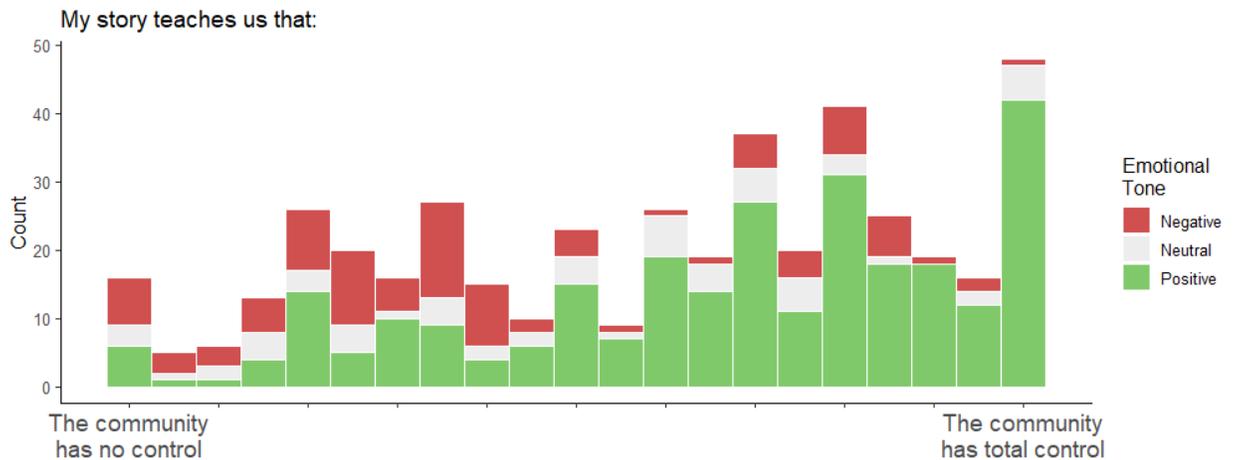
Below is an example of a neutral story in which the community was considered volatile:

“One weekend in Boynton, can’t remember what day, my family and I were all sitting in the living room watching some movie or show also can’t remember but all a sudden we heard helicopters above and saw lights flashing coming from what appeared to be all directions then we heard dogs barking, and there were come cops rushing into our backyard with flashlights. We saw all this through the window then my dad being the smart guy that he is opens the back door to see what was going on, but one of the officers yelled at him to get back inside the house. Moments later everything went quiet. Helicopters left. The barking stopped. It appeared they left. We were all confused on what just happened. Till this day never knew why they were storming our backyard, and I guess we’ll never figure it out. We weren’t shook because this kinda thing always happens in our neighborhood one way or another.”

Control vs. No Control

Whether community members feel a sense of control was another issue of heightened interest to Healthier Together and Palm Health Foundation. A sense of control or empowerment is one determinant of physical and mental health.³³⁻³⁴ Additionally, responses to this question may offer insights into how funders, non-profit organizations, and advocates can provide effective supports to communities. The visual below shows how storytellers characterized their stories with respect to this issue.

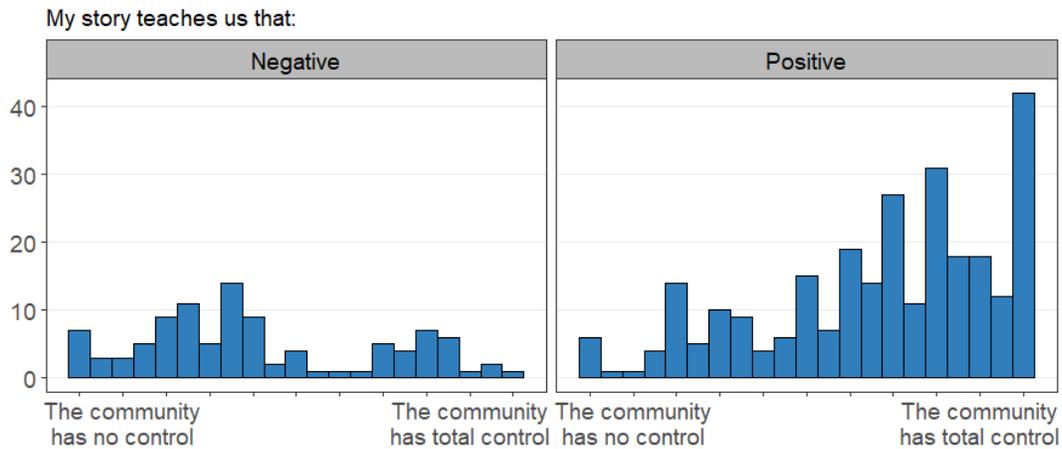
Figure 16. Number of stories in which the community has total control vs. no control.



In a story in which “the community has no control,” a man in Boynton Beach said, “This month there was a young child about 10 that was shot and killed. She was outside playing, and there was a drive-by which is a regular event where I live. It broke my heart there was no eye witnesses.” In contrast, following is a story in which “the community has total control.”

“The important moment was when I moved here in 2010 from WPB. I was homeless. I had income but it was not enough to find somewhere to live. I was living with several people in a room but it didn’t work out, and I was kicked out. So then I went to another place, paid my rent, and then 3 days the lights went out. And the place was in debt, and it was freezing cold and no electricity. I was so distraught, asking my lord to take me. And then I read a newsletter, called and spoke with a woman, and she told me to come see her that Monday. She worked for ARC, Marian Saunders. I went to see her at the library. She bought me breakfast and signed me up here (Quiet Waters). I have my complaints, because it’s a small city, but we are like a family here. I have a kitchen and bakery, and I bake for everyone. I am happy. It’s all I can ask for. A lot of things are different here: the smell of the sugarcane or the ashes of the burning of the sugarcane. Also the animals like chickens walking around and vultures. We could also use more activities here (skating rink, theater, etc). I am an activist, and I try to change things here.”

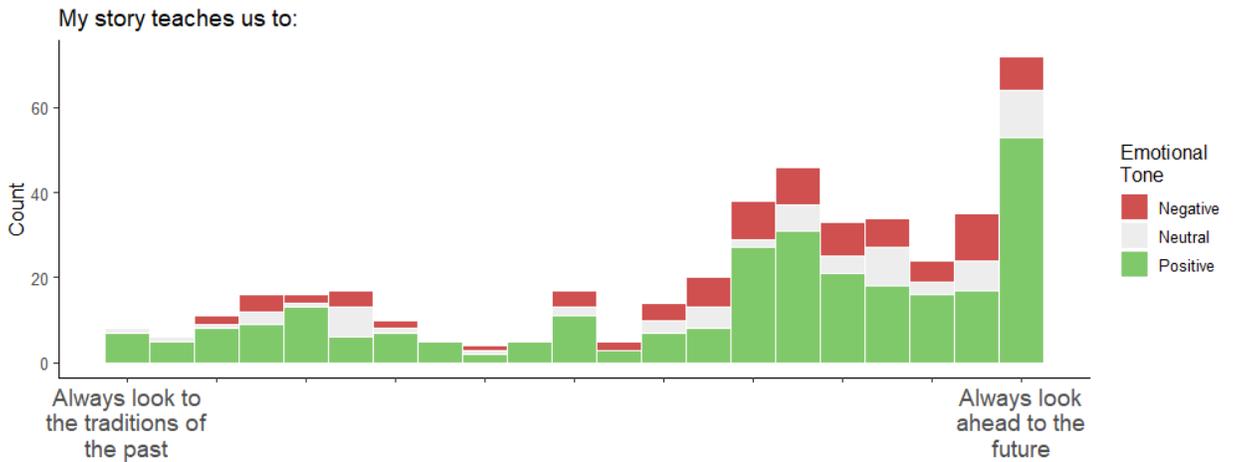
Figure 17. Many positive stories were those in which the community had some measure of control.



Traditions of the Past vs. Looking to the Future

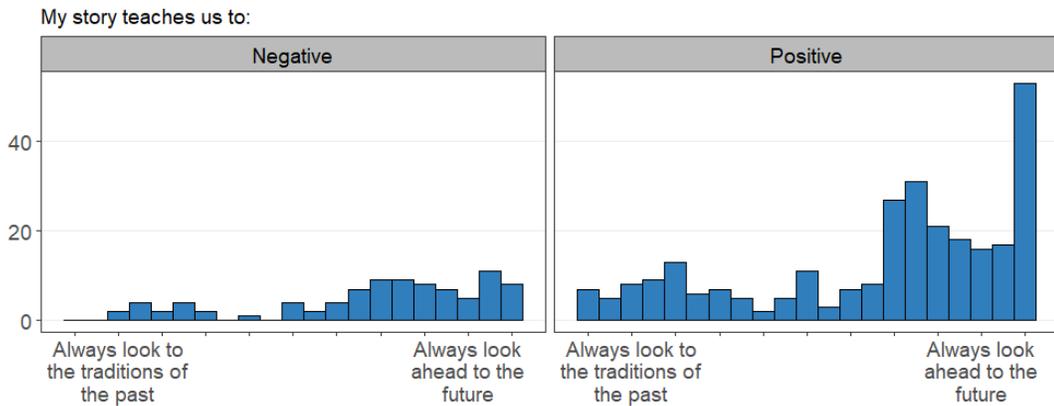
Three questions gauged the extent to which stories involved traditions of the past (two triads and one dyad). Most stories involved looking ahead to the future rather than looking to traditions of the past. Figure 18 shows responses to the dyad.

Figure 18. Most stories teach us to look ahead to the future.



Whether stories were positive or negative, most involved a future orientation.

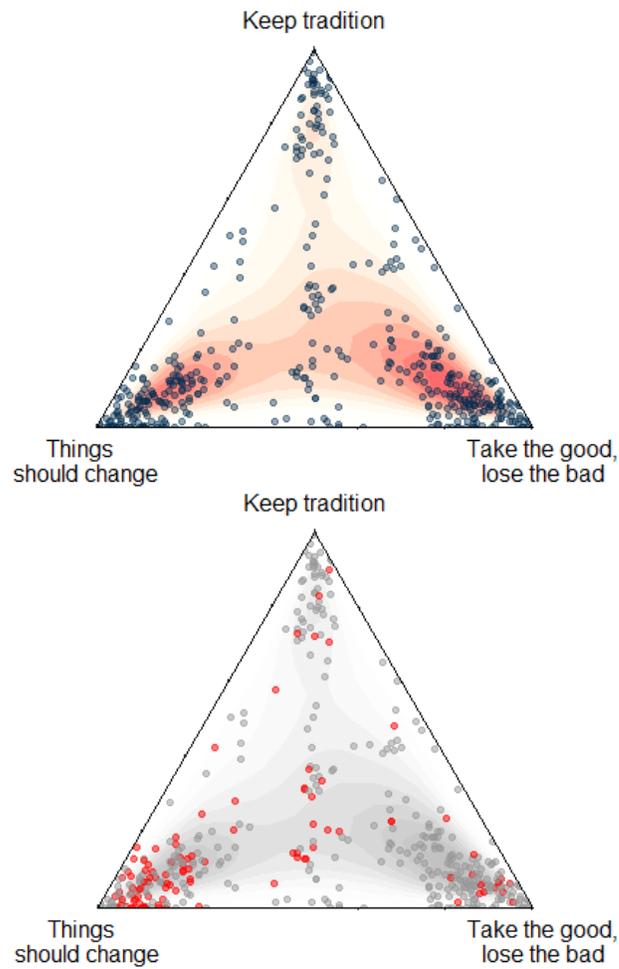
Figure 19. What stories show about looking to tradition or looking ahead to the future.



When asked about the lesson in their story (in a triad question), "keep tradition" was emphasized less often than "things should change" or "take the good, lose the bad." Figure 20 shows the response to this signifier for each story. Each point represents how one story was interpreted. The gradient of color shows the density of stories; more intense color in one corner of the triangle, for example, means that more stories were characterized by the response option in that corner.

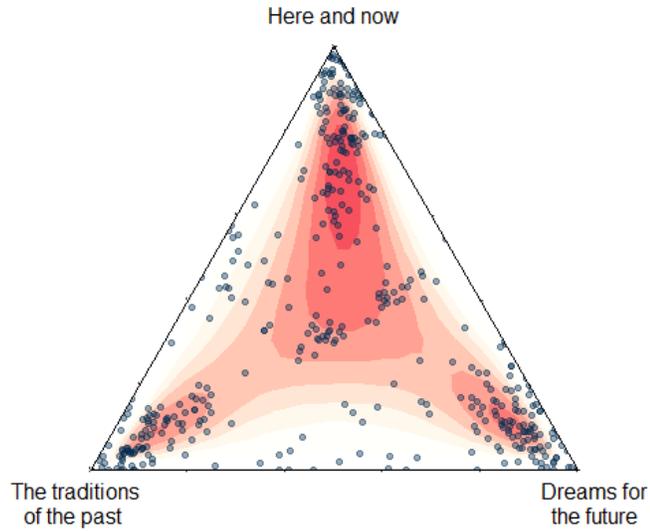
Not surprisingly, among stories labeled "negative" or "strongly negative," most show that "things should change" (bottom triangle in Figure 20). To see responses to this question based on whether the story was negative, neutral, or positive, see the figures in Appendix A.

Figure 20. Distribution of stories for each option on the triad (top). On the bottom, stories labeled "negative" or "strongly negative" are shown in red.



In another triad, storytellers were asked whether their story related to the past, present, or future (Figure 21). Responses clustered most near "here and now" but many stories related to traditions of the past or dreams for the future. (See Appendix A to view more triads split by emotional tone.)

Figure 21. How stories were interpreted with respect to the past, present, or future (“My story relates to...”).



Motivations

Storytellers were asked, “In your story, why did people act the way they did?” Responses offer insights into the motivations of people who’ve had an influence on life in their neighborhoods.

Figure 22. Motivation of people in the stories.



Below is an example of a story in which someone acted for no reason:

"I'm sure there are many stories like this one because of the ridiculous amount of police brutality incidents. I had let my grandson use my car to run a few errands. He soon returned the car to me but while returning the car to me he got into an incident with a police officer right in my driveway. The police officer roughly grabbed my grandson out my car although I did tell the officer the car wasn't stolen. It was for me, and I let him use it. He threw him on the ground and left him with a bleeding nose after realizing he had the wrong guy."

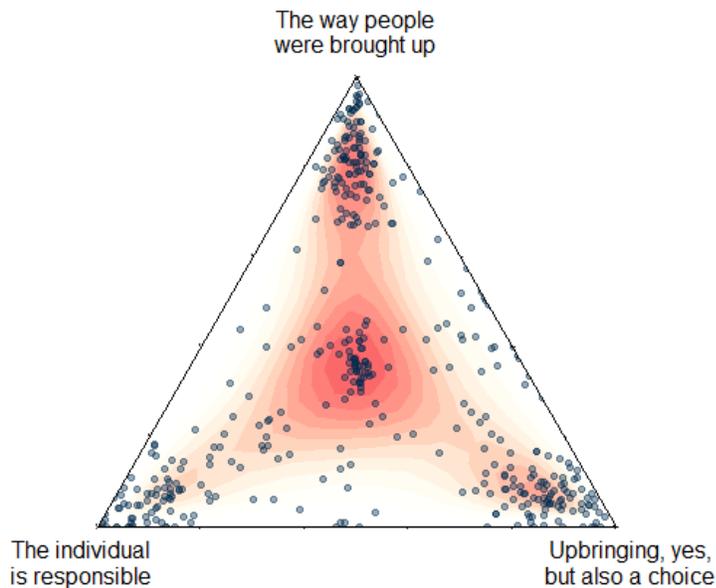
Those who identified their story as positive appeared more likely to ascribe positive motivations to people in their story. For example, a woman from Belle Glade, who characterized her positive story as showing that people "did what they believed," said:

"My community is a blessing and is so nice. When you are down, someone will help you up. I've lived here my whole life, and my children want me to move to WPB or Wellington, but I don't want to. It's so nice growing up here. My children came last week and took me out to eat for my birthday. My sister lives nearby and we see each other often."

Responsibility, Upbringing, and Choice

Storytellers were asked, "Why did things happen in the story I told?" Figure 23 shows how stories were characterized. A cluster of stories (in the center) were interpreted to involve all three factors in roughly equal measure.

Figure 23. Individual responsibility, upbringing, and choice.



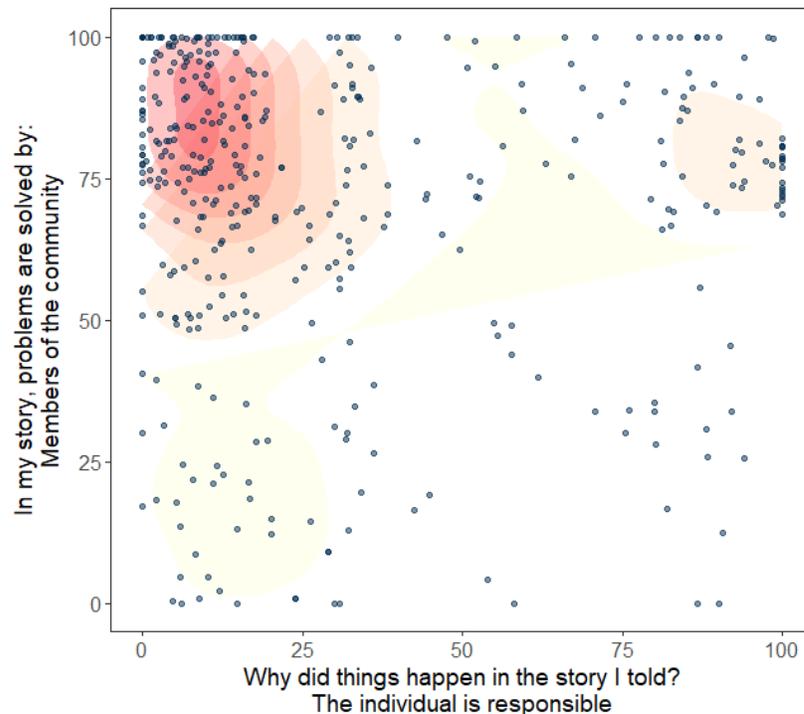
Comparing Different Questions

Some patterns became visible when looking at answers on two or more separate, follow-up questions. The emotional tone of the stories was related to responses on almost every other follow-up question. Not surprisingly, positive stories were more likely to be those in which problems were solved by members of the community, the community had control, and the community was stable and resilient. Negative stories were more likely to be identified as those in which things should change.

Community Problem-Solving and Individual Responsibility

In most stories, problems were solved by members of the community (shown by points near the top of Figure 24) as opposed to those outside the community (the bottom of Figure 24). When answers to this question are compared to the question about responsibility, an interesting pattern emerges. (Appendix A includes additional heatmaps comparing responses for different questions.)

Figure 24. Heatmap showing the relationship between individual responsibility and the community's capacity to solve problems.



Few stories show "the individual is responsible," according to responses on this triad, but for a small cluster of stories, the individual is responsible, *and* problems are solved by the community. These smaller clusters may reveal insights about the community that are obscured by larger patterns. One story in this cluster emphasized the role of personal choice in determining quality of life: "It's either life can take you down the good road or the bad one. You choose what road you wanna take." Below is an example of a story (from the same small

cluster) in which “the individual is responsible,” and problems are solved by members of the community:

“An important moment that happened to me while living in the city of Delray Beach was when I got a letter from National Academy of Future Physicians and Medical scientists. It was due to me having a 3.5 GPA at Atlantic Community High School and recommendation from someone. It was a fun and such an inspirational event that I was able to attend. I got to meet nobel peace prize winners and doctors from across the country.”

In contrast, in a story from the upper-left portion of the figure, the storyteller emphasized collective well-being, saying, “Everyone works together in order to promote a better community.” Below is another story from this cluster:

“Belle is a small community where family orientation is key to helping others and contributing to providing support everyone. We are constantly asking individuals who has left the the city to come back to the city and contribute.”

Upbringing and Motivation

Responses on the triad about motivation (i.e., why people act the way they do) were

connected to responses on the triad about responsibility and upbringing. In other words, how someone answered the first triad appeared related to their answer on the second triad (see Figure 25). When asked why people acted the way they did in their story, those who indicated that people “did what they believed” (by moving the circle marker toward that option on the triad) appeared more likely to point to upbringing as a reason for why things happened in their story. Those who said people “just did it, no reason” were more likely to point to individual responsibility instead.^d

Below is an example of a story in which people “did what they believed,” and things happened because of “the way people were brought up.”

“One day was my nephews football game at Boynton High. We went out to support him. As we were there, we noticed how much the community was bonding. Just at a football game you can tell that Boynton is not a bad place.”

Stories in which upbringing (“the way people were brought up”) played a role were also related to traditions of the past. These stories, for example, were more likely to have the lesson of “keep tradition”^e and to relate to “the traditions of the past,”^f but they were not more likely to teach that we should “always look to the traditions of the past.”^g

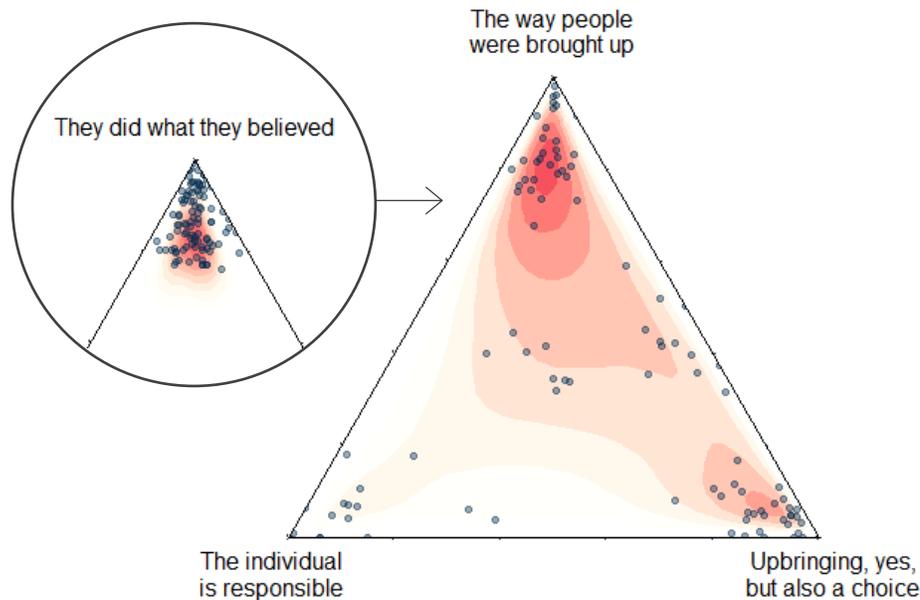
^d $r_s(429) = -0.22, p < .001$

^e $r_s(447) = 0.18, p = 0.0001$

^f $r_s(437) = 0.28, p < .0001$

^g $r_s(418) = 0.01, p = 0.88$

Figure 25. Responses to the triad on responsibility for stories in which people “did what they believed.”



Below is a story about traditions of the past in which things happened because of “the way people were brought up.”

“One 4th of July we had a family gathering at the park. We were having a great time with each other. My niece was playing in the play ground and started offering if others would want to join, strangers at that. This showed me that kids now a days are warm headed and caring. The future is bright.”

A Note on Statistical Analysis

While some of the relationships between responses to different questions were statistically significant (using Spearman’s rank order correlation), statistical tests involving follow-up questions must be

conducted with caution (if at all). When divorced from the narratives, drawing conclusions based on frequentist statistics is problematic for several reasons. Assumptions required for inferential techniques may be violated. For example, SenseMaker data are not normally distributed (see Appendix B), and relationships are likely to be non-linear (or non-monotonic). Additionally, respondents can choose not to answer any given question. Many blank questions introduce bias that can interfere with observed patterns. (The level of non-responses in this project, between 3% and 14% for follow-up questions, was comparable to that found in other studies using SenseMaker.) Statistical tests may nevertheless provide some validation for the patterns identified by community members (Marietjie Vosloo, personal communication, March 26, 2020).

Stories that Don't Fit the Pattern

In addition to noticing patterns, sensemaking also draws upon stories that are exceptions to observed patterns.

Stories which are considered rare or contain an unexpected combination of features may provide important information about the social systems in which the storytellers live. They also demonstrate what is possible.

Rare Stories

Most stories submitted as part of the We Are Here project were considered frequent or commonplace by the storytellers. About 50 stories were identified as "very rare." Below is a story from a young man in Delray Beach which he marked as "very rare":

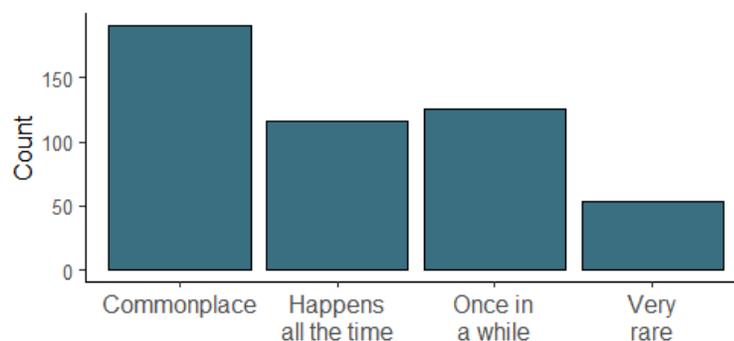
"When I was growing up I was always home alone. My mom worked 6 days a week from about 10 am to 10 pm so I was normally by myself. Sometimes some of the bad kids from the neighborhood would come around and I would pretend I wasn't home because if I opened the door and they knew I was alone, then they would likely come into my house and take or do whatever they wanted."

Among the "very rare" stories, almost two thirds (64%) were "strongly positive" or "positive," and 11% were negative or "strongly negative." (Appendix A further explores the relationship between the prevalence and tone of stories.) In one "very rare" and "strongly positive" story, one man said, "In my neighborhood, we view each other as a big family. I remember when my close friend that also lives in my neighborhood house caught on fire. The church and community as a whole decided to help her and her whole family get back on their feet." A woman in Boynton Beach said, "I am very close to everyone in my community. I've been battling pneumonia and leukemia for many years now, and my insurance stopped paying for a lot of my hospital funds. My neighbors and community as a whole raised money for me." Another woman said, "There was an incidence of a boy getting shot by my house... everybody in the community was there for the parents and family like we were all family."

Below is a story labeled "very rare" which was considered "strongly negative" by the storyteller. The story (which was transcribed by a student) includes events most would consider uncommon, including blindness and one family member killing another.

"Moved here in 2013. Went to an eye doctor in 2014 who worked in

Figure 26. Number of stories characterized as commonplace or rare.



Pahokee. She scattered the cataract and tried to get it out, but blinded her in one eye. She can't find stuff in her house and scatters stuff around. Can't get much help. Grandchildren's mother was killed by father (drug user), one grandchild works in a clinic in NJ, the other works in transportation. Life is okay, but it could be better. Grandson has two boys, granddaughter childless. Born in Pahokee. Learnt from Aunt and Uncle, didn't finish school because she had to pick beans. Didn't think she'd make it to 81."

Stories interpreted as rare offer an avenue for weak signal detection, a process that involves identifying potential trends as they're emerging.³⁵⁻³⁶ Rare stories (as well as those interpreted as happening "once in a while") may direct attention to events (or types of events) that are in the process of becoming more commonplace. They may show that change is coming. In complex systems, rare events have the potential to expand into defining features of the system in which they arise.

Even if the events in a story remain uncommon, however, their impact may be devastating. One rare event, like becoming blind or losing one's home to a fire, can have permanent, life-altering consequences. An important part of sensemaking then is keeping watch for rare-but-consequential events. This insight is echoed in the domains of climate change and finance where one rare but catastrophic event can severely disrupt quality of life.³⁷

Stories with Unusual Features

In addition to stories interpreted as rare, other interpretations (responses to signifiers) may set stories apart. For example, if the majority of stories are interpreted as being about "fear" instead of

"hope," a small cluster of stories a bit closer to "hope" may be worthy of attention.

Such a cluster illustrates what Snowden refers to as the "adjacent possible." The phrase was first introduced by Stuart Kauffman to describe biological systems then later used by Steven Johnson, who wrote, "The adjacent possible is a kind of shadow future, hovering on the edges of the present state of things, a map of all the ways in which the present can reinvent itself."³⁸ It is toward such outliers, as adjacent possibilities, that systems can be nudged using safe-to-fail probes.

Stories that contain unexpected or unusual *combinations* of features (like being positive in tone yet describing hardship or trauma) may also prompt new insights. For example, some stories interpreted as showing that "the community is volatile" were nevertheless characterized as positive in tone. While "volatile" sounds intrinsically negative, these stories may show that change, which can be positive and sorely needed, involves less stability and predictability.

In one story characterized in this way, a woman said, "My neighbors would always keep an eye on us to protect and that help me become a good person to watch out for people myself!" Another said, "Important moment in my life is learning how to provide for myself. I used to depend on my parents to do everything. I had to get off my butt and go work for something." Below is another example of a positive story in which "the community is volatile."

"Anybody that know my family, know we come from a very religious family. I didn't understand any of it until I was shot and almost killed by my best friend over a fight about money. We were both living illegally so the police didn't take us seriously. We both had been in and

out of jail but when I almost died I found God for myself, now I live a good life.”

Some stories were labeled strongly positive although, when asked about the motivations of people in their story, the response was “They just did it, no reason.” In one such story, for example, a man in Boynton Beach said, “I fought a lot as a kid. That’s just how it is when you grow up in the hood. I would have fought a lot more if it wasn’t for one simple phrase: ‘My bad.’ For those of you that don’t speak hood, ‘My bad’ is the equivalent of saying ‘I’m sorry.’”

While most positive stories show that problems are solved by members of the community, about one in ten show that problems were solved by those outside the community. Reviewing these stories provides an opportunity for broader insight. Under what circumstances are solutions from outsiders interpreted as positive? These stories do exist. For example, one man said, “I grew up in the trenches. I was selling dope and getting bad grades in school, and then someone wanted to put me on the path to success.” Another wrote, “I like it in my neighborhood. Every time I accomplished something, they put me in the newspaper.”

Rare stories can be visualized as being set far apart from most other stories. Figure 27 shows how positive stories were distributed with respect to solutions to problems. The most common answers for this question are found in the tall areas or peaks on the right (indicating that many stories were given this interpretation). Uncommon answers are in the tail on the left.

For distributions with a long, heavy tail (such as the histogram in Figure 27), extreme or unexpected results are actually more common than one might expect (if one assumed the distribution was normal). In the social sciences, estimates of probability (and common statistical methods) are typically based on the assumption that all responses to a given question (e.g., all the responses to the dyad about problem-solving that might have been submitted) are distributed in a particular way—namely, in a Bell curve called the normal distribution. The visual on the left in Figure 28 depicts a normal distribution.

In contrast, the graph on the right in Figure 28 shows a distribution with an extreme peak (i.e., “excess positive kurtosis”) and longer, thicker tails. These are also called

Figure 27. Distribution of positive stories showing whether problems are solved by members of the community.

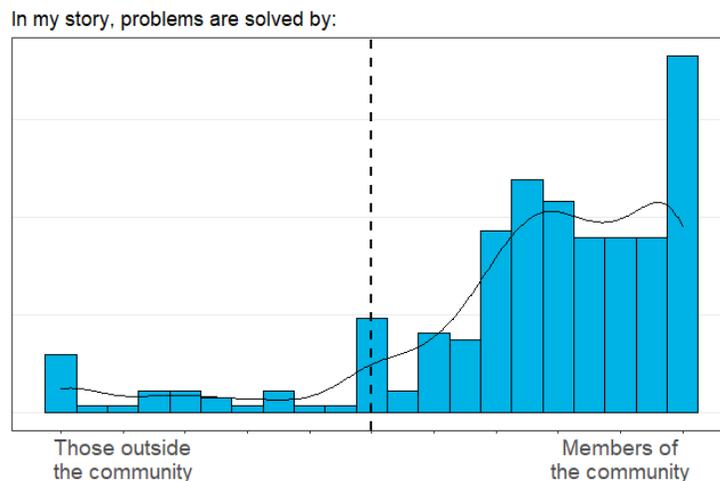
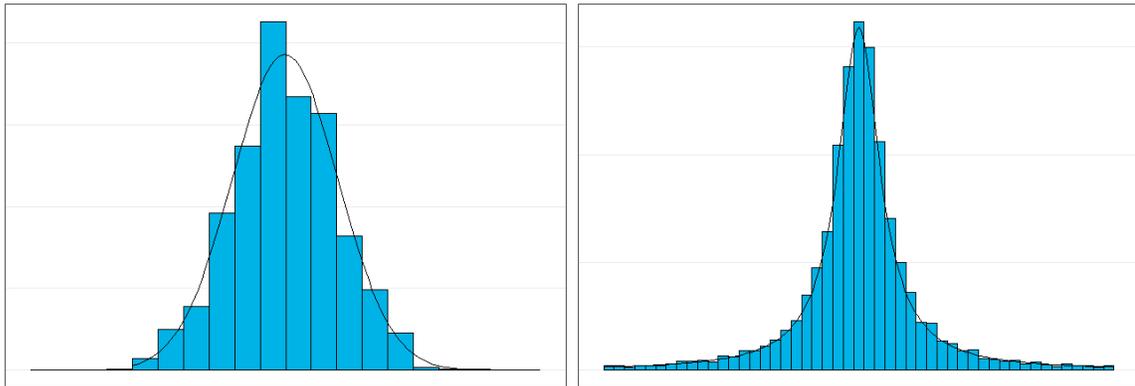


Figure 28. Example of a normal distribution (on the left) and a fat-tailed distribution (right).



fat tails (see Appendix C for a more in-depth explanation). Distributions for SenseMaker data more closely resemble long-tailed (or fat-tailed) distributions. The result is that stories and responses to signifiers which deviate from the norm are more common than expected—another reason to consider what rare or uncommon stories can teach us about life in these communities.

To recap, stories that don't fit into the apparent patterns or trends are vital sources of insight. One-time, rare events (or experiences that happen "once in a while") can have long-lasting, life-altering consequences. The global coronavirus pandemic is a vivid example. Further, unusual findings may be far more common than one might suppose.

Understanding that both common and rare stories can yield important insights, what does this mean for sensemaking? In traditional evaluation, finding patterns in the data contributes to an overall narrative about a community that an evaluator might consider more accurate than any one story. In sensemaking, on the other hand, finding patterns can help a community make sense of their experiences, something even individual stories can do. Together, using the stories, communities build common narratives and a shared reality. The strength of these common narratives lies in their ability to explain past experiences and inform steps toward more positive future experiences.

"If accuracy is nice but not necessary in sensemaking, then what is necessary? The answer is, something that preserves plausibility and coherence, something that is reasonable and memorable, something that embodies past experience and expectations, something that resonates with other people, something that can be constructed retrospectively but also can be used prospectively, something that captures both feeling and thought, something that allows for embellishment to fit current oddities, something that is fun to construct. In short, what is necessary in sensemaking is a good story."

– Karl Weick, *Sensemaking in Organizations* (1995)

Community Insights

After viewing stories, community members at the Insights to Action workshop discussed issues, themes, and ideas they noticed during their scan. Participants formed four groups and engaged in 15 minutes of conversation before beginning a discussion as a single, large group. Youth and adults shared contrasting opinions (for example, on the meaning of concepts used to label the issues and on how things should change), which led to an interactive and lively dialogue. By giving youth opportunities to speak, the facilitator helped to guide the evolving discussion, allowing contrasting perspectives to spur community insights.

One issue youth identified among the stories which resonated with their own experience, was the idea of retaliation, or the mindset that if someone does something to you, you need to do something worse back to them in order to maintain respect. Some observed that “neighbors used to look out for one another and the community and don’t do that as much these days.” Similarly, participants in the data reviews found that within the stories of violence, there was a theme of silence in the face of negative circumstances. One participant commented, “Maybe the silence is a coping mechanism for survival, to help them deal with adversity?”

Through further discussion, the group, led mostly by youth from each community, listed additional issues and ideas evoked by the stories. These represented elements of the overall, collective narrative. Youth spoke in dualistic terms, identifying the kind of stories they hoped to see less of in the future and the stories they wanted to see proliferate. Table 5 lists these as corresponding pairs in two columns. This captured the direction in which the community hoped to shift, to go from behaviors in the first column to behaviors in the second. Participants voted on which themes or issues were most important to them. Several issues were combined to form four themes, which are shown at the top of Table 5.

In a follow-up sensemaking session held in the Glades in July of 2019, both adults and youth (in Student ACES) discussed stories after a gallery walk. They recognized challenges faced by the community, including lack of resources, violence, struggle, and police brutality. The disparity between growing up now and growing up in the past was another theme. Some stories, they noted, illustrate support from family or the community while others do not. Another insight was the degree to which quality of life is influenced by family dynamics, a factor evident in stories about family obligations as well as those about absent fathers or children growing up “too fast.”

Table 5. Themes identified in the Insights to Action workshop (with top four themes indicated in the first column).

	Fewer Stories About...	More Stories About...
1	Retaliation	Compassion
	Disrespect and fear	Respect and appreciation
2	Resources that aren't useful or accesible	Resources that are accessible and relevant
	Broken promises to communities, made by adults	Promises being kept
	Not paying attention, not caring	Being an advocate for the community
3	Negative role models all peers are attracted to, looks up to	Positive role models being attractive and accepted as valid, "cool"
	No positive peer support	Positive peer support and acceptance
4	Lack of values, no hope	Values of friends and family helping us through adversity so we have hope
	Being isolated in your community	Being connected and experienced with the world outside your community
	Certain kids being isolated	All kids being connected
	Vulnerable, fragile	Resilience
	A negative mindset	A positive mindset
	Phones and social media influencing what we do/like	Thinking for one's self in the face of being perceived as different
	It's never enough (music video messages)	Being satisfied with what you need
	No power	Having control over your environment
	Waiting for someone to keep their promises	Not acting helpless and working to make promise-makers more accountable

Shifting the Narrative

After reviewing the stories and identifying patterns and themes, participants in the sensemaking sessions turned their attention to the future. Youth formed lasting connections with one another and reported a shift in how they see the communities. Healthier Together providers incorporated the stories and insights into their ongoing work.

The sensemaking process hosted by Palm Health Foundation and Healthier Together fueled the development of locally-driven, safe-to-fail actions intended to influence social determinants of health in each community. At the end of the Insights to Action workshop, youth helped plan new activities and became more engaged in their communities. The Healthier Together initiative began utilizing the stories and insights to continue building the capacity of communities to make positive change.

In keeping with complexity science and recommendations embodied in the Cynefin framework, the follow-up to sensemaking was not the design and implementation of comprehensive interventions. The expectation was not to identify long-term solutions. The sensitivity of communities to small or rare-but-consequential events can make long-term interventions untenable, a reality vividly illustrated by the impact of a global pandemic one year later. Instead, the next steps involved setting a course and moving in the desired direction through continuous, low-risk actions. Adopting this approach, like guiding a boat through turbulent waters, entails an ongoing responsivity to changes in conditions that major interventions often lack. In this metaphor, each stroke of the oar is informed by the current, adjusted accordingly, and designed to move the boat along a desired course.

Setting a New Course

The sensemaking sessions empowered communities to hone their vision for the future. Youth and adults in the Insights to Action workshop identified themes they wanted to see grow (see Table 5, last column). Connected to residents' stories, these themes have real-world, day-to-day relevance for communities. As one person noted upon reviewing the stories, most people aren't thinking about "big" issues. They're thinking about their lives in a personal way.

Participating in the We Are Here project had an influence on youth that made story collection and sensemaking act as interventions in their own right. One immediate outcome, noted by Krissy Webb, is that it triggered an open dialogue between youth and adults, something the community needed which had been lost through generational trauma and anger.

The stories changed how youth view their communities with many surprised to learn of their neighborhoods' strengths and thriving histories. For example, the perception of some communities as depressed was challenged by stories communicating confidence and hope. This was eye-opening for workshop participants. Dupree Jackson commented, "Based on data coming out of SenseMaker, our communities are not hopeless. Our communities in fact feel very empowered.

They just don't feel like they have the resources they need."

The sensemaking session also inspired youth to continue learning about community issues which they previously found unengaging. After the session, they felt a vested interest. "Through the work," said Inger Harvey, youth "developed a new way of looking at themselves." Positive stories, such as those involving kindness and generosity between neighbors, made a lasting impression that gave some youth renewed hope and determination to help build stronger neighborhoods for their future. Ms. Harvey adds that SenseMaker "begins to create, in an informal way, community planners without them knowing they're planning."

Adjusting the Oars

As a result of the workshop, three groups of youth participating with three providers (connected to three Healthier Together communities) became a cohesive group with expanded networks and an enhanced ability to influence culture and advocate. Youth began planning community activities at the end of the workshop, which included Community Cookout for a Cause in Delray Beach (one of many "Build Our Blocks" projects), a kickball party and barbeque in Boynton Beach, and a flag football tournament and festival in the Glades.

These events were intended to bring residents together and strengthen social support networks vital for mental and physical well-being. This need for greater social cohesion was an issue identified in the stories by participants of the sensemaking workshop.

Mini Grants

The process of generating small, local actions to improve communities was already in place before the project began. As a community-driven initiative, Healthier

Together is particularly well-suited to translating insights from SenseMaker data into actions. Healthier Together "puts residents at the core of developing health solutions around their own needs rather than force-fitting a system that doesn't always recognize the complexity, culture, context and circumstances of diverse communities."

A primary vehicle for this approach is the awarding of mini-grants, not only to other local non-profit organizations but to individuals and groups with a promising idea. For example, in 2019, Healthier Boynton Beach awarded nine local organizations mini-grants to help caregivers, and Healthier Neighbors awarded mini-grants for 38 projects.³⁹ These included:

Cooking with Trindy

A "male mental health awareness cooking class" for young men and teens featuring ingredients that support emotional wellness

Infinite Possibilities Mindset Training

A workshop by Kalimba Yancey designed to help participants change their mindset "from victim to victor, from misery to mastery, from trials to triumph"

Youth Hydroponic Farming and Mentoring Program

A program offered by Oswald Newbold, II, and Riviera Beach Youth Empowerment to teach students about growing their own food while offering mentorship

Love Completed

An event created by Donald Parns, Jr., honoring mothers who lost a child to gun violence which fostered social connection and joy

So My Ears Can See

A play directed by An'Thawney McDowell performed for youth about a teenage boy and his friend coping with "high school

problems, single parent homes, and... police brutality”

Neighbors Helping Neighbors

While stories from the We Are Here project did not directly inform the awarding of mini grants in 2019, Palm Health Foundation began using SenseMaker to monitor the impact of mini grants in 2020. Further, the We Are Here project and the mini grant process together laid the groundwork for an approach that developed in early 2020 in response to another set of stories from the same communities—stories shared during the coronavirus pandemic.

As Palm Health Foundation received stories from residents in desperate circumstances, they recognized the need for timely responses and decision-making flexibility within each community. In addition to partnering with Genesis Community Health, Inc. and Pathways to Prosperity, Inc. to establish a COVID-19 testing site in Boynton Beach, the foundation created the Neighbors Helping Neighbors (NHN) fund. Funds were distributed to organizations with close ties to residents.

In the Glades, youth participating in Student ACES (including many of the same youth who collected stories for We Are Here) regularly read stories from residents detailing their struggles with the virus and quarantine. The youth pulled out stories from individuals who might be helped through the NHN fund, contacted them directly, and helped to coordinate the delivery of resources and support. For example, with the NHN fund, Student ACES helped families who lost their job cover rent and utilities. They helped single parents buy food and clothing for their children. They also assisted with car payments, cell service, and education-related costs.

Eighteen youth participating in the EJS Project also read the stories, met regularly using Zoom, and identified individuals and families in need of help. Youth spoke with residents and helped deliver resources. For example, a pregnant teen struggling to attend school remotely received a Chromebook and a baby shower. (See phfshares.org for the local news story.)

Because the organizations receiving NHN funds had existing relationships within their respective communities, they were able to find, through word of mouth, families in need of help who had not submitted a story. In the Glades, Student ACES regularly spoke with the Sheriff’s office and local churches. Organizations also reached out to local service providers who could offer additional supports to families. EJS partnered with a therapist to help a senior grieving the death of his spouse. They also contacted the CEO of Cancer Alliance of Help & Hope, Inc. to help a woman receiving chemotherapy.

A Compass for Leaders

As a source of insight into the community’s needs, stories gathered using SenseMaker have guided local leaders. Mr. Jackson, a member of community task forces in Delray Beach, noted that SenseMaker has allowed him to speak with the voice of his community. He is often asked, “What are your immediate needs? What do you expect your needs to be next week?” He’s better able to answer those questions based on the stories collected. “I don’t just let the data sit,” he said.

A participant in one of the data reviews observed that the vast majority of storytellers said that “everyone” should know about their story. Only eight people said “no one.” They concluded that voices need to be heard.

Reflections

The SenseMaker tool and methodology was a good fit for the We Are Here project. The tool (i.e., the SenseMaker software) made it possible to meet the objectives of the project by facilitating the collection of hundreds of stories by local youth. The methodology, informed by complexity science, provided Palm Health Foundation and Healthier Together with the means to explore and respond to community experiences involving social determinants of health.

We Are Here was a pilot project and proof of concept for the application of SenseMaker in Palm Beach County. In addition to demonstrating the feasibility of collecting stories from hundreds of residents across multiple cities, the project fulfilled its aims to give communities a voice, connect youth with their history, catalyze collaboration, and inform a multitude of small actions to build healthier communities.

We Are Here also led to future SenseMaker projects, including the COVID-19 story collection project launched in March, 2020 (see phfshares.org) and story collection from mini-grant awardees and participants designed to monitor changes in residents' experiences during and after the funded projects. With revisions to the story prompt and signifiers, these subsequent projects have acted as continuations of We Are Here, helping to sustain the dialogue and supports between communities, Healthier Together, and Palm Health Foundation.

Collective Insight

The sensemaking workshop, Insights to Action, was highly engaging for both adults and youth. Discussing the stories was an emotional experience for participants. Although the final segment addressing the development of safe-to-fail probes was shortened due to time constraints, facilitators agreed that the workshop accomplished its objectives, and

the potential of sensemaking to give community residents a voice was clear.

Data visualizations (e.g., histograms, ternary diagrams, and heatmaps) were less engaging than the stories themselves. However, the visuals provided a starting point for sensemaking in the early data reviews and continued to guide thinking among project leads.

Question Design

The quality and utility of data obtained through SenseMaker rests heavily on the the story prompt and signifiers. The story prompt for We Are Here succeeded in evoking both positive and negative stories featuring a wide variety of experiences. The prompt was neutral enough to evoke stories of varying tones yet specific enough to evoke rich recollections on the part of residents.

Many stories were (to some extent, as intended) about the neighborhood as it once was. Stories detailing neighborhood histories may have less relevance for present-day challenges than stories about recent events, but they succeeded in capturing the attention of youth and resonated with current issues. While SenseMaker is generally intended to capture and follow current conditions (to provide feedback for safe-to-fail probes), this orientation toward the past proved

useful for sensemaking and fulfilled unique objectives of the project.

Although responses to signifiers were sometimes unexpected given the content of the stories, they were informative, catalyzing insights among community members and leaders.

Engaging Youth

One of the strengths of the project was the involvement of youth in story collection and sensemaking. Youth were not only actively engaged and invested in the outcome, they were positively influenced by what they learned. One teen said it changed how he looked at his city, and the caring and generosity expressed in some of the stories stuck with him.

Engaging youth did present some challenges. Youth had limited schedules during the school year, which made it difficult to convene them for a full day. Financial incentives for story collection may have led to shorter stories in cases where youth were paid per story. Where youth transcribed stories from interviews or recordings, some stories were apparently abridged. Some stories were just one to two sentences long. Because SenseMaker is designed for micronarratives, particularly short narratives may still contribute to

sensemaking, but longer narratives are likely to yield better insights.

A Good Fit

SenseMaker has been utilized by organizations around the world, some having mixed success.⁴⁰ For addressing health and well-being in Palm Beach County, SenseMaker was a good fit. Some factors which may have contributed to the success of SenseMaker in the We Are Here project include: (1) a strong match between the varied objectives of the project and the capabilities of SenseMaker, (2) the development of an appropriate story prompt, and (3) alignment between the philosophies of Palm Health Foundation (e.g., empowering communities and complex systems thinking) and the SenseMaker methodology.

The methodology continues to develop and can be adjusted to meet a variety of nuanced needs. For example, by adding new prompts, SenseMaker can be used to explore how community residents are affected by mini-grants and, at the same time, how grant recipients are empowered to do good in their communities. This versatility is one factor that has made SenseMaker a useful evaluation strategy for Palm Health Foundation.

Continuing the Conversation

The We Are Here project demonstrated that a complexity-aware, narrative-based approach to evaluation can yield rich information, fuel collective insight, and direct actions to improve community health and well-being. The stories and their meaning to the storytellers continue to provide Palm Health Foundation and Healthier Together with guidance and an avenue for supporting communities.

By involving communities in the process of data collection and placing them at the center of their own data (e.g., through participation in sensemaking), the We Are Here project fueled a community-wide conversation around issues affecting their well-being and how to improve them. With more direct lines of communication between community residents and local leaders, the conversation continues.

This has generated opportunities to co-create solutions and fostered “intrinsic responsibility”.⁴¹ According to Donella Meadows, founder of the Sustainability Institute which applies systems thinking to social challenges, intrinsic responsibility means that “the system is designed to send feedback about the consequences of decision making directly and quickly and compellingly to the decision makers.”⁴² SenseMaker was and continues to be instrumental in supporting such a feedback loop in Palm Beach County.⁴³

Learning from Experiences

The project itself promoted social connections and civic engagement, both powerful determinants of health. Participating was empowering for residents, because their experiences could directly inform local actions to improve their quality of life. Moreover, the mere existence of mini grants and other responses to each community’s voice may strengthen hope and inspire resilience,

factors that substantially contribute to mental and physical health.

Stories from the community provided Palm Health Foundation and Healthier Together with information that traditional evaluation methods miss or condense into summary statistics. The stories were deeply personal, vividly illustrating lived experiences that statistics alone cannot capture.

Aligning with Complexity

Conspicuously missing from this report are a list of research findings based on analysis of the data, rigid conclusions, and recommendations from an evaluator. These omissions reflect the nature of the sensemaking process, that it is intrinsically ongoing. More importantly, it respects the central role of community members and local leaders in generating insights from the raw data and acting on these insights with agility.

By presenting the reader with samples of raw data (the stories and data visuals) without much interpretation, the format of this report mirrors the methodology of the project, a methodology aligned with complex systems thinking. A key feature of complex systems is that the future is often impossible to predict. Small events can quickly snowball, and big interventions can quickly melt in a shifting climate. The Healthier Together communities, along with the myriad of factors influencing

residents' well-being, are complex systems. Moving these communities toward better health requires a new way of thinking about cause-and-effect.⁴⁴⁻⁴⁶

Current, predominant thinking about cause-and-effect has been heavily influenced by social science statistics^h with both positive and negative consequences for social change. Improvements that are not statistically significant effectively didn't happen, and those that do are presumed replicable.⁴⁷⁻⁵⁰ In contrast, in complex systems, because small effects and interactions become the seeds of system-wide change, small wins can become big wins over time.

Improving the health of even one child, for example, can have a cascade of non-linear effects that result in a significantly healthier community years later. One child can become a local leader who works for the good of the community, or they can fire the gun that becomes a common element in a distressed community's traumatic stories. In a complex system, systemic change can begin with one child. In traditional evaluation, however, a program that works for only one child is not regarded as working at all.

Complexity science encourages a second look at how practices, programs, and policies are regarded as "evidence-based."⁵¹ Evidence-based essentially means that a program is based on what worked in the past with the assumption that the future will follow the same pattern. This assumption runs contrary to the features of complex systems (which may be one factor behind the replication crisis in the social sciences).⁵² While it's tempting to make this and implementation fidelity the gold standards for programming, approaches that allow for responsiveness to changing circumstances and the cultivation of small outcomes are likely to achieve better results in complex systems.⁵³⁻⁵⁴

One year after the Insights to Action sensemaking workshop, Palm Health Foundation continues to use SenseMaker to invite feedback and monitor change, and communities continue to share their voice. By working collaboratively with community residents, by listening and responding to their lived experiences, Palm Health Foundation and the Healthier Together communities improve health and well-being in Palm Beach County.

^h Frequentist statistics based on the Gaussian (normal) distribution and use of p values

References

1. Healthy People 2020 (2020). *Social determinants of health*. Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved from <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health>
2. CSDH (2008). *Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health*. Geneva, World Health Organization.
3. Mode, N. A., Evans, M. K., & Zonderman, A. B. (2016). Race, neighborhood economic status, income inequality and mortality. *PLoS ONE*, 12;11(5):1-14. doi:10.1371/journal.pone.0154535
4. Braveman, P. A., Cubbin, C., Egerter, S., Williams, D. R., & Pamuk, E. (2010). Socioeconomic disparities in health in the United States: What the patterns tell us. *Am J Public Health*, 100(S1):S188-S196.
5. Ward-Smith, P. (2007). The effects of poverty on urologic health. *Urologic Nursing*, 27(5):445-446.
6. Singh, G. K., & Siahpush, M. (2006). Widening socioeconomic inequalities in US life expectancy, 1980-2000. *International Journal of Epidemiology*, 35(4):969-979.
7. Belle, D., & Doucet, J. (2003). Poverty, inequality, and discrimination as sources of depression among U.S. women. *Psychology of Women Quarterly*, 27(2):101-113.
8. Caughy, M. O., O'Campo, P. J., & Muntaner, C. (2003). When being alone might be better: Neighborhood poverty, social capital, and child mental health. *Social Science & Medicine*, 57(2):227-237.
9. Meltzer, R., & Schwartz, A. (2016). Housing affordability and health: Evidence from New York City. *House Policy Debate*, 26(1):80-104.
10. Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: a multilevel study of collective efficacy. *Science*, 277(5328):918-24.
11. Wodtke, G., Elwert, F., Harding, D. J. (2016). Neighborhood effect heterogeneity by family income and developmental period. *American Journal of Sociology*, 121(4):1168-1222.
12. Kawachi, I., Adler, N. E., & Dow, W. H. (2010). Money, schooling, and health: Mechanisms and causal evidence. *Ann NY Acad Sci*, 1186(1):56-68.
13. Brennan Ramirez, L. K., Baker, E. A., & Metzger, M. (2008). *Promoting Health Equity: A Resource to Help Communities Address Social Determinants of Health*. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention.
14. CDC. (2008). Community Health and Program Services (CHAPS): Health Disparities Among Racial/Ethnic Populations. Atlanta: U.S. Department of Health and Human Services.
15. Child Opportunity Index (COI). (2020). Retrieved from <http://www.diversitydatakids.org/child-opportunity-index>
16. Noelke, C., McArdle, N., Baek, M., Huntington, N., Huber, R., Hardy, E., & Acevedo-Garcia, D. (2020). Child Opportunity Index 2.0 Technical Documentation. Retrieved from diversitydatakids.org/research-library/research-brief/how-we-built-it

17. Arias, E., Escobedo, L. A., Kennedy, J., Fu, C., & Cisewski, J. (2018). U.S. Small-area Life Expectancy Estimates Project: Methodology and Results Summary. National Center for Health Statistics. *Vital Health Stat*, 2(181).
18. Mowles, C. (2014). Complex, but not quite complex enough: The turn to the complexity sciences in evaluation scholarship. *Evaluation*, 20(2):160-175.
19. Cilliers, P. (1998). *Complexity and Postmodernism: Understanding Complex Systems*. Routledge.
20. The Health Foundation. (2010). *Evidence scan: Complex adaptive systems*. Retrieved from <https://www.health.org.uk/sites/default/files/ComplexAdaptiveSystems.pdf>
21. Waldrop, M.M. (1994). *Complexity: the emerging science at the edge of order and chaos*. Harmondsworth: Penguin.
22. Dodder, R., & Dare, R. (2000). *Complex Adaptive Systems and Complexity Theory: Inter-related Knowledge Domains*. Massachusetts: Massachusetts Institute of Technology.
23. Singh, N., Gupta, V. K., Kumar, A., & Sharma, B. (2017). Synergistic effects of heavy metals and pesticides in living systems. *Front. Chem.*, 5:70. doi: 10.3389/fchem.2017.00070
24. Feldman, J. (2018). Good health harmed by a cascade of complex pesticide effects. *Pesticides and You*, Winter 2018-2019, 9-19. Retrieved from <https://beyondpesticides.org/resources/journals>
25. Institute of Medicine and National Research Council. (2015). The U.S. Food and Agriculture System as a Complex Adaptive System. In M. C. Nesheim, M. Oria, & P. T. Yih (Eds.), *A Framework for Assessing Effects of the Food System*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/18846>
26. Langenberg, S., & Wesseling, H. (2016). Making Sense of Weick's Organising. A Philosophical Exploration. *Philosophy of Management*, 15:221-240. <https://doi.org/10.1007/s40926-016-0040-z>
27. Priede Schubert, A. (2015). Evaluations as Interventions: Process Use of Program Recipients. *UCLA*. ProQuest ID: PriedeSchubert_ucla_0031D_13982. Merritt ID: ark:/13030/m5tf2sb2. Retrieved from <https://escholarship.org/uc/item/1sp6k1vz>
28. Henry, G. T. & Mark, M. M. (2003). Beyond use: Understanding evaluation's influence on attitudes and actions. *American Journal of Evaluation*, 24:293-314.
29. Snowden, D. J., & Boone, M. E. (2007). A leader's framework for decision making. *Harvard Business Review*, 85:68-76. PMID 18159787.
30. Arnstein, S. R. (1969). A ladder of citizen participation. *Journal of the American Planning Association*, 35(4):216-224.
31. Meriam, B. (2010). *Signifier mapping*. Cognitive Edge. Retrieved from <https://cognitive-edge.com/articles/signifier-design-for-cultural-mapping-project/>
32. Van der Merwe, S. E., Biggs, R., Preiser, R., Cunningham, C., Snowden, D. J., O'Brien, K., Jenal, M., Vosloo, M., Blignaut, S., & Goh, Z. (2019). Making Sense of Complexity: Using SenseMaker as a Research Tool. *Systems*, 7(2). <https://doi.org/10.3390/systems7020025>
33. Tsey, K. (2008). 'The 'Control Factor': Important but neglected social determinant of health' (correspondence). *The Lancet*, 372(9650):1629.

34. Tsey, K., Wilson, A., Haswell-Elkins, M., Whiteside, M., McCalman, J., Cadet-James, Y., & Wenitong, M. (2007). Empowerment-Based Research Methods: A 10-Year Approach to Enhancing Indigenous Social and Emotional Wellbeing. *Australasian Psychiatry*, 15(1_suppl), S34-S38. <https://doi.org/10.1080/10398560701701163>
35. Ansoff, H. I. (1975). Managing Strategic Surprise by Response to Weak Signals. *California Management Review*, 18(2):21-33.
36. Burman, C. J., Aphane, M., & Delobelle, P. (2016). Weak signal detection: A discrete window of opportunity for achieving 'Vision 90:90:90'?. *Journal des Aspects Sociaux du*, 13(1):17-34.
37. Taleb, N. N. (2020). *Statistical Consequences of Fat Tails*. STEM Academic Press.
38. Johnson, S. (2010). *Where Good Ideas Come From: The Natural History of Innovation*. New York: Riverhead Books.
39. Healthier Neighbors (2019). 38 Projects: Redefining health in our community. Retrieved from <https://healthierneighbors.com/2019-winners>
40. Casella, D., Magara, P., Kumasi, T. C., Guijt, I., & van Soest, A. (2014). *The Triple-S Project SenseMaker Experience: A Method Tested and Rejected*. (Triple-S Working Paper 9) The Hague: IRC.
41. Lambe, F., Ran, Y., Jürisoo, M., Holmlid, S., Muhoza, C., Johnson, O., & Osborne, M. (2020). Embracing complexity: A transdisciplinary conceptual framework for understanding behavior change in the context of development-focused interventions. *World Development*, 126. 104703. <https://dx.doi.org/10.1016/j.worlddev.2019.104703>
42. Meadows, D. (1999). *Thinking in Systems*. USA: Sustainability Institute.
43. Carey, G. & Crammond, B. (2015). Systems change for the social determinants of health. *BMC Public Health*, 15(1):662. DOI: 10.1186/s12889-015-1979-8
44. Rutter, H., Savona, N., Glonti, K., Bibby, J., Cummins, S., Finewood, D. T., Greaves, F., Harper, L., Hawe, P., Moore, L., Petticrew, M., Rehfuess, E., Shiell, A., Thomas, J., & White, M. (2017). The need for a complex systems model of evidence for public health. *Lancet* (London, England), 390(10112): 2602-2604. [https://doi.org/10.1016/S0140-6736\(17\)31267-9](https://doi.org/10.1016/S0140-6736(17)31267-9)
45. The Health Foundation. (2010). *Evidence scan: Complex adaptive systems*. Retrieved from <https://www.health.org.uk/publications/complex-adaptive-systems>
46. Miles, A. (2009). Complexity in medicine and healthcare: People and systems, theory and practice. *Journal of Evaluation in Clinical Practice*, 15:409-410.
47. Iso-Ahola S.E. (2017) Reproducibility in Psychological Science: When Do Psychological Phenomena Exist? *Front. Psychol.*, 8:879. doi: 10.3389/fpsyg.2017.00879
48. Vasishth, S., Mertzen, D., Jäger, L. A., & Gelman, A. (2019). "The statistical significance filter leads to overoptimistic expectations of replicability": Corrigendum. *Journal of Memory and Language*, 104, 128. <https://doi.org/10.1016/j.jml.2018.09.004>
49. McKelvey, B., & Pierpaolo, A. (2005). Why Gaussian statistics are mostly wrong for strategic organization. *Strategic Organization*, 3(2):219-228.
50. Diener, E. & Biswas-Diener, R. (2020). The replication crisis in psychology. In R. Biswas-Diener & E. Diener (Eds), *Noba textbook series: Psychology*. Champaign, IL: DEF publishers. Retrieved from <http://noba.to/q4cvydeh>

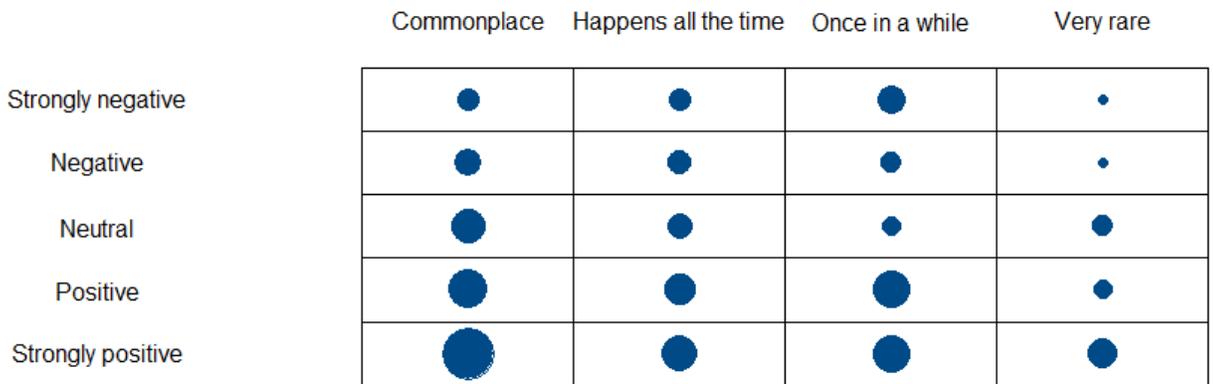
51. Kroelinger, C. D., Rankin, K. M., Chambers, D. A., Diez Roux, A. V., Hughes, K., & Grigorescu, V. (2014). Using the principles of complex systems thinking and implementation science to enhance maternal and child health program planning and delivery. *Maternal and Child Health Journal*, 18(7):1560-1564.
<https://doi.org/10.1007/s10995-014-1586-9>
52. Grant, R., & Hood, R. (2017). Complex systems, explanation and policy: implications of the crisis of replication for public health research. *Critical Public Health*, 27(5):1-8.
<http://dx.doi.org/10.1080/09581596.2017.1282603>
53. Todd, B., et al. (2020). Is it fair to say that most social programmes don't work? *80,000 Hours*. Retrieved from <https://80000hours.org/articles/effective-social-program>
54. Carey, G., Crammond, B., Malbon, E., & Carey, N. (2015). Adaptive policies for reducing inequalities in the social determinants of health. *Int J Health Policy Manag.* 4(11):763-767.doi:10.15171/ijhpm.2015.170
55. Snowden, D. (2011). The mantra of resilience. Cognitive Edge Blog. Retrieved from <https://cognitive-edge.com/blog/the-mantra-of-resilience>

Appendix A. Additional Figures

Emotional Tone and Prevalence of Stories

The prevalence of stories according to storytellers (i.e., commonplace, happening all the time, occurring once in a while, or very rare) was related to their emotional tone.ⁱ Strongly negative stories involved experiences that were more likely to be characterized as happening “once in a while” (as opposed to very rarely or often), and neutral stories were likely to involve experiences that were either commonplace or very rare.

Figure 29. Number of stories for each combination of tone and prevalence (e.g., “negative” and “happens all the time”) represented by circle size.



ⁱ $\chi^2 = 26.4$, $df = 12$, $p = .009$

Figure 30. Plot showing the relationship between the emotion tone of stories and their prevalence. Darker colors indicate that the relationship is stronger. Blue means that stories are more likely to be characterized by the specific tone and prevalence (e.g., “strongly negative” and “once in a while”), and red means that stories are less likely be given each label (e.g., “neutral” and “once in a while”).

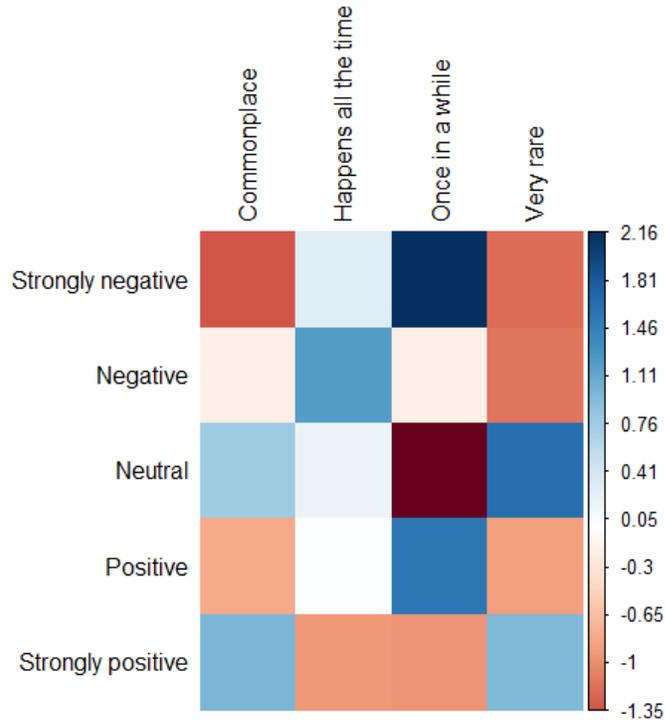
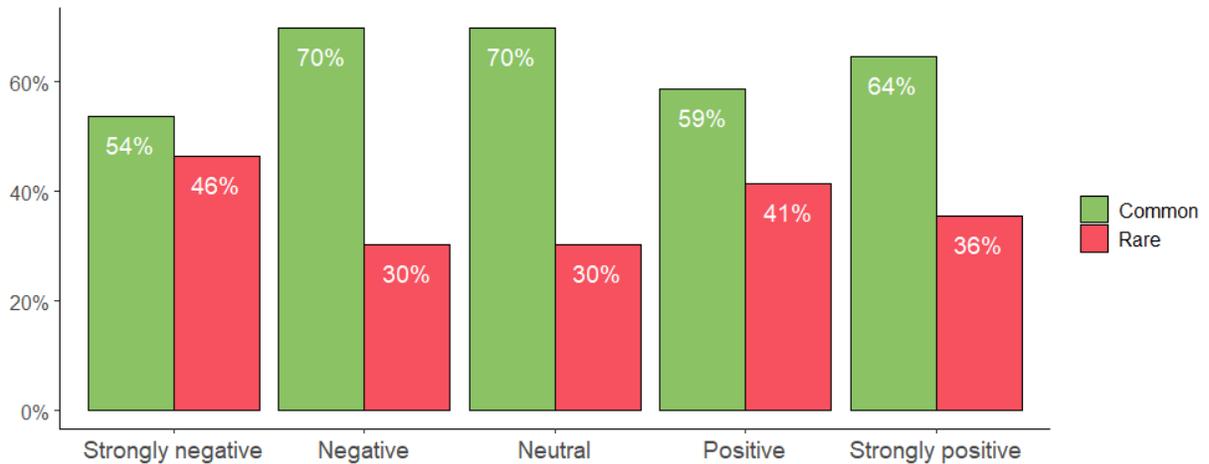


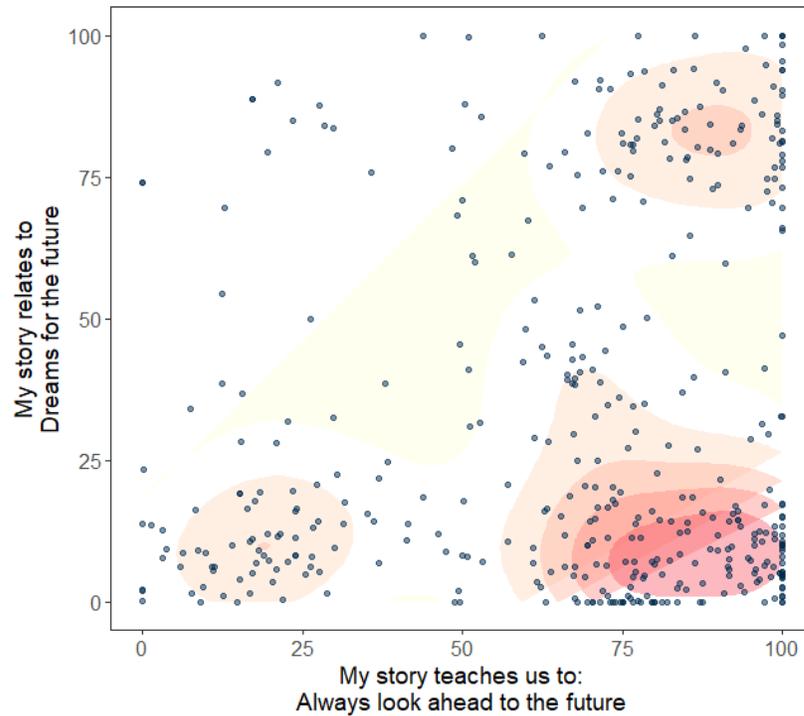
Figure 31. Percent of stories considered common (“commonplace” or “happening all the time”) or rare (“once in a while” or “very rare”) for each emotional tone.



Comparing Responses to Separate Questions

Below are additional examples of heatmaps (scatterplots with density gradients) showing the relationship between responses to different follow-up questions.

Figure 32. "Always look ahead to the future" and "My story relates to dreams for the future"



Below is an example of one of the stories (in the lower-right cluster) which was not related to dreams of the future yet teaches us to always look ahead to the future:

"I remember after the annual roots festival which took place every year a group of us would go on Atlantic ave and post up while the nice cars passed by after the festival let out. This was tradition up until 1999 when the than Delray Beach police Chief order his officer to suite up in riot gear and come disperse of the crowd. I remember feeling helpless and going home and asking my mom, Why would they treat us like that. This was well before police and community relationships mattered to our city leaders."

Figure 33. "They just did it, no reason" and "The community is volatile."

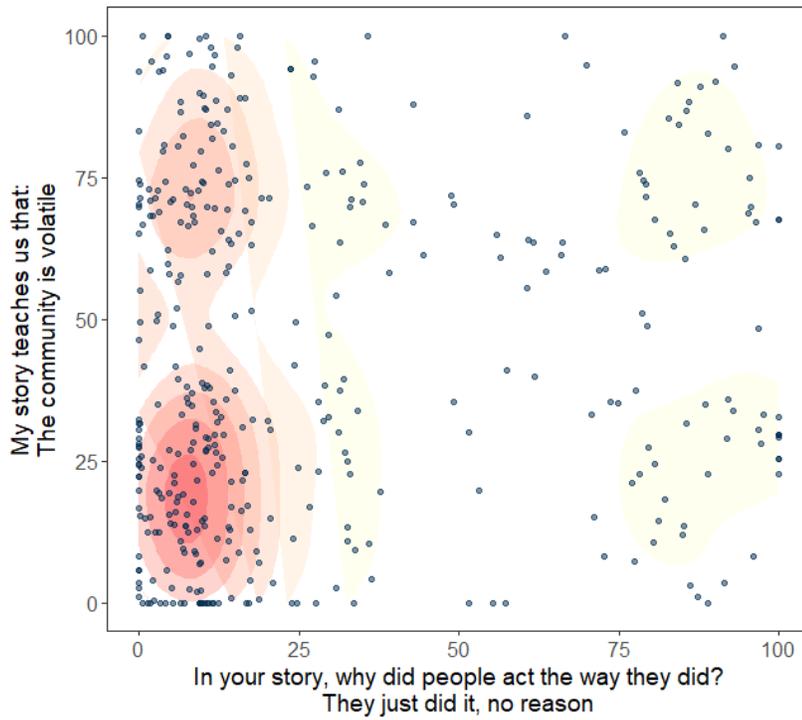
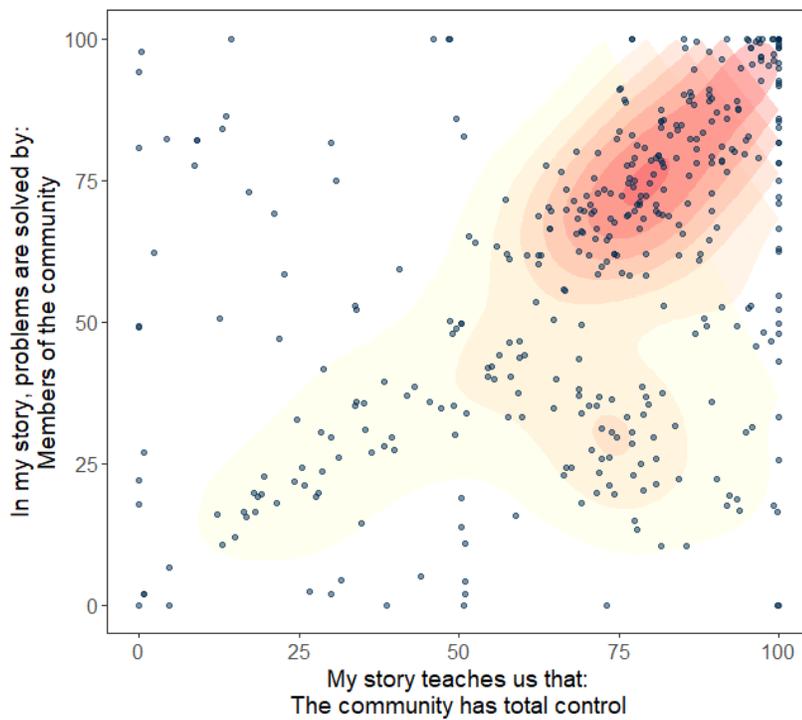


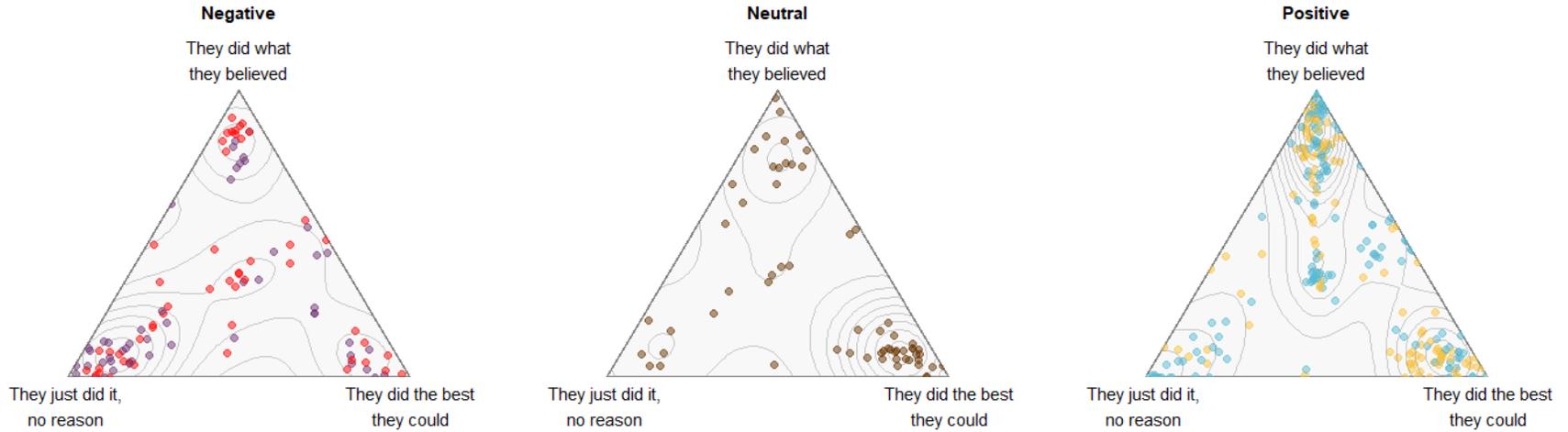
Figure 34. "The community has total control" and problems solved by "Members of the community"



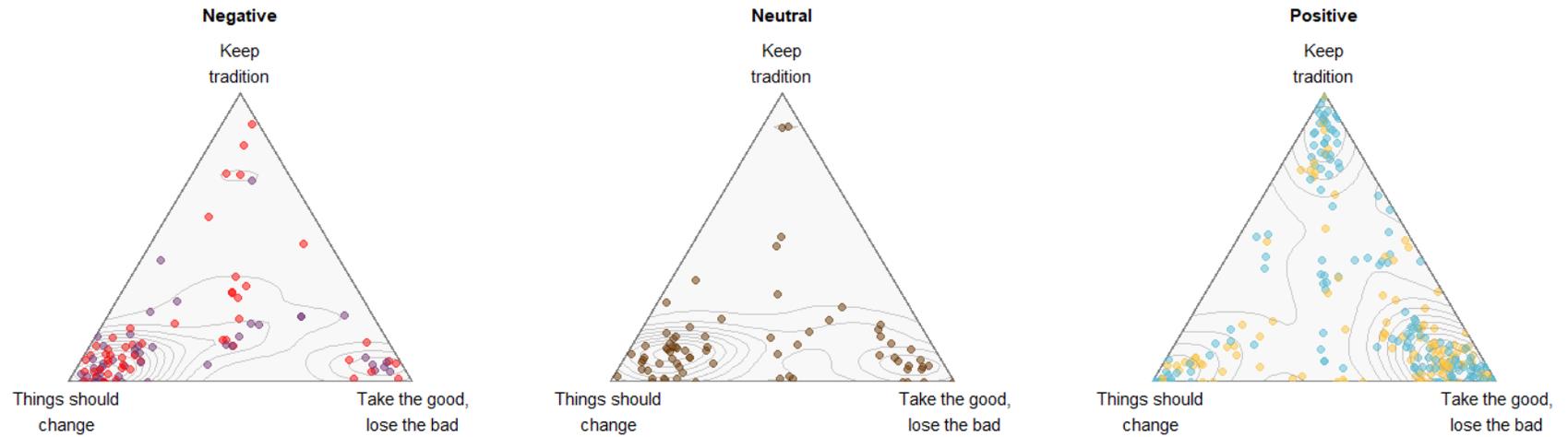
Emotional Tone and Triad Questions

Figure 35. Responses to triads split by emotional tone.

In your story, why did people act the way they did?

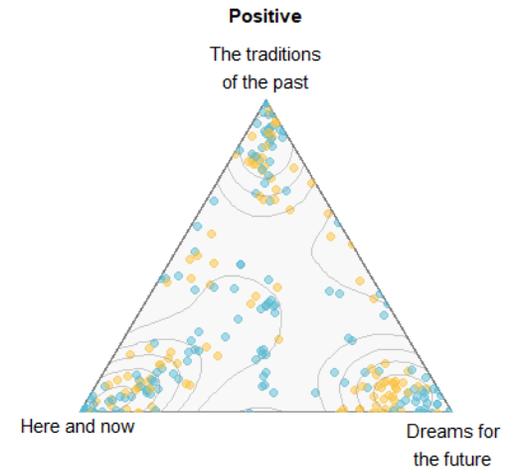
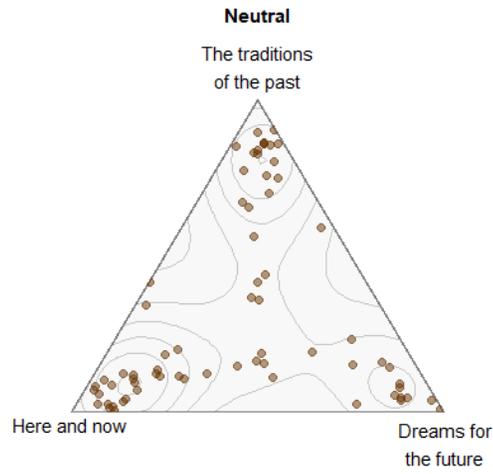
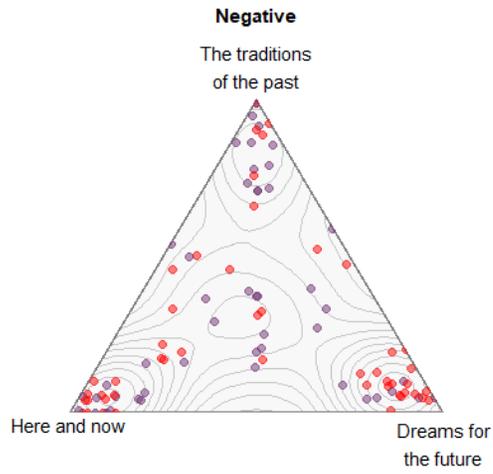


The lesson in your story is:

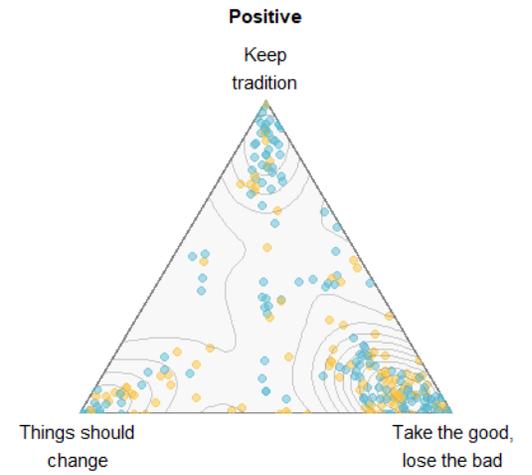
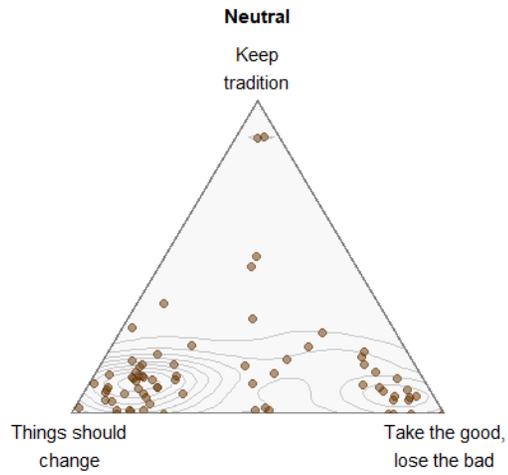
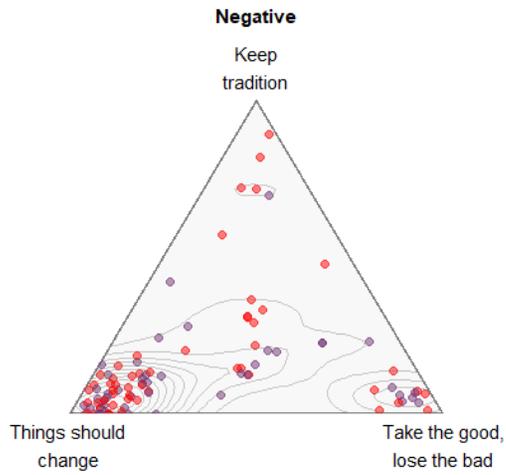


Emotional tone of story: ● Strongly negative ● Negative ● Neutral ● Positive ● Strongly positive

My story relates to:



The lesson in your story is:



Emotional tone of story: ● Strongly negative ● Negative ● Neutral ● Positive ● Strongly positive

Appendix B. Normality of Triad and Dyad Data

Data obtained using SenseMaker is not normally distributed. Figures 36 and 37 illustrate this using data obtained as part of the We Are Here project.

Figure 36. Density plot and qqplot for the first triad, for the response, "They did what they believed."

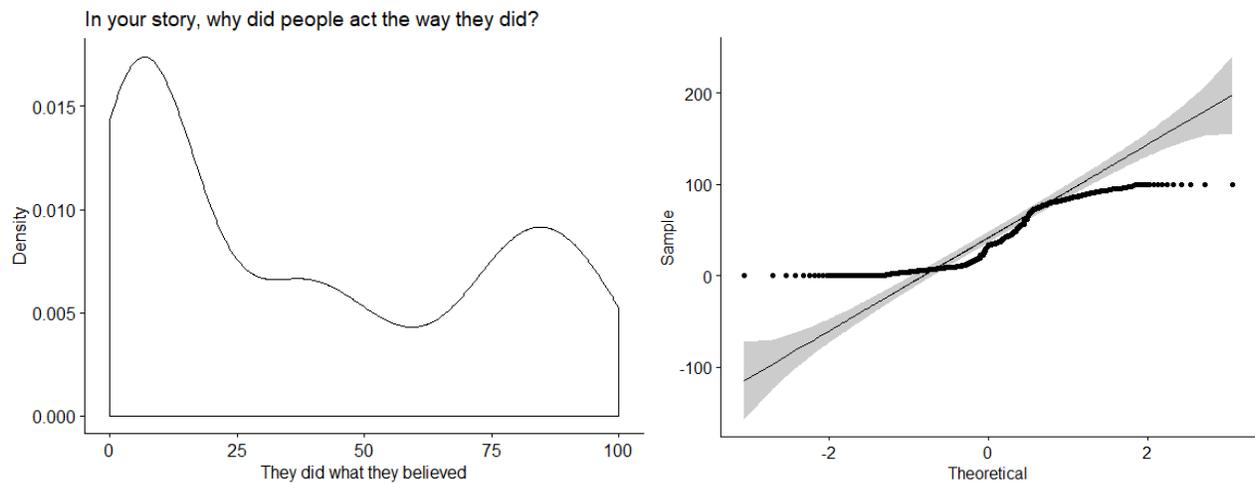
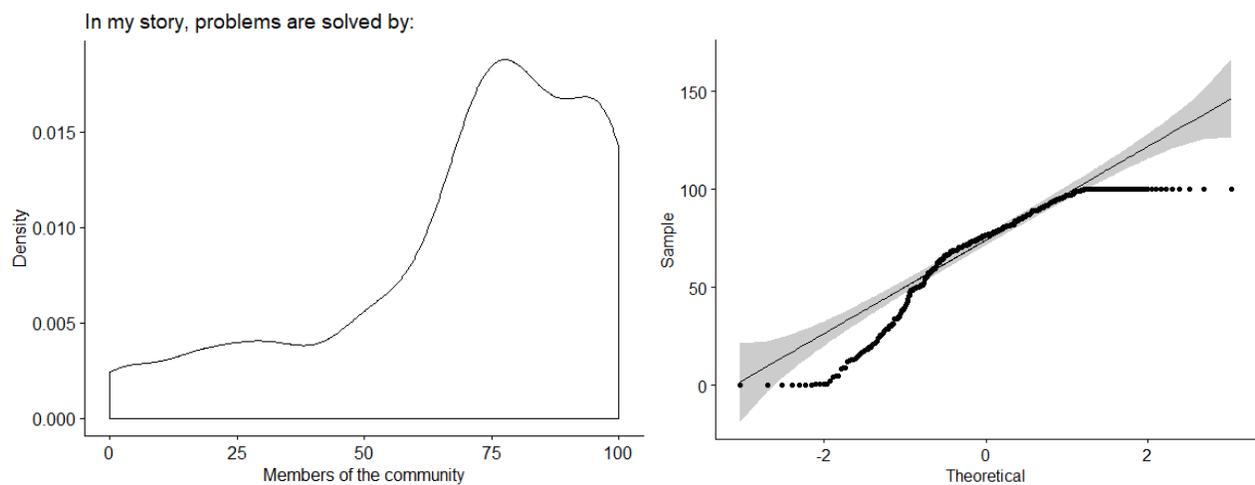


Figure 37. Density plot and qqplot for the first dyad.



A Shapiro-Wilk test showed significant departures from normality for both the triad, $W = 0.86$, $p < .001$, and dyad, $W = 0.89$, $p < .001$.

Appendix C. How Likely Are Unusual Outcomes?

Social programs and interventions are predicated on best guesses and statistical estimates about the likelihood of certain outcomes. An evaluation may show that positive outcomes are most likely following a certain intervention while negative outcomes are so rare that the possibility can be ignored.

The Normal Distribution

The probability of events or particular outcomes in human systems (e.g., communities, organizations, schools) is often estimated (both statistically and conceptually) by assuming that the spectrum of possible outcomes is distributed normally. In a “normal distribution” (or Gaussian distribution), certain outcomes occur very frequently. This is illustrated by a peak in the middle of the distribution (Figure 38). Similar outcomes occur somewhat less frequently, while highly unusual outcomes occur very rarely.

The height of the bars in each of the three figures represents the frequency or likelihood of the outcomes. For example, test scores can be normally distributed. If a score of 70% on a college exam is the most common outcome (i.e., the average, or mean score, represented by the bar in the center), a score of 75% would be slightly less common, 90% would be much less common, and 100% would be particularly rare.

Probability and Fat Tails

Many outcomes or experiences in social systems are not normally distributed, however. Instead, the distributions have a fat, heavy, or long tail (see Figures 39 and 40). This means that highly unusual outcomes occur more frequently. Examples of distributions with fat or long tails include the Cauchy (Figure 39), Pareto, or log-normal distributions (Figure 40). Of note, the terms fat-tailed and long-tailed are often used synonymously.

For distributions with long tails (Figure 40), there are a larger number of highly unusual outcomes

Figure 38. Normal distribution.

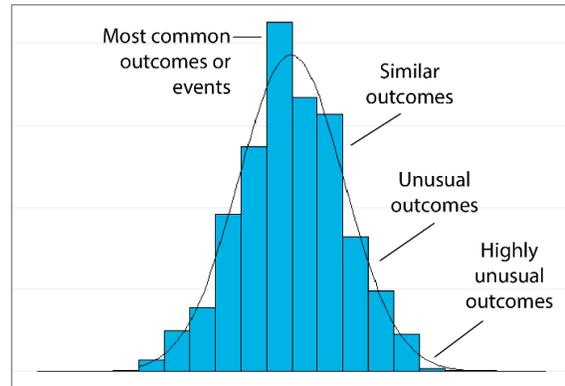


Figure 39. Fat-tailed distribution (Cauchy).

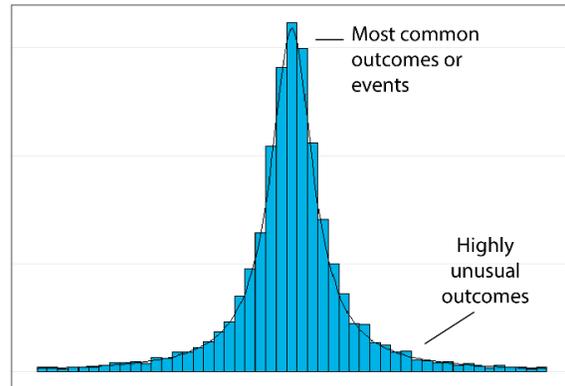
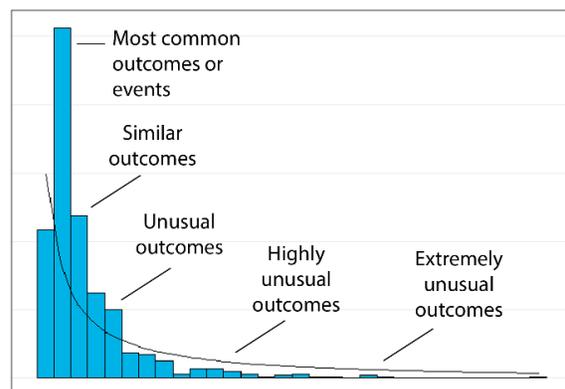


Figure 40. Long-tailed distribution (log-normal).



that can occur. In the college exam example, this would be akin to some students getting a score as high as 1000%. The distribution for household income, for example, has a long tail. In the United States, 50% of the population earns less than \$64,000 per year. At the same time, 5% of the population has a net worth exceeding \$2.5 million.

This distribution also describes some human behavior. The amount of time children spend playing video games on the popular platform, Steam, is high for a few, select video games and extremely low for a large number of games. Children spend 3 hours per day playing Portal 2 but less than 2 seconds per day, on average, playing Contraption Maker.

How to Lead in a Fat-Tailed World

Assuming that outcomes or experiences are normally distributed when they instead have a fat or long tail can lead evaluators or program planners to underestimate the likelihood of unusual outcomes or ignore the possibility of rare-but-consequential events. In economics, for example, underestimating the probability of financial losses can lead to bankruptcy, and failing to prepare for rare but extreme events can lead to economic collapse.

Nassim Taleb, a statistician and former risk analyst, notes that for fat-tailed distributions, "ruin is more likely to come from a single extreme event than from a series of bad episodes."³⁷ He adds, "as we fatten the tails we get higher peaks, smaller shoulders, and a higher incidence of a very large deviation."

Using a normal distribution to estimate outcomes that aren't normally distributed results in misleading estimates. Dave Snowden, founder of Cognitive Edge, writes, "An outlier event, dismissed as an outlier on one distribution turns out to have a much higher probability if we use the more naturally occurring Pareto one."⁵⁵

Speaking about risk assessment strategies, the higher-than-estimated probability of negative outcomes is one reason Dave Snowden urges the use of safe-to-fail interventions. He writes, "Agility properly understood is not about succeeding faster, but managing failure better."

Both Taleb and Snowden highlight the challenges of gauging probability at all using fat-tailed distributions. For a normal distribution, smaller samples are required to obtain a mean and variance approaching that of the population. For fat-tailed distributions, it may take several thousand measurements before the sample resembles the population, if this happens at all. Features of the population (i.e., mean, standard deviation) cannot be estimated using a sample, descriptive statistics cannot be generalized to the population, and inferential statistics (e.g., linear least-squares regression) do not work.³⁷

When statistical estimation is no longer possible, new strategies become necessary. "In the Pareto world," says Snowden, "strategies can not [sic] be based on probability assessments, instead we are asking questions about which safe-to-fail experiments have plausibility of coherence."

