SEED + SPARK

Using Nature as a Model to Reimagine How We Learn and Live

Seed + Spark takes its readers in search of a better understanding of the future of learning—and, by extension, the future of humanity. Believing "the future is already here; it's just not evenly distributed," Seed + Spark provides a framework for remaking our schools, our workspaces, and our social structures in ways that align with the design principles of the natural world. The result is an eclectic, provocative series of interviews, ideas, and case studies in which parallel worlds collide, and our basic understanding of our place on the planet is forever altered.

SEED + SPARK

To build a better future, we humans must become better at learning from the inherent wisdom that surrounds us. In this remarkable book, Mother Nature's guiding principles are brought to life, and a path forward is brought into clearer view. Amidst the madness of the world, *Seed + Spark* is a beacon.

—Sir Ken Robinson, best-selling author of *Finding Your Element*

This is more than a book. It is an exploration that provokes, inspires, confronts, tantalizes and teaches us how to engage fully with life's dynamics so that we may create a world that blossoms with possibilities. Especially for the children, this book offers us the same experiences of curiosity, imagination, and learning that are needed to bring education back to life.

—Margaret Wheatley, author of *Leadership and the New Science*, and, most recently, *Who Do We Choose To Be?*

The authors of *Seed + Spark* draw on the attributes of nature — identity, information, and relationships — to imagine a new approach to education. Brought to life with dazzling illustrations, the text ranges widely drawing on perspectives from both the natural and cultural worlds. The questions raised in this curious, insightful book strike at the heart not just of education, but of life itself.

—Daniel H. Pink, #1 New York bestselling author of *WHEN* and *DRIVE*

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The quality of our life
depends on the quality
of the seeds
that lie deep in our consciousness.

— Vasubandhu

Everything you see has its roots
In the unseen world . . .

Why do you weep?

That Source is within you
and this whole world
Is springing up from it.

—Rumi

Letter to the Reader

Dear Reader:

This book was written for the person who is holding it.

In the pages that follow, we identify seven design principles from the natural world that enable all living systems to thrive, and provide illustrative case studies and actionable ideas to help you apply those principles to the creation of truly *living* schools, workplaces, and social structures — ones that can give voice, clarity, meaning and form to a new story for how we learn and live, so that together we can build a better world, by design.

We need a new story (which is, in truth, not new at all) because the one we have lived with for centuries is antithetical to who we are and how life works. And so this book is an effort to help (re)orient us to what the wisest among us have always known:

That the universe is not like a clock, but a cloud.

That everything is not separate, but connected.

And that the change we seek will not come via critical mass, but critical connections.

To that end, the structure of *Seed + Spark* mirrors the structure of a healthy ecosystem. We begin with the three properties that animate a living system and provide it with seeds for growth: identity, information, and relationships; from there, we outline the conditions that allow such systems to naturally evolve, change and emerge; and then we move to the three properties that regulate a healthy system's ability to regenerate itself: patterns, processes and structures.

Within each of these sections, you'll encounter examples from art, science, and culture that progress along a continuum from the conceptual (the big idea) to the practical (how it looks when it's applied). Periodically, you'll find words of wisdom that are meant to serve both as provocations for reflection and threads you can hold as you move throughout the text. And at the end of each section, you'll find a set of "Inquiry Seeds" — questions, prompts, and community actions — that any of us can apply to our own work and life, immediately, in order to begin thinking and acting ourselves into a new way of being.

How we are at the small scale, after all, is how we are at the large scale.

And transformation is first and foremost an inside job.

This, then, is how we can build a better world — by ensuring that *all* living systems, from our schools to our companies to our homes and communities, are designed to affirm each person's inner spark, not dim it.

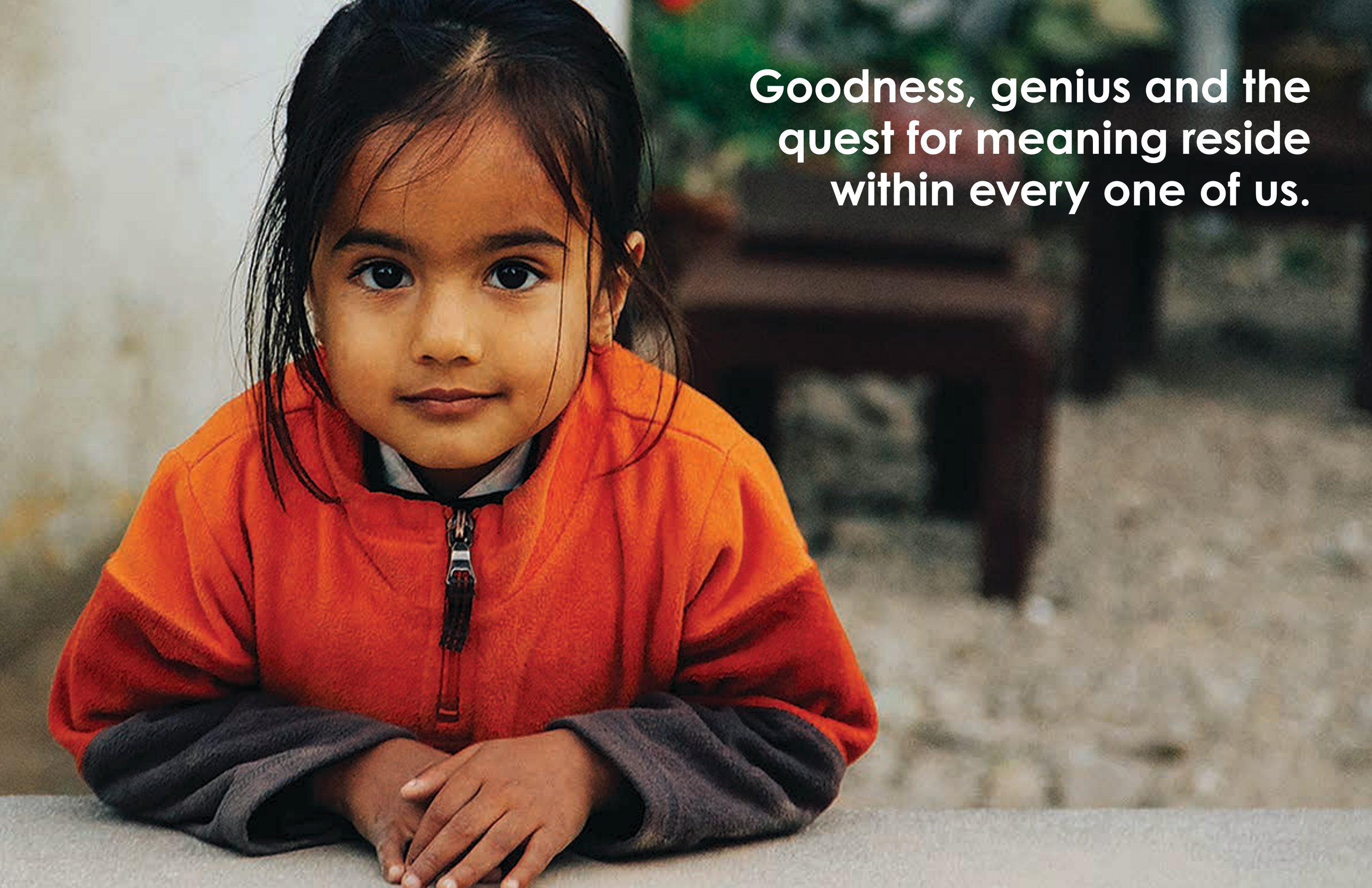
Learn more at seedandspark.live.

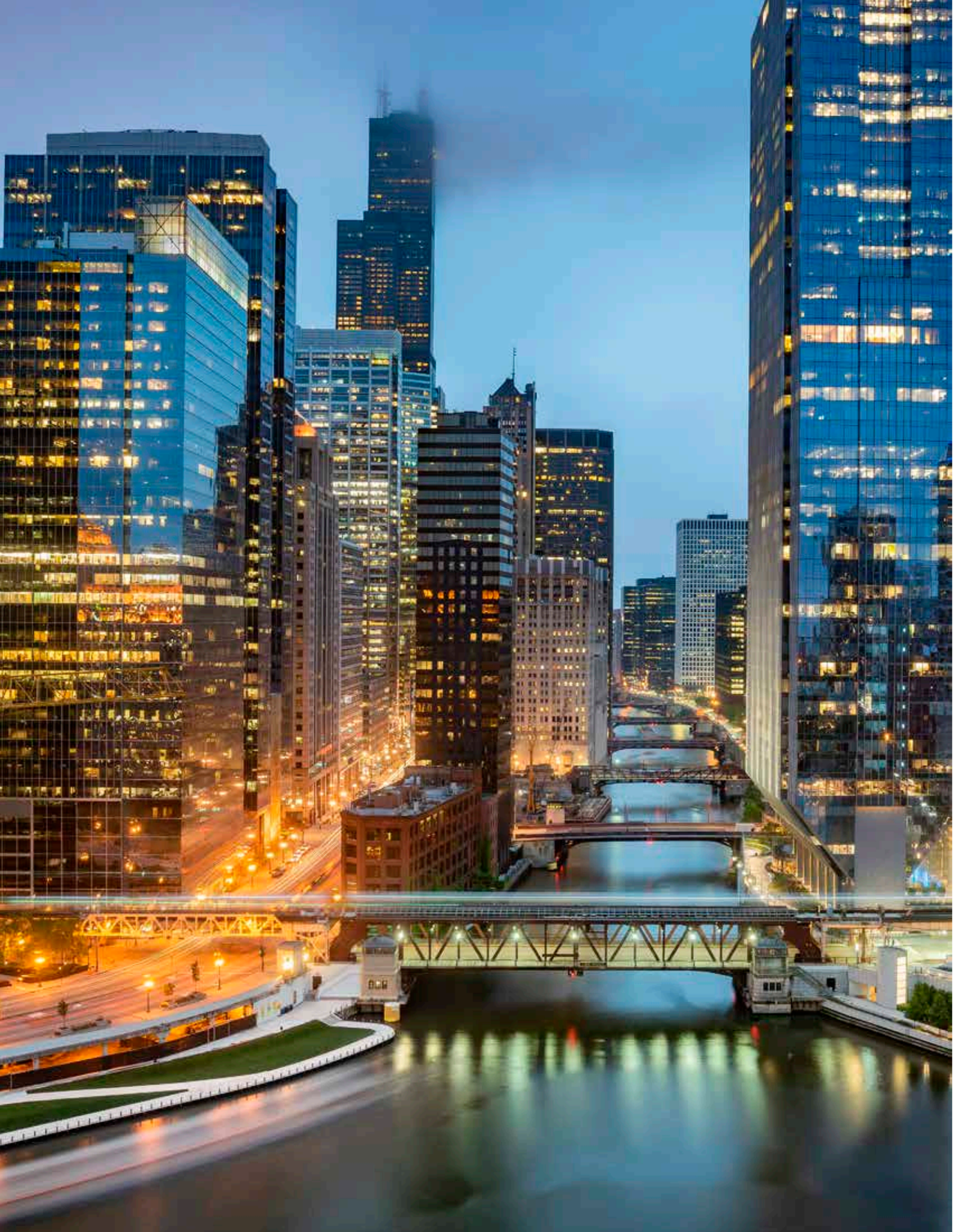
A new world is struggling to be born.

It will not emerge solely through the reinvention of institutions and social structures.

It will not arrive solely through the reformation of policies and priorities.

The world we seek depends on our ability to remember that our identity is interwoven into a living planet, and an interdependent human family.


Goodness, genius and the
quest for meaning reside
within every one of us.

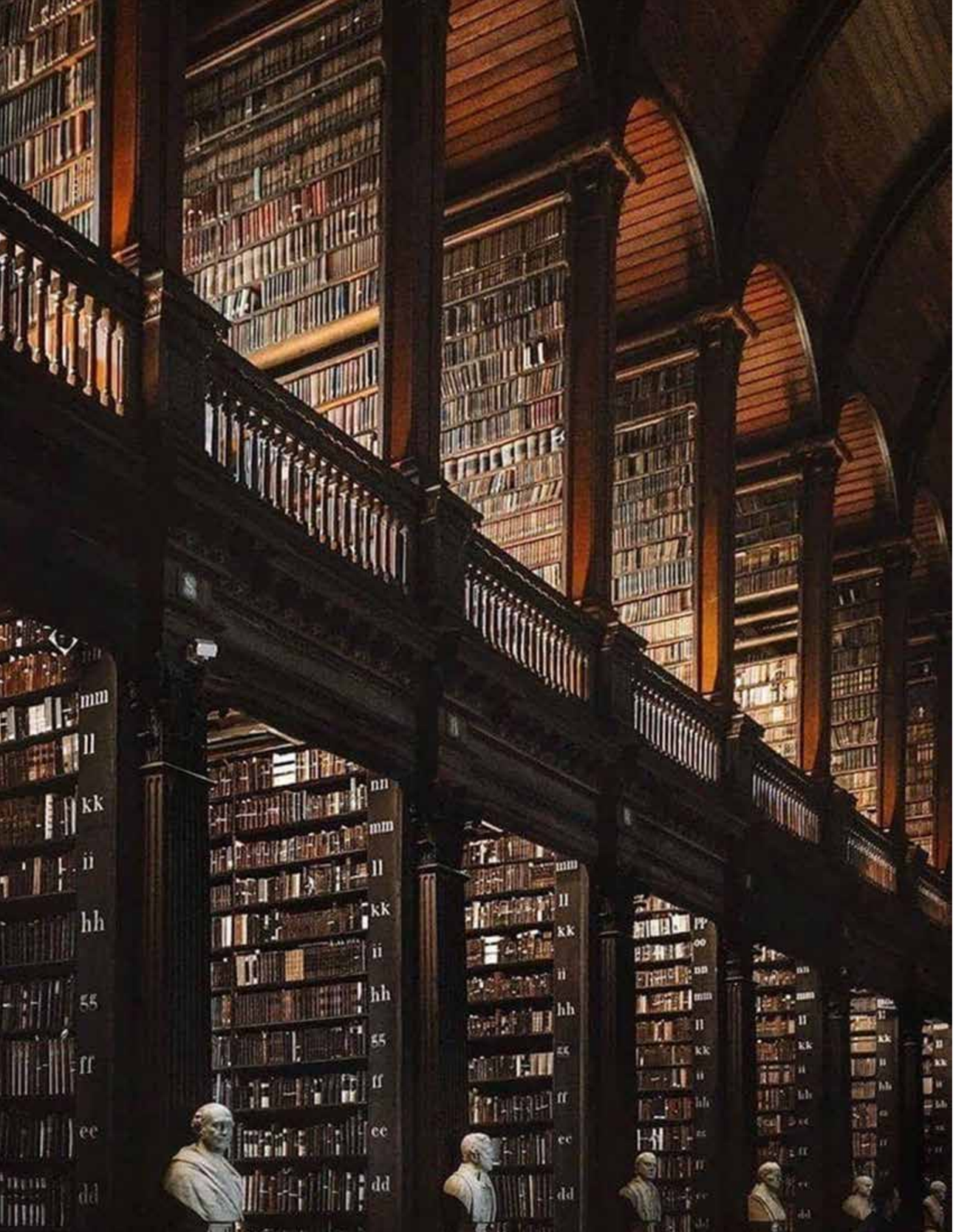


The needs and dreams of each of us are far more alike than they are different.

They must be ignited and nurtured with fearless intention and commitment.

We are born learning beings — powerfully shaped by the environments in which we learn.

How children are taught to think and solve problems *in* school is how they will think and solve problems *out* of school.



The business of schooling has become the unquestioned answer for how we educate our children.

It is not.

Knowing what we now know, we can no longer do what we now do.

To do so is educational malpractice.

To build a world that can work for all people, the innate power and creativity of the human spirit must be liberated in service of the needs we all share — security, community, fairness, belonging, hope.

The fullness of our humanity, the sustainability of our planet, and the emergence of a better world rest within this new story of learning — a story that, by design, can bring us back to LIFE.

CONTENTS

Foreword:
Stephanie Pace Marshall

> *"Education is at the point at which we decide whether we love the world enough to assume responsibility for it. And education too, is where we decide whether we love our children enough not to expel them from the world, nor to strike from their hands their chance of undertaking something unforeseen by us, but to prepare them in advance for the task of renewing a common world."*
>
> *— Hannah Arendt*

As an educator for over fifty years, the intellectual flourishing, emotional well-being and soulful growth of children have been at the center of my work.

I have listened to them; honored their questions; joined them on spontaneous expeditions of inquiry and imagination; and held them in gratitude, never knowing when their boundless creativity might emerge, and shift everything.

I sought to become a "child-whisperer," an uncommon yet apt analogy. Children need to be held in deeply reciprocal and caring relationships by those whom they trust will keep them safe, tell them the truth, and love them into fully becoming themselves.

I was grateful they became my teachers, enabling the design of learning environments, systems and institutions that invited them to soar, and they did.

For all these reasons, the questions embedded in Hannah Arendt's profound statement were unsettling and would not let me go, especially now.

What does it mean to love the world enough to assume responsibility for it?

What does it mean to love our children enough to prepare them to renew a common world?

And why did she unequivocally root these questions, so vital to the future of humanity and our planet, in education — and what we must now decide?

Because you hold this important book, I trust these questions hold you as well.

Seed + Spark uniquely and creatively responds to these questions by illuminating a generative narrative and lexicon for living system design, and the creation of human systems that flourish, just as life does.

It shines a light on the life-affirming learning story we must now tell, and shows what it looks like when this new story of wholeness, interdependence, belonging and emergent possibility is brought to life in our schools, communities, and organizations.

These are the places where the minds and hearts of our next generation of Earth stewards and

global citizens are nurtured; where boundaries are courageously challenged and crossed; and where children learn they are born with wings.

Through powerful essays that connect us to the science of learning and the dynamics of living systems, provocative interviews with pioneering practitioners from multiple fields, and inspiring case stories of communities breathing life into a new story of learning, *Seed + Spark* illuminates how dazzling and empowering learning becomes when children learn as life does — when they are immersed in the questions and problems that will shape our future and create a sustained and constructive human presence on the Earth.

It is our collective work, and our collective moment, to answer these questions:

Are we tending to our children wisely?

Are we preparing them to become the authors of a new story for renewing a common world?

Regrettably, my answer is no.

Decades of research on cognition and the brain have exponentially increased our understanding of learning, and the conditions within which it is ignited and nurtured. Yet we do not act on what we know, because it requires that we change what we do.

When children wrestle with powerful questions and the complexities and messiness of the real world, they develop agency, confidence, empathy and compassion, and are able to hear the voices of others as well as their own, often for the very first time.

When they recognize they are not alone, but part of something much bigger, they learn that individual actions matter, that everything is connected, and that they are responsible for their choices. Their moral compass becomes more accurate, their North Star shines brighter, and their commitment deepens to re-weave what is frayed but not yet broken.

This is what we want for our children. Yet it is not how we ask them to learn; it is not how we ask them to work; and it is not how we ask them to live.

We have lost our way. But our future resides within the growing minds of our children. How we ask them to learn creates the patterns of their thinking and their thinking shapes the world.

As always, mind-shaping is world-shaping. And although the nature of schooling as we know it has become the unquestioned answer to educating our children, it is not.

Children must learn as life does, within vibrant learning ecosystems that are "naturally right "by design. *Seed + Spark* illuminates how to bring this new learning story to life — and not just in schools, but in all human systems committed to ensuring that the human spirit thrives.

Imagine what might be possible if children experienced schools not only as places to learn, but as places where awe and astonishment resided. What then?

Whatever we want children to care for outside of school, they must care for inside; whatever we want children to create outside of school, they must create inside; whatever we want children to respect and love outside of school, they must respect and love inside. We know this is true.

In his important book, *21 Lessons for the 21st Century*, author Yuval Noah Harari writes: "Humankind is facing unprecedented revolutions. All our old stories are crumbling, and no new story has so far emerged to replace them. How can we prepare ourselves and our children for a world of such unprecedented transformations and radical uncertainties? What should we teach that will help him or her survive and flourish in the world of the twenty-second century?"

Embedded in these questions is the recognition that our old structurally-entrenched stories are crumbling because they are not capable of preparing us or our children to survive and flourish in the years ahead. When old stories crumble, the narrative void that results is destabilizing, and often paralyzing.

This is why we sense the ground is shifting. But it is not merely shifting; it is erupting and exposing the life-diminishing fault lines of the old story.

Yet despite the trauma, profound disruption and dislocation, the crumbling of the old stories is essential to our renewal. Each day brings greater clarity that our old stories are antithetical to who we are, and do not invite or celebrate the inherent connectedness, interdependence, kindness, goodness and courage of our collective humanity.

We can now choose who we want to be.

Inquiry is always the catalyst for transformation.

Deepening the quality of our inner lives, reweaving the bonds of human connections, and ensuring the sustainability of our planet are not possible within the current reductive, competitive and spirit-deforming paradigm of the old story, and how we design systems, organize our work and require our children to learn.

A vibrant new story is emerging and life is now our mentor for renewing a common world.

Sometimes there are moments in human history that beckon awakenings. They challenge us to re-evaluate our beliefs, relationships, patterns and reigning cultural stories. They invite us to create new language, new rules and new systems, and they call us to author and live into new stories that illuminate truths that have been present all along, but we have forgotten how to see.

The ancient Greeks called this time *Kairos* — the right moment.

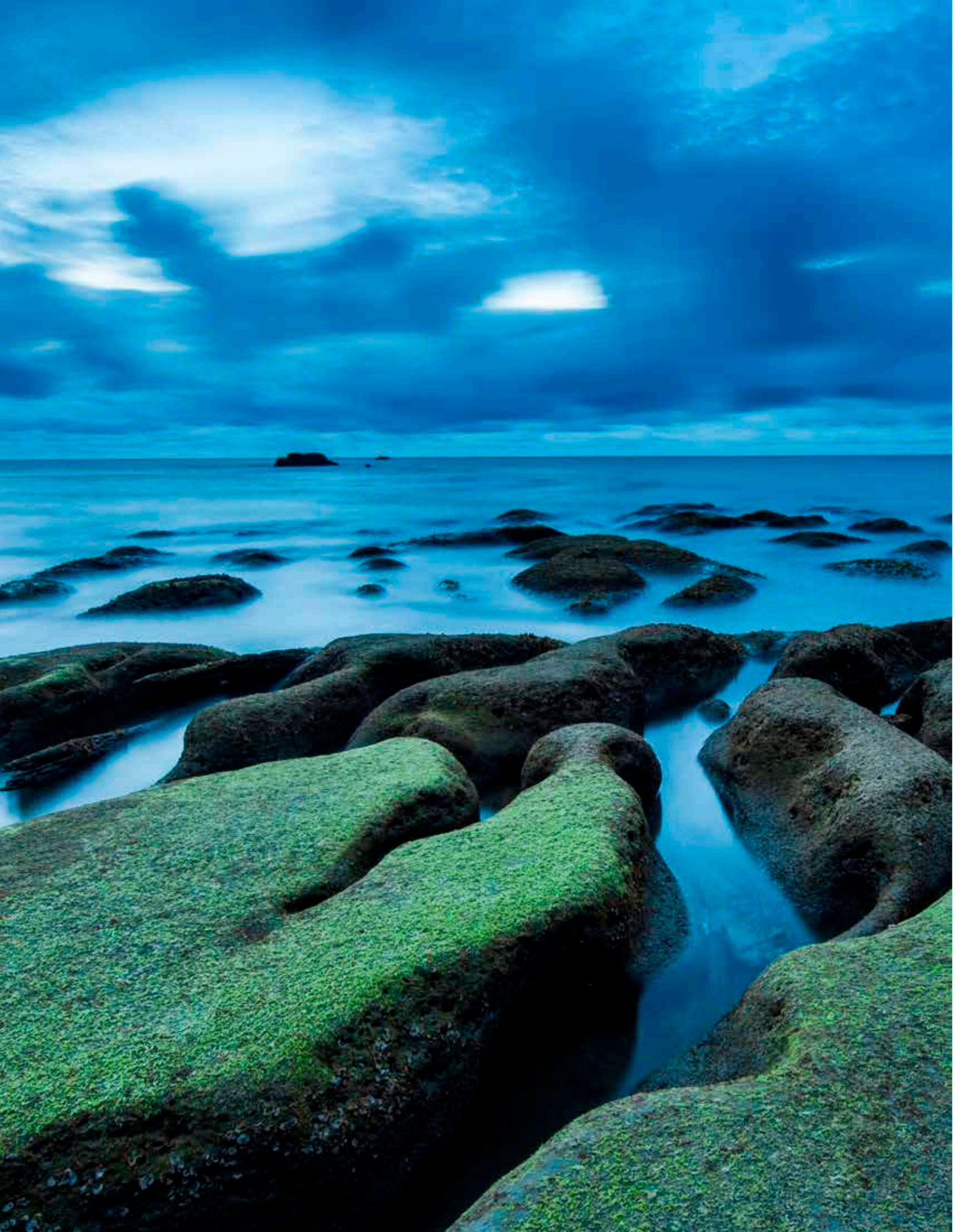
We are in such a time, and with life as our partner, we can become authors of a new story and a new learning covenant — one that reweaves our children's frayed connections to the web of life, to themselves, and to one another, and enables us to author whole and connected lives and create a world where all can thrive.

This is what it means to love the world enough to assume responsibility for it.

This is what it means to love our children enough to prepare them to renew a common world.

This is the gift of *Seed + Spark*.

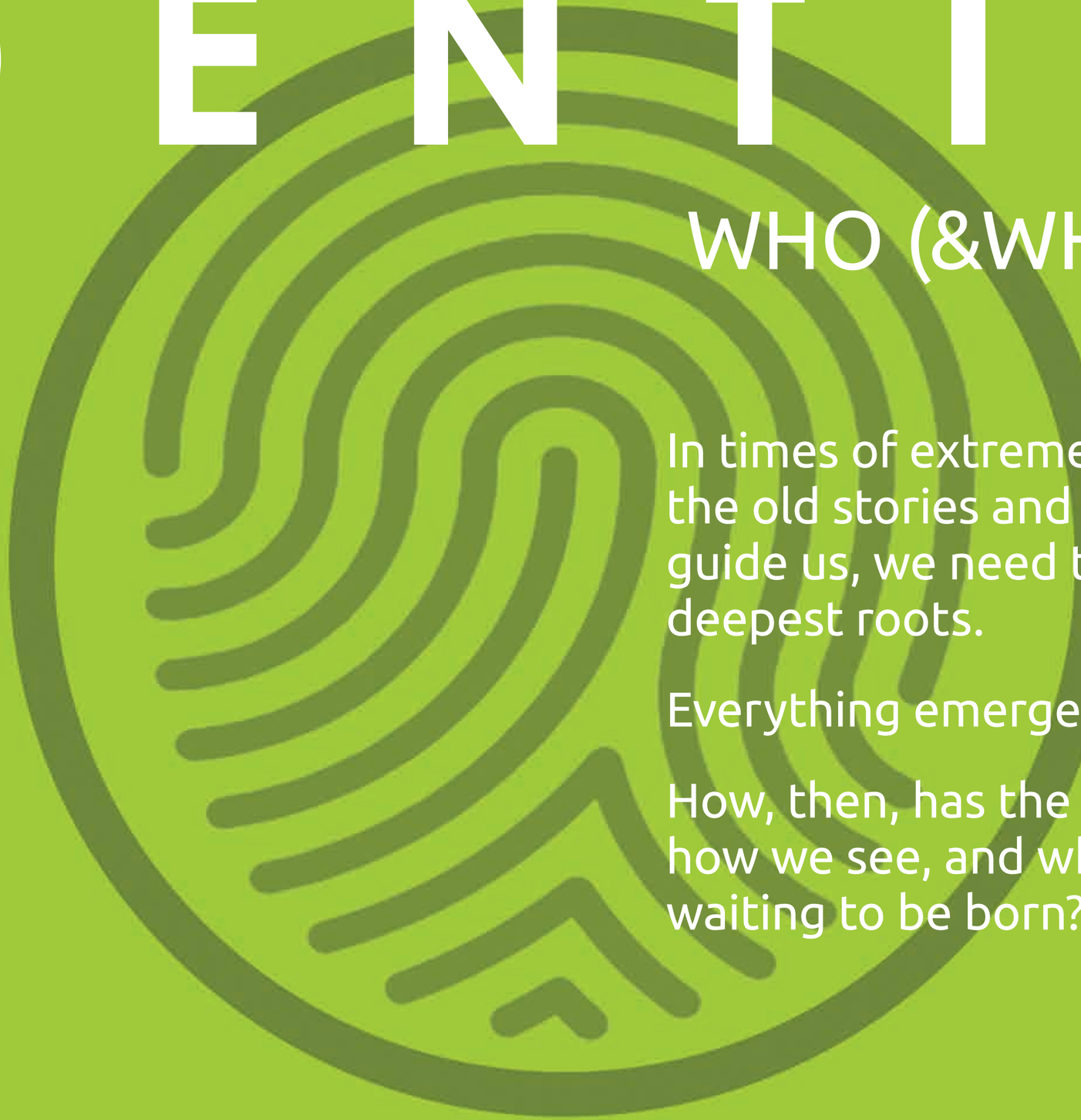
Stephanie Pace Marshall
Chicago, Illinois
2020



PART ONE
SEEDS FOR GROWTH

IDENTITY

WHO (&WHY) WE ARE



In times of extreme uncertainty, when the old stories and maps can no longer guide us, we need to reconnect to our deepest roots.

Everything emerges from identity.

How, then, has the old story shaped how we see, and what is the new story waiting to be born?

The Question: *Who's There?*

The problem was that we did not know whom we meant when we said "we."

—Adrienne Rich

More than four hundred years after it was written, people around the world are still reading, performing, and wondering about *Hamlet*.

Why?

The simple answer is because it's the world's most famous playwright's most famous play. But the complex answer is because the title character and we are kindred spirits.

Like every young person everywhere ever, Hamlet has visions of his future that don't align with the visions the adults in his life have for him. He is an artist and a dreamer — a person more comfortable in the world of ideas than the world of actions. And he is in love.

But Hamlet is also the future king of Denmark, which means he is bound by custom to avenge his father's murder — a duty that leads to his own untimely death in no small part because the act of killing goes against his very being.

No matter your age, then, to read *Hamlet* is to watch a fellow human being struggle between staying true to himself and accepting the role society has assigned him to play. And so Hamlet's struggle illuminates a central question we all must wrestle with — one that is not coincidentally posed by the first two words in the play:

"Who's there?"

This is a new question for *homo sapiens* — the being who knows, and who *knows* he knows. That's because for the great majority of our time on this planet, human beings have viewed the world almost entirely through the prism of "we," not "me."

As foragers, we lived in unquestioning obedience to the unknowable marvels of the natural world. And in the earliest civilizations, we lived to serve the needs of our Gods in Heaven — and then, later on, their hand-chosen emissaries on Earth.

In these long chapters of the human story — which make up more than 93% of our history as a species — our ancestors were most likely to find comfort, and a sense of identity, through their ability to fit usefully and invisibly into a larger community.

To stand out from the crowd was undesirable, since, in reality, doing so could mean ostracism or death.

To walk in someone else's shoes was unnecessary, since, in effect, we all wore the same shoes.

And to wonder about the world was to focus one's gaze outward, or upward.

Over time, however, the human gaze has shifted.

Beginning with the rise of the great religions, continuing through the citizen revolutions in France and the Americas, coursing through all of Shakespeare's plays, and running right up to the age of social media and the Selfie Stick, we humans have begun to increasingly look inward — for better and for worse.

At the same time, a wave of new discoveries in fields ranging from neuroscience to psychology have taught us that our need to understand "who's there" is more than just an exercise in navel-gazing; it's the way we deepen our empathic capacity to connect with our fellow creatures.

"We are learning," says social theorist Jeremy Rifkin, "against all of the prevailing wisdom, that human nature is not to seek autonomy — to become an island to oneself — but, rather, to seek companionship, affection, and intimacy. The conventional belief that equates self-development and self-consciousness with increasing autonomy has begun to lose its intellectual cachet.

A growing number of child development psychologists now argue the contrary — that a sense of selfhood and self-awareness depends on and feeds off of deepening relationships to other people. Empathy, in turn, is the means by which companionate bonds are formed."

"The brain is a social organ, made to be in a relationship," explains psychiatrist Dan Siegel. "What happens between brains has a great deal to do with what happens within each individual brain . . . [And] the physical architecture of the brain changes according to where we direct our attention and what we practice doing."

As far as words go, *empathy* is a new one — it didn't even appear until the early 20th century. It comes from the English translation of the German word *einfühlung*, which was used to describe the relationship between a work of art and its subject; it was later expanded to include interactions between people.

Those interactions, according to Rifkin, are what give rise to a deeper human identity, and a fully developed capacity for making sense of the world. "Empathic consciousness starts with awe," he contends. "When we empathize with another, we are bearing witness to the strange incredible life force that is in us and that connects us to all other living beings.

"It is awe that inspires all human imagination. Without awe, we would be without wonder and without wonder we would have no way to exercise imagination and would therefore be unable to imagine another's life 'as if' it were our own."

In other words, we have slowly flipped the paradigm of human understanding:

It's not the world that makes us wonder; it's our wondering that makes the world.

As the Chilean biologist-philosopher Humberto Muturana put it, "the world everyone sees is not *the* world but *a* world, which we bring forth with others."

This epiphany is changing more than just our understanding of the brain. In recent years, scientists in fields ranging from biology to ecology have revised the very metaphors they use to describe their work — from hierarchies to networks — and begun to affirm, as physicist Fritjof Capra says, "that partnership — the tendency to associate, establish links, and maintain symbiotic relationships — is one of the hallmarks of life."

Biologist Merlin Sheldrake agrees. "We are ecosystems," he writes, "composed of — and decomposed by — an ecology of microbes, the significance of which is only now coming to light. Symbiosis is a ubiquitous feature of life, one in which our selves emerge from a complex tangle of relationships only now becoming known."

Take fungi, for example — most of which form vast underground highways called *mycelium*, a thing that is best thought of not as a thing at all, but as a *process*, and "an exploratory, irregular tendency," as Sheldrake puts it. "Mycelium is ecologically connective tissue, the living seam by which much of the world is stitched into relation. Mycelium is a body without a body plan."

The same can be said of lichens, a composite organism of algae and bacteria that, Sheldrake says, "confuse our concept of identity and force us to question where one organism stops and another begins. Lichens are places where an organism unravels into an ecosystem and where an ecosystem congeals into an organism. Lichens are stabilized networks of relationships; they never stop lichenizing; they are verbs as well as nouns."

And lest we think this sort of behavior is restricted to the fungal realm, scholars like Siegel have suggested that the same principle applies to us — so much so that the very thing at the center of our most personal sense of self — the mind — may not be as distinct as we'd thought.

"Mind emerges as much in relationships as it does from physiological, embodied processes including brain activity," Siegel explains.

“Relationships are the crucible in which our lives unfold as they shape our life story, molding our identity and giving birth to the experience of who we are, and liberating — or constraining — who we can become.

If we consider that our minds are a part of an interacting, interconnected system that involves our bodies and our brains, as well as the environment in which we live, including our social relationships, we may be able to reconcile how the mind is part of one system that seems to be in two places at once.”

That's not just flowery prose; it’s how living systems operate in the natural world — by existing and creatively organizing within and between a boundary of *self.* Although this boundary is semipermeable and ensures the system is open to the continuous flow of matter and energy from the environment, the boundary itself is structurally closed.

A cell wall is a good example. It’s the boundary that establishes its system’s identity, distinguishes it from and connects it to its environment, and determines what enters and leaves. But because this meaning of “boundary” is as much about what it lets in as what it keeps out, the end result of this arrangement, according to the German biologist Andreas Weber, is a notion of *self* in which “every subject is not sovereign but rather an intersubject — a self-creating pattern in an unfathomable meshwork of longings, repulsions, and dependencies.”

The Chilean biologist, philosopher, and neuroscientist Francisco Varela agrees. “Life is a process of creating an identity,” he says. Every organism is “a meshwork of selfless selves.” And these principles of life are universally applicable.

What’s true for the microorganism is just as true for the megalopolis.

But what does that *really* mean in the daily whir of our personal and professional lives? And how do we intentionally build our empathetic muscles in the service of building a living, thriving organization?

As you’ll see in the stories and examples that follow, our work begins with a commitment to hold the space, and make the time, to allow all members of a learning community — from the youngest to the oldest — to understand that each person’s sense of an individual self emerges, as Siegel puts it, from not only our inner life, but our “inter-life” as well.

The science of the human brain — particularly its bi-hemispheric structure — has allowed us to integrate two very different ways of making sense of the world, and our place in it.

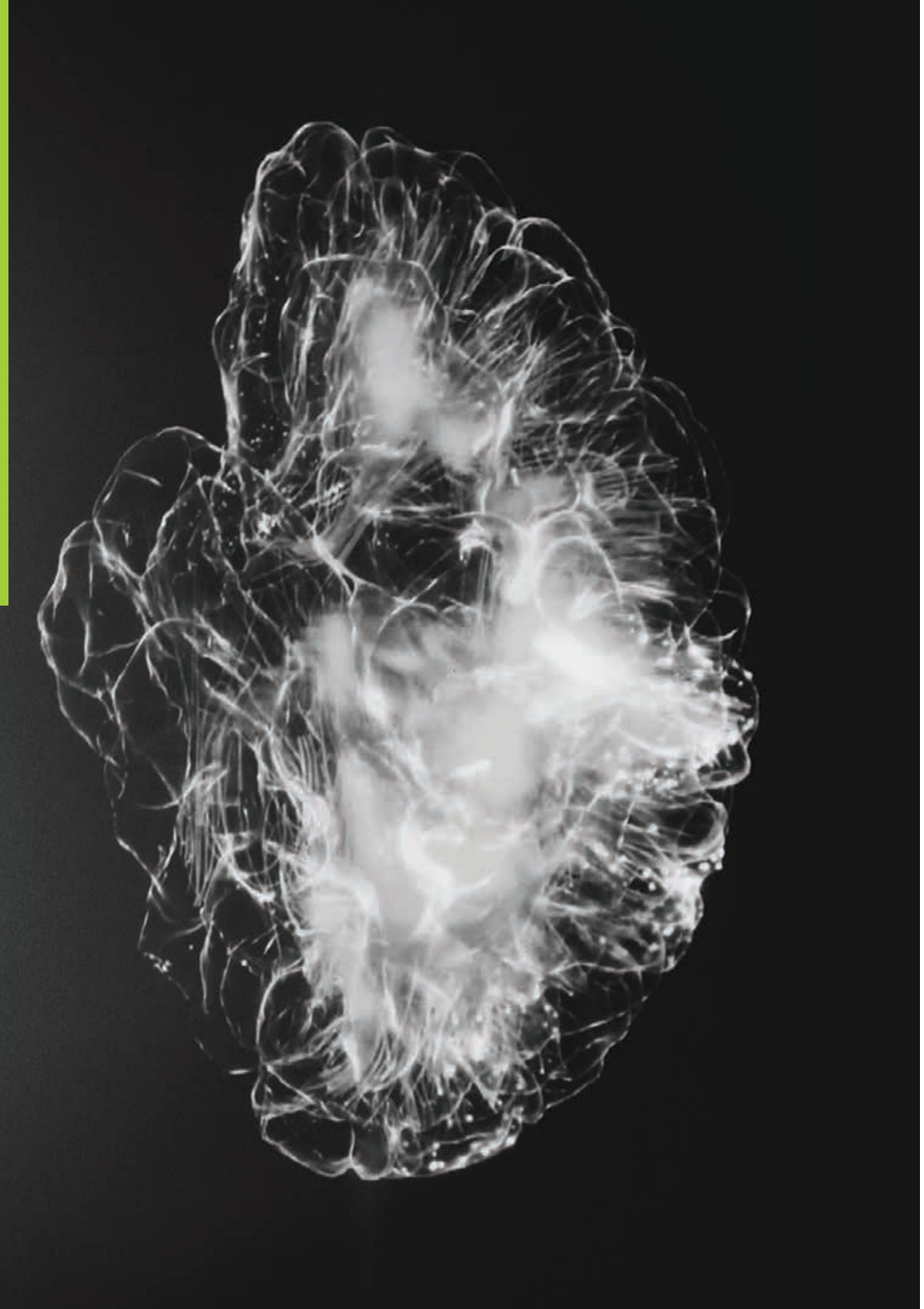
The art of the American writer James Baldwin is a direct challenge to the myths that have shaped our shared sense of what it means to be an American.

The insights of the Vietnamese Buddhist monk Thich Nhat Hanh offer a window into the ways our understanding of the mind shape our capacity for well-being. And the vision of Embassy Education, a nascent network of elementary and secondary schools in Ho Chi Minh City, Vietnam, is to leverage the creative power of arts education in order to help Vietnamese children develop a better, more integrated sense of themselves.

In the past, says Weber, “with our craving to build a new and better world we have thoughtlessly given up that one crucial sphere to which we are linked by the umbilical cord of life. We have attempted to sneak away from our Siamese connection with all other human beings. We have tried to escape from ourselves.”

In truth, we need to be many to become one — and one to become many.

We live the stories we tell
about ourselves.



The Science: The Human Brain

It is the most complex living system in the known universe, built of hundreds of billions of cells, each as complicated as a city.

It is the primary author of the deeply personal story we tell ourselves about who we are and why we're here.

And it never shows us the world as it truly is — only as we need it to be.

This is the conundrum of the human brain, which is why understanding its peculiar science is a prerequisite towards our ability to imagine, and then build, a better world.

Consider this: Human beings — or, for that matter, any other life form on earth — see only what has helped them survive in the past. The way we make sense of the present is being shaped by the innovations, fears and assumptions our ancestors made hundreds, thousands, even *millions* of years ago. And our success as a species has occurred not in spite of our inability to see reality, but *because* of it.

As neuroscientist Beau Lotto puts it, human beings didn't evolve to see the world objectively; they evolved to "not die." And all living things have managed to "not die" thus far by developing different perceptual overlays on the same planetary backdrop.

Bats developed echolocation.

Cephalopods learned to change colors.

Birds got GPS.

And we developed a wet computer with a parallel processor — otherwise known as a bi-hemispheric brain.

Why did our brains evolve that way, with a singular blueprint stamped out twice? No one knows for sure, although psychiatrist Iain McGlichrist believes it happened to help us "attend to the world in two completely different ways, and in so doing to bring two different worlds into being," and two different ways of surviving life's slings and arrows.

"In the one," he explains, "we *experience* — the live, complex, embodied, world of individual, always unique beings, forever in flux, a net of interdependencies, forming and reforming wholes, a world in which we are deeply connected. In the other we 'experience' our experience in a special way: a 're-presented' version of it, containing now static, separable, bounded, but essentially fragmented entities, grouped into classes, on which predictions can be based.

"These are not different ways of thinking *about* the world," McGilchrist claims. "They are different ways of *being* in the world. If the left hemisphere is the hemisphere of 'what', the right hemisphere, with its preoccupation with context, the relational aspects of experience, emotion and the nuances of expression, could be said to be the hemisphere of 'how.'"

Who we perceive ourselves to be is a mashup of these different perceptual overlays — ostensibly equal parts logic and emotion. And yet the reality of the modern world, says McGilchrist, is that our way of seeing has gotten out of balance.

For a number of reasons, we have become left-hemisphere heavy.

“My thesis is that for us as human beings there are two fundamentally opposed realities, two different modes of existence; that each is of ultimate importance in bringing about the recognizably human world; and that their difference is rooted in the bi-hemispheric structure of the brain. It follows that the hemispheres need to cooperate, but I believe they are in fact involved in a sort of power struggle,and that this explains many aspects of contemporary Western culture.”

Is it possible to bring ourselves back in balance? Harvard neuroscientist Jill Bolte Taylor says it is — and she would know. In 1996, a blood vessel burst in the left half of her brain. “In the course of four hours,” she explains, “I watched my brain completely deteriorate in its ability to process all information.”

Because Taylor had spent her adult life studying the brain’s intricate architecture, she was uniquely suited to observe how the stroke was affecting her. What she discovered has huge implications for how all of us think about who (& why) we are in the world.

But first, a quick refresher course:

The right side of our brain is designed to help us remember things as they relate to one another. “To the right mind,” Taylor says, “no time exists other than the present moment, and each moment is vibrant with sensation. By design, our right mind is spontaneous, carefree, and imaginative. It allows our artistic juices to flow free without inhibition or judgment.” And it gives us the sense that we are indistinguishable, infinite, and interconnected.

By contrast, our left hemisphere organizes the world for us in a linear and methodical way. “Here,” says Taylor, “the concept of time is understood as either past, present or future, and our left brain thrives on details. Here, we use words to describe, categorize, define, and communicate about everything we see.” And here, we find the part of ourselves that feels most distinct — the part that proclaims, “I am,” apart from the world.

Because Taylor’s stroke occurred in her left hemisphere, her right hemisphere was left unchecked by its usual counterbalance. As a result, she experienced a drastically different way of seeing the world (and her role in it). “I no longer perceived myself as a single, a solid, an entity with boundaries that separated me from the entities around me. Everything around us, about us, among us, within us, and between us is made up of atoms and molecules vibrating in space. Although the ego center of our language center prefers defining our *self* as individual and solid, most of us are aware that we are made up of trillions of cells, gallons of water, and ultimately everything about us exists in a constant and dynamic state of activity.

“My left hemisphere had been trained to perceive myself as a solid,” she explained, “separate from others. Now, released from that restrictive circuitry, my right hemisphere relished in its attachment to the eternal flow. I was no longer isolated and alone. My soul was as big as the universe and frolicked with glee in a boundless sea.”

For Taylor, the lesson is not that one hemisphere is better than the other; indeed, there is a reason our brain evolved this way — to integrate two contradictory yet complementary ways of seeing the world: one holistic and boundless, the other segmented and bound.

The lesson comes when we accept, as Beau Lotto puts it, that “the world out there is really just our three-dimensional screen. Our receptors take the meaningless information they receive; then our brain, through interacting with the world, encodes the historical meaning of that information, and projects our subjective versions of color, shape and distance onto things.

“Meaning is a plastic entity,” he reminds us, “much like the physical nature of the brain, which we shape and reshape through perceptual experiences. It is critical to understand that the meaning of the thing is not the same as the thing itself.”

Believing *is* seeing, in other words, as much as seeing is believing.

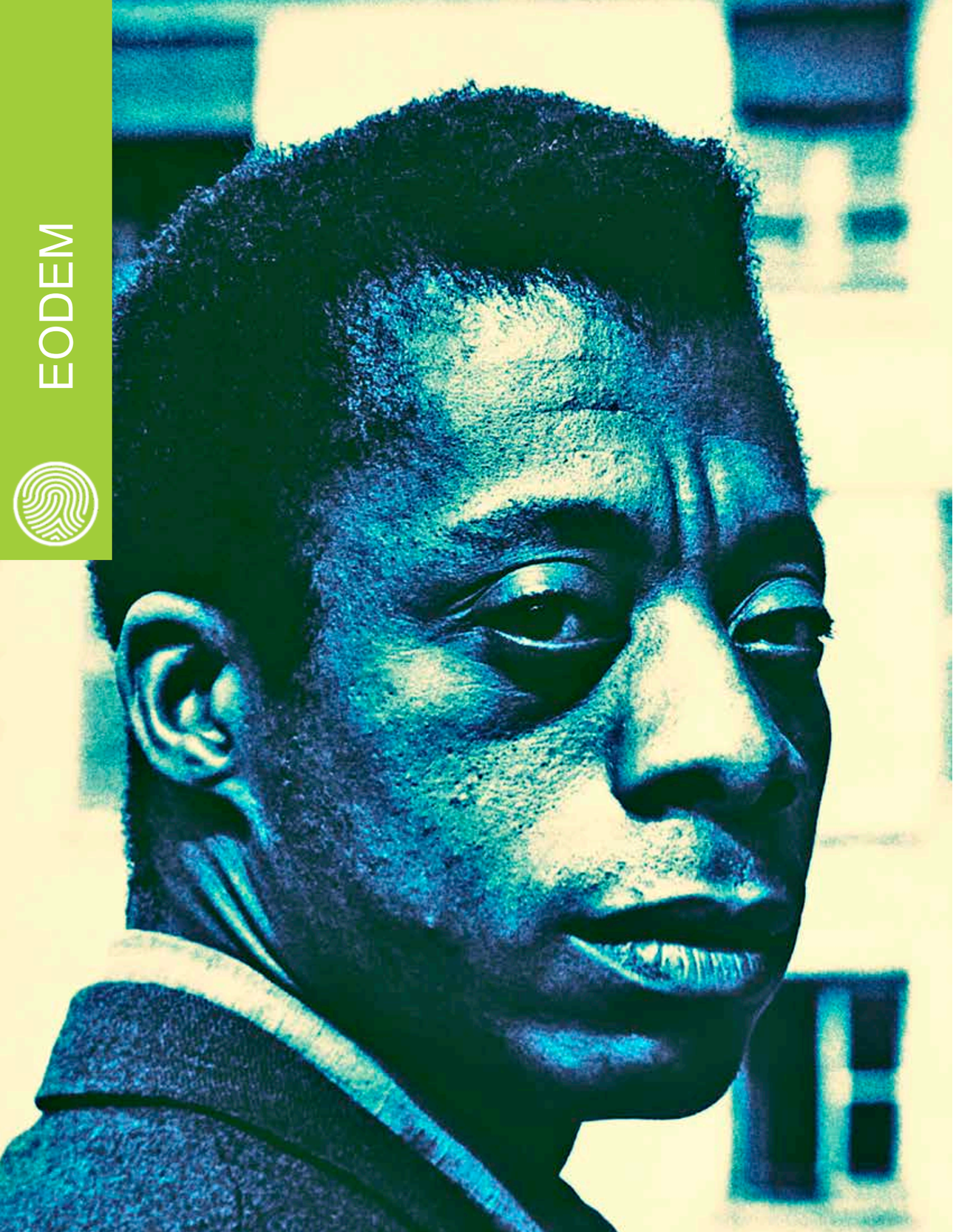
To change the story of how we learn and live, we must become aware of the way our brains are always trying to ensure that we “not die” — by providing us with a coherent story about our lives, a story that our brain works around the clock to create.

A story that is never accurate.

To see differently, we must learn to see *seeing* differently. “The more aware I remain about what my brain is saying and how those thoughts feel inside my body,” Taylor tells us, “the more I own my power in choosing what I want to spend my time thinking about and how I want to feel. If I want to retain my inner peace, I must be willing to consistently and persistently *tend the garden of my mind* moment by moment, and be willing to make the decision a thousand times a day.”

In sum, the clearer we are about the science of the human brain, the greater the chance we can appreciate the art of individual identity.

It is the most wondrous thing we have discovered in the universe, and it is us.



The Art: James Baldwin

How do you develop a healthy sense of self when the society into which you're born has been constructed to deny your very identity?

This is America's inconvenient truth, the unwanted legacy of the "Peculiar Institution," and the fly in the buttermilk of every Utopian American myth and storyline since our founding. And throughout our short and tumultuous history, perhaps no artist has better captured the knotted pathology that has ensnared White and Black America in an intimate dance of mutual self-destruction than a slender, bug-eyed boy from Harlem named James Baldwin.

He was born between the wars to a poor mother in a crowded family. As a child he struggled under the critical eye of his stepfather, a man Baldwin felt had been "defeated long before he died because, at the bottom of his heart, he really believed what white people said about him." He came of age alongside the growing resistance of the Civil Rights Movement, a period in which he recognized himself as "a kind of bastard in the West." And over the course of his life — and a career that spanned six books, three plays, and scores of essays, book reviews, and electrifying public talks — James Baldwin became a witness to the destructive power of our racist myth-making, and the redemptive power of our capacity for love and reconciliation.

Throughout his life, Baldwin questioned how his fellow Americans could develop a healthy sense of identity in a society that spent so much energy cultivating an image that was not grounded in reality. "The failure to look reality in the face diminishes a nation as it diminishes a person," he wrote. "If we are not capable of this examination, we may yet become one of the most distinguished and monumental failures in the history of nations.

"We made the world we're living in, and we have to make it over."

To make the world over, Baldwin urged us to fearlessly confront the ways in which the current racial structure was preventing *all Americans,* oppressor and oppressed, from discovering who they were. "One may say that the Negro in America does not really exist except in the darkness of our minds," he wrote. "Our dehumanization of the Negro then is indivisible from our dehumanization of ourselves."

Black people (or, more specifically, the people in American culture that have been defined as "Black") have always been regarded by White people (or, more specifically, the people in American culture that have chosen to define themselves as "White") as caricatures, not human beings. But one can only begin to recognize another's humanity "by taking a hard look at oneself."

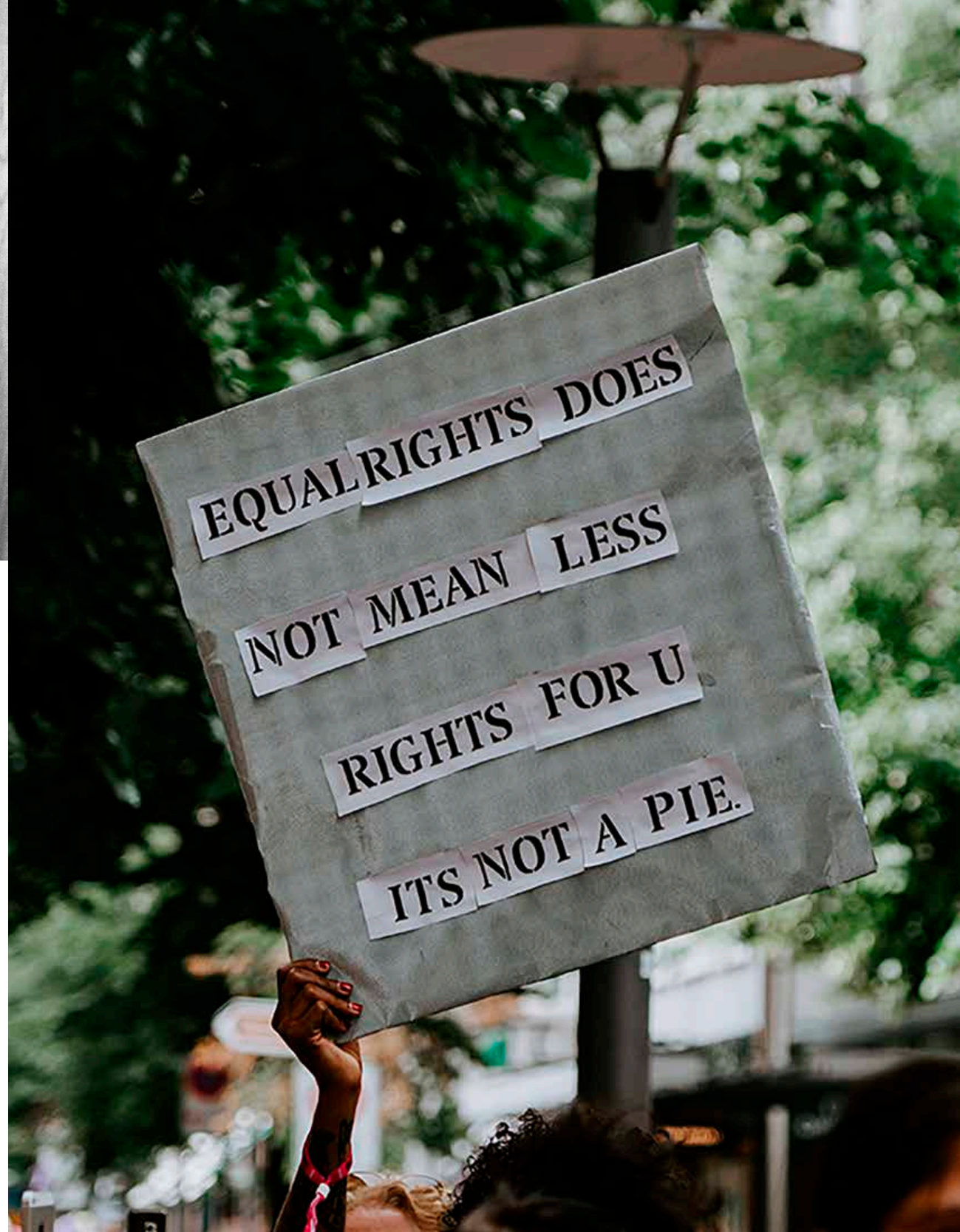
To recognize one's true identity as an American, therefore, requires recognizing the full weight of our racial history — no matter how painful — and the full scope of the ways our racial fantasies and attendant myths have shaped the construction of both our individual and shared identities.

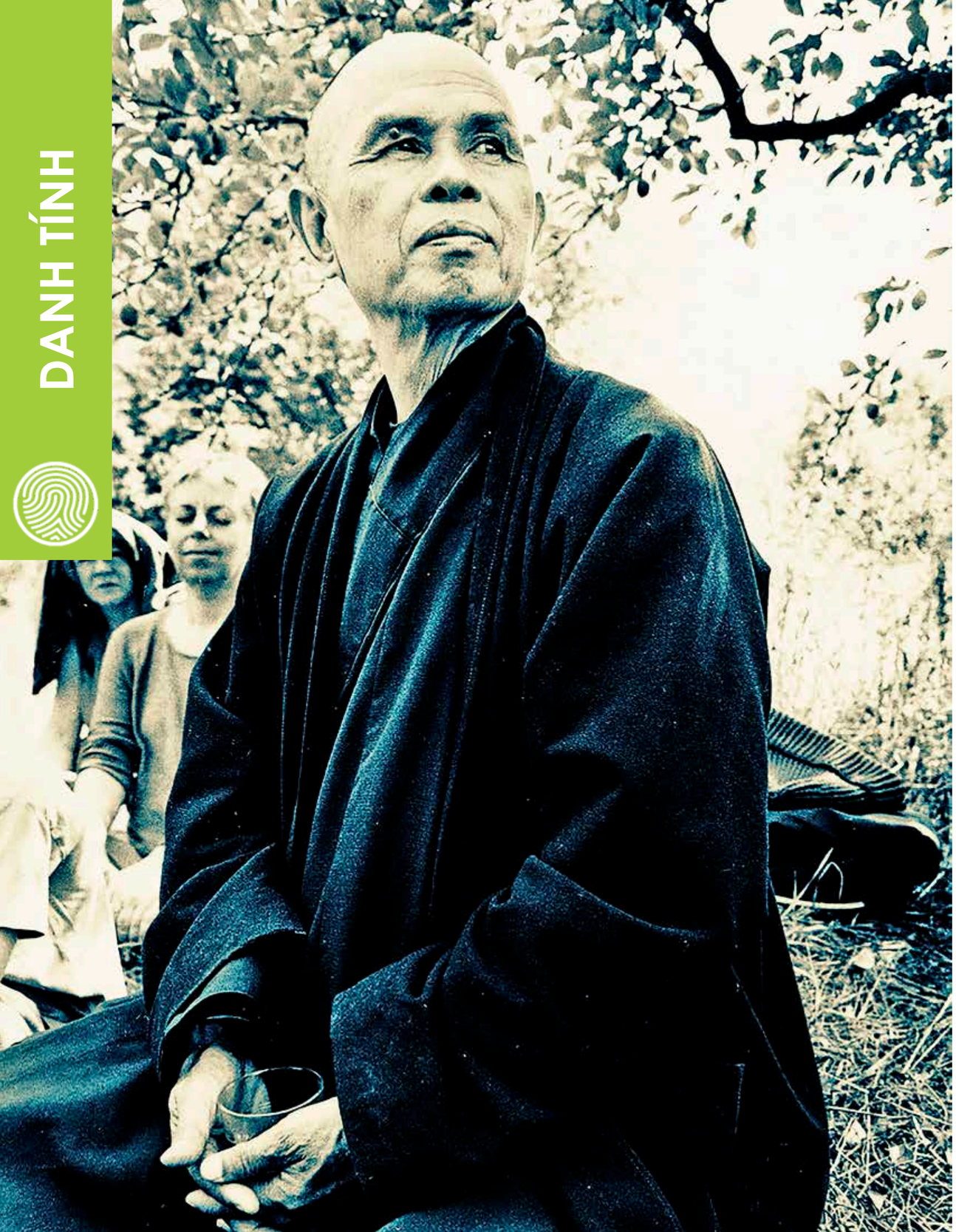
"We take our shape within and against that cage of reality bequeathed us at our birth,"

he wrote. To believe oneself to be White or Black is to deprive oneself of a viable identity. What binds us together is not these artificial categories of social construction, but "our endless connection with, and responsibility for, each other."

"If we," he wrote in 1962, "and now I mean the relatively conscious whites and the relatively conscious blacks, who must, like lovers, insist on, or create, the consciousness of the others — do not falter in our duty now, we may be able, handful that we are, to end the racial nightmare, and achieve our country, and change the history of the world.

"We are walking in terrible darkness here, and this is one man's attempt to bear witness to the reality and the power of light."





The Practitioner: Thích Nhất Hạnh

Zen Master Thich Nhat Hanh is a global spiritual leader, poet and peace activist, revered throughout the world for his powerful teachings and bestselling writings on mindfulness and peace. Born in central Vietnam in 1926, Thich Nhat Hanh entered Hue's Tu Hieu Temple in 1942 as a novice teenage monk. Dr Martin Luther King Jr. nominated him for the Nobel Peace Prize in 1967. In 1975 he established the Sweet Potato community near Paris, and in 1982 they moved to a much larger site in the southwest of France, soon to be known as "Plum Village." Under Hanh's spiritual leadership, Plum Village has grown to become the West's largest and most active Buddhist monastery, with over 200 resident monastics and up to 8,000 visitors every year.

(The following comments are excerpts from several of Zen Master Hanh's books, particularly Understanding Our Mind.)

Q: What are the signs of a well-regulated sense of individual identity?

A: In Buddhism there is no such thing as an individual. Just as a piece of paper is the fruit, the combination of many elements that can be called non-paper elements, the individual is made of non-individual elements. If you are a poet, you will see clearly that there is a cloud floating in this sheet of paper. Without a cloud there will be no water; without water, the trees cannot grow; and without trees, you cannot make paper. So the cloud is here. The existence of this page is dependent on the existence of the cloud.

In the same way, the individual is made of non-individual elements. How do you expect to leave everything behind when you enter a meditation center? The kind of suffering that you carry in your heart, that is society itself. You bring that with you, you bring society with you. You bring all of us with you.

We are imprisoned in our small selves, thinking only of the comfortable conditions for this small self, while we destroy our large self. The forests are our lungs outside our bodies. The sun is my heart, my heart outside of this body. If my body's heart ceases to function I cannot survive; but if the sun, my other heart, ceases to function, I will also die immediately. We should be able to be our true self. That means I should be able to be the river, we should be able to be the forest, we should be able to be a citizen of any country in the world. We must do this to understand, and to have hope for the future.

Q: What is the purpose of meditation?

A: When you meditate, it is not just for yourself, you do it for the whole society. You seek solutions to your problems not only for yourself, but for all of us. To meditate is to be aware of what is going on in yourself, your feelings, your body, your perceptions, your family. This is very important for any kind of life.

I think that our society is a difficult place to live. If we are not careful, we can become uprooted, and once uprooted, we cannot help change society to make it more livable. Meditation is a way of helping us stay in society.

To transform our situation is also to transform our minds. To transform our minds is also to transform our situation, because the situation is mind, and mind is situation. Awakening is important. The nature of the bombs, the nature of injustice, the nature of the weapons, and the nature of our own being are the same.

A human being is like a television set with millions of channels. If we turn the Buddha on, we are the Buddha. If we turn sorrow on, we are sorrow. If we turn a smile on, we really are the smile. We can't let just one channel dominate us. We have the seeds of everything in us, and we have to take the situation in hand to recover our own sovereignty.

When we sit down peacefully, breathing and smiling, with awareness, we are our true selves, we have sovereignty over ourselves. We go back to ourselves in order to see what is going on, because to meditate means to be aware of what is going on. What is going on is very important.

If we are very aware, we can do something to change the course of things.

Q: How do we wake up?

A: We are so busy we hardly have time to look at the people we love, even in our own household, and to look at ourselves. Society is organized in a way that even when we have some leisure time, we don't know how to use it to get back in touch with ourselves. We are not used to being with ourselves, and we act as if we don't like ourselves and we are trying to escape from ourselves.

The root word "budh" means to wake up, to know, to understand. A person who wakes up and understands is called a Buddha. It is as simple as that.

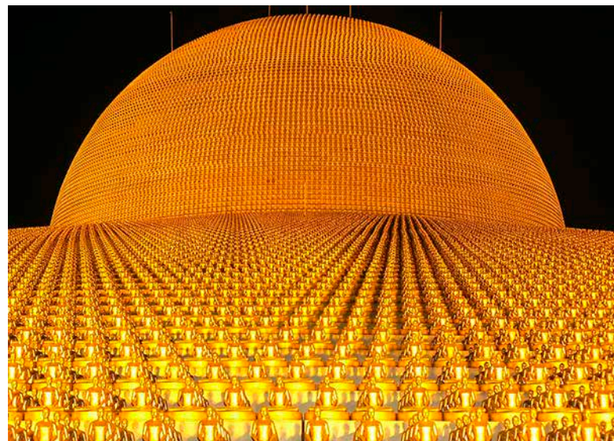
Children understand very well that in each woman, in each man, in each child, there is a capacity of waking up, of understanding, and of loving. Many children have told me that they cannot show me anyone that does not have this capacity. Some people allow it to develop, and some do not, but everyone has it. This capacity of waking up, of being aware of what is going on in your feelings, in your body, in your perceptions, in the world, is called Buddha nature, the capacity of understanding and loving. Since the baby of that Buddha is in us, we should give him or her a chance.

Humankind has become a very dangerous species. We need people who can sit still and be able to smile, who can walk peacefully. We need people like that in order to save us. Mahayana Buddhism says that you are that person, that each of you is that person.

Q: How are we connected to one another?

A: Suppose you and I are friends. (In fact, I hope we are friends.) My well-being, my happiness depends very much on you, and your well-being, your happiness, depends on me. I am responsible for you, and you are responsible for me. Anything I do wrong, you will suffer, and anything you do wrong, I have to suffer. Therefore, in order to take care of you, I have to take care of myself.

This is the Buddha's teaching about perception, based on the principle of dependent co-arising. Buddhism is easy to learn. And nowadays, nuclear physicists have begun to feel the same way. When they get deeply into the world of subatomic particles, they see their mind in it. An electron is first of all your concept of the electron. The object of your study is no longer separated from your mind. Your mind is very much in it. Modern physicists think that the word "observer" is no longer valid, because an observer is distinct from the object he observes. They have discovered that if you retain that kind of distinction, you cannot go very far in subatomic nuclear science. So they have proposed the word "participant."



You are not an observer, you are a participant.

Q: To what do you think we should be paying attention?

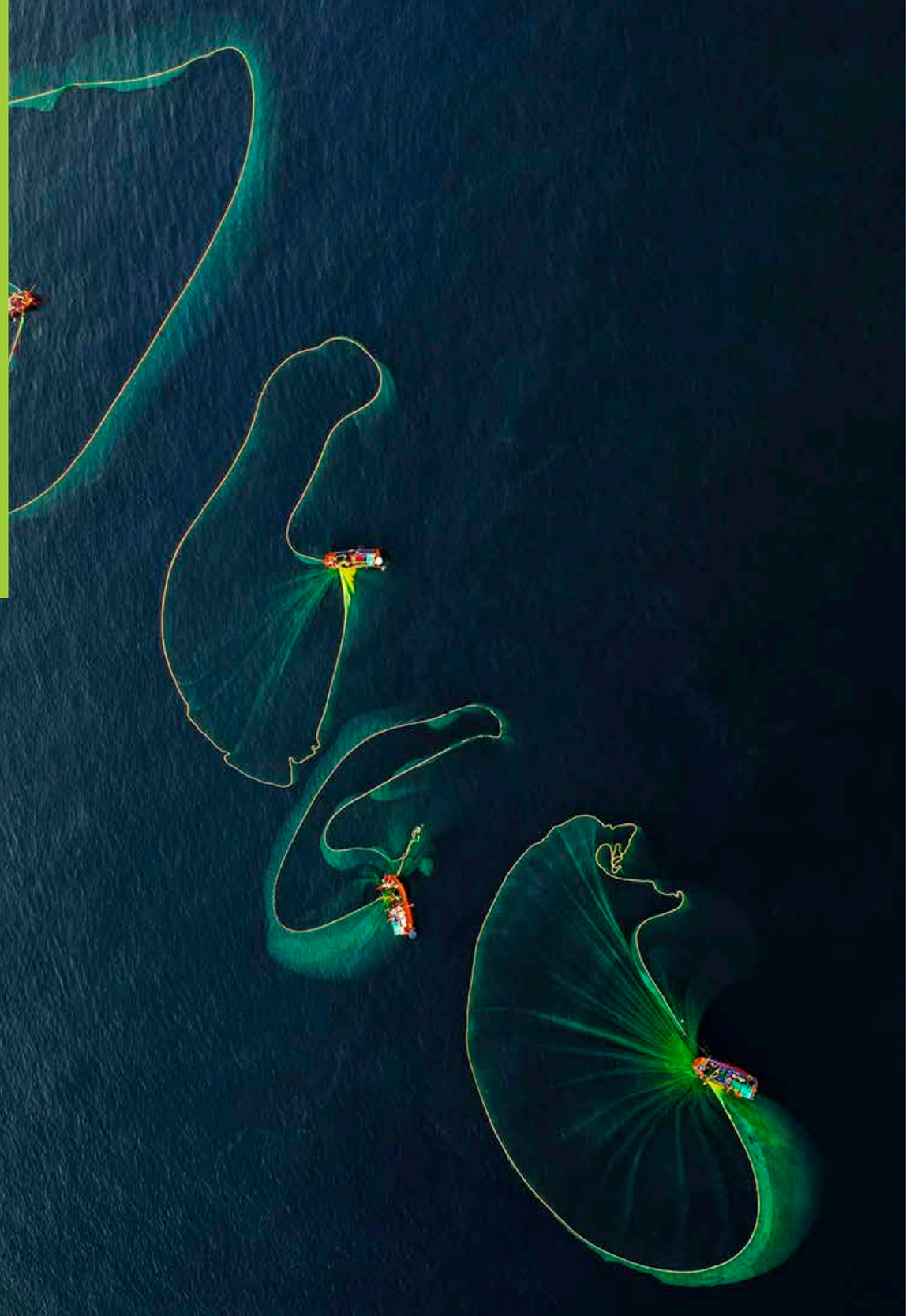
A: Every act we make through our body, speech and mind sows seeds in our consciousness, and our store consciousness preserves and maintains these seeds. Our harmful thinking can be enough to make the universe tremble.

To know whether someone is happy, you only have to look at the seeds in his store consciousness. If there are strong seeds of unhappiness, anger, discrimination, and delusion, he will suffer greatly, and it is likely that through his actions he will water these unwholesome seeds in others.

If his seeds of understanding, compassion, forgiveness, and joy are strong, not only is he capable of true happiness but he will be able to water the seeds of happiness in others.

Our daily practice is to recognize and water the wholesome seeds in ourselves and others.

Our happiness and the happiness of others depend on it.



The Community:

Embassy Education-Learning City (Ho Chi Minh City, Vietnam)

In Australia, the country of his birth, Thanh Bui learned early on that kids who looked like him faced two possible paths.

On one, traversed by the only other Asian student in his school, the cold sting of isolation and ridicule awaited. On the other, however, came the assimilatory embrace of knowing you were "one of the lads."

For Bui, youthful, outgoing, and kinetic, it was an easy choice — one that would take him to heights his immigrant parents could never have imagined: first, playground popularity and acceptance, and then, eventually, global celebrity and superstardom.

The only requirement was that he suppress his Vietnamese identity.

It would take decades before Bui understood the true cost of his unconscious choice.

And it's why he'll spend the next decade planting seeds that he hopes can one day frame new paths, and new choices, for a new generation of Vietnamese children.

Recently, amid the symphony of barking dogs and the aromatic smell of diesel fuel, Bui sat on a fishing boat atop the muddy waters of the Mekong River, contemplating how his family's journey had begun in this exact spot, a lifetime ago.

This was where his parents, along with eighty-five tightly-packed strangers, had summoned the courage to leave the country of their birth in search of a better life.

"They were the age then, 28, that I was when I first came back," Bui said. "They had no education, no money, and nothing but the clothes on their backs. That's why I wanted to come back here. I wanted to know exactly the place they had left.

"When you know where you're from," he said slowly, "there's this sense of humanity that sweeps through you. I don't think you're ever O.K. until you know exactly where you're from — and I've been on that journey my whole life."

For anyone who is the child of immigrants, Thanh Bui's journey will feel familiar. Although he grew up in Adelaide, a cosmopolitan city on Australia's southern coast, Bui's early experiences were limited to the dusty farm where his father picked potatoes. When the crop was wiped out one year, Bui's parents packed what little they had to travel 700 kilometers further south, to the capital city, Melbourne.

Through a network of fellow immigrants, Bui's parents found a job making jeans. To encourage her two sons, Thanh and Tan, to pitch in, their mother promised one penny for each pocket they sewed. As they worked, Bui recalls, "my brother and I heard every day that the only way to elevate oneself is through education. And although we were allowed to spend our earnings on jellybeans, every dollar my parents saved went into our education."

At home, the Bui brothers led a life that was disciplined, directed, and thoroughly Vietnamese. Yet Thanh recalls "starting to feel this sense of not belonging anywhere, which left me wondering, 'Who am I?' But my father always said, 'Son, I almost died three times getting out. The last thing you're going to do is disrespect me and your ancestors by not knowing your language.'"

Eventually, Thanh earned a full scholarship to a prestigious boys school in Melbourne. His parents were thrilled, but Thanh remembers "feeling so out of place, like all eyes were on me. That started my whole understanding of how I fit in. I had to learn how to be an Australian."

At the same time, Thanh was realizing that the dreams he held for himself did not align with the dreams his parents held for him. "Ever since I was little," he explained, "I had the sense that music was part of me, that it could take me to this other world that I'd never visited before."

His parents encouraged him to pursue his artistic side — as an extracurricular activity. But by the time he was 17, Bui's talent had yielded some enviable choices, from pursuing a college degree on full scholarship, to becoming the lead singer of a band on the cusp of its inaugural Asian tour.

For Thanh's parents, the choice was simpler: doctor or lawyer.

"You could see the pride in their faces," Bui recalled. "They'd worked their whole lives for this, they'd sacrificed everything for this, this moment. This was the achievement."

But Bui decided he had to follow his true path. "So I took a deep breath, I swallowed, and then I said the words that I knew would break my parents' hearts:

"Mom and Dad, I want to be an artist."

Eight years would pass before he returned home again.

He traveled all over the world.

He started songwriting.

He nearly won *Australian Idol*.

And then, in 2010, at the height of his fame, he was invited to visit Vietnam on an open ticket — to meet with producers, record some tracks, and see what happens.

Three years later, he was still there — performing regularly as a solo artist, hosting the country's most popular TV show, and beginning to feel accepted for the first time: a *Việt Kiều* returning to his roots.

Yet his time in the country of his ancestors had made two things clear: the first was the complete absence of infrastructure to support Vietnamese artists. "Music at that time was an elite product few people had access to," Thanh explained.

“In a country of 95 million people, there are only a handful of people pursuing careers in music. And there’s talent here — but if talent doesn’t meet opportunity, then it’s nothing.”

The second epiphany was more personal. “I’d been shuttling between two homes for three years, trying to figure out what it meant to be Vietnamese and Australian in a world that was so globalized, and how to reconcile these different sides of myself. That’s when I realized that if I ever wanted to do so, I needed to move here for good. I needed to go all in.”

And so, on January 1, 2013 — Thanh Bui moved permanently to Vietnam to open the SOUL Music & Performing Arts Academy, a school that could stitch together both the modern and traditional sides of Vietnamese identity in order to “bring the soul back into our music.”

It was a rocky beginning.

At SOUL’s first open house, even though a thousand people came through the door, just fifteen registered for classes. “It was a stab in the heart,” Bui says. “Everyone was telling us it wouldn't work. And in that moment the numbers reflected that. But it helped me understand the local context of the families we were trying to reach. We were still too Western-leaning. Parents wanted their kids to be singing in Vietnamese.”

So Bui and his partners tweaked the course offerings, and gradually their student roster grew. “Our formula was to bring the world’s best ideas about artistry and craft to Vietnam, and then localize it,” he explained.

“What was missing in Vietnam was a different sort of advocacy for the arts — to make them a vital part of a child’s holistic development: to be global citizens with local values.

“Vulnerability, for example, is a Western concept; ‘saving face’ is a Vietnamese value. The modern identity requires elements of both. So we use the arts to give kids the courage to find their own sense of themselves.

Ultimately that’s why we exist — to inspire the next generation to be unafraid, and to find and use their voice.”

One weekday afternoon, amidst the patchwork of old French colonial and modern buildings that make up the SOUL campus, fifteen-year-old Bao Tan provided a walking embodiment of her school’s founding purpose. With long black hair, steady eyes, and a smouldering intensity, Bao recalled passing the school everyday as an eight-year-old, and “wondering about it.” Then she started writing songs, “and saying all these things I hadn’t been able to say in the past,” and she registered for every class she could take, from traditional singing to hip-hop dance. “All these things had been inside of me for so long,” Bao explained. “I’ve discovered that music is a part of me. I can’t say that I’m an extrovert but I feel like I have lots of things to say but I don’t know how to express it. And sometimes I really feel lonely, but not really because music is besides me.”

As a swirl of students around her — from infants to teenagers — arrived for their afternoon classes, Bao reflected on her generation, and what music can provide. “A lot of teenagers nowaday, not all the time do we know what we really want. We don’t really know what we want to do and pursue — so it’s really hard for me personally. I feel like sometimes I’m just scared that if I speak, will people judge me? You’re supposed to listen to your parents. But what are the other ways I can learn to explore myself? By speaking for yourself now, you really know what your identity is. When you look at me, what do you think I am — and is it the way that I think *I* am?

“A lot of parents in Vietnam, they raise their kids to just be a businessman or a lawyer. But there are lots of kids out there just like me. They want us to live in the safety zone. But for me, each of us has something — we’re still growing mentally and physically. They want to keep us in a frame in order to keep us safe. Music doesn’t fit into that frame.

“But music reminds me to slow down. Just be yourself. Just be Bao Tan. Just be who you want to be.”

A decade in, Thanh Bui now sees a future in which the lessons of SOUL can be applied to millions of Bao Tans, nationwide. In 2020, he opened a preschool that was designed in direct partnership with the pioneering

educators of Reggio Emilia, Italy — one he hopes can provide a template that, in time, will transform early childhood education across the country. He has partnered with a Finnish University, Turku, and Harvard's Project Zero, to think through issues of accreditation and assessment. Instead of trying to invent everything from scratch, he has contracted with existing curriculum providers, such as the German program Kindermusik, which introduces infants and toddlers to music. And he has begun constructing a one-million-square-foot "learning city" that brings together a K-12 academy, a college, a performing arts academy, and a sports and entertainment complex.

"The world is changing," he said amidst the din of passing motorbikes, taxis and dust. "So must the purpose of school. We have to reconnect the artistic and scientific sides of ourselves: artist *and* businessman. Dancer *and* engineer. Children of Vietnam *and* citizens of the world.

If we're serious about changing the way the world sees us and the arts, we have to build a new ecosystem that puts creative education at the heart of learning.

"We are a country that is not afraid to look forward. But social mobility is still very difficult here. My parents felt that sense of helplessness. 'Where is home? What's going to be the future?' But if we can give access to the arts to every kid in this country, we can help them understand their roots and develop a more holistic viewpoint on life.

"Not knowing who you are, not knowing your purpose, that's the biggest problem in the world. This whole understanding of who am I? Straddling between different cultures and different sets of identities. That's something we can all relate to in this modern interconnected world."

As Thanh spoke, a young boy's voice could be heard from one of the school's practice rooms. He was singing a traditional Vietnamese ballad, beautiful and slow, and the sound of it brought tears to Thanh's eyes.

"We've been at war with ourselves for a long time," he continued, running his hands through a pompadour of thick black hair.

"But the last 45 years have provided an unprecedented period of peace. The modern byproduct of that are people like myself, who can bridge the two worlds. We share the same story. And we've all been searching for that pathway home to understand who we are and what we stand for.

"When people think about Vietnam, we don't want them to think about the war anymore; we're tired of that. It's time for the new stories — the stories of hope."

Everyone wants our schools to be better.

Now we must choose if we want them to be different.

NOW WHAT?

Inquiry Seeds

To support your work translating these principles into practices, we offer seven sets of *Inquiry Seeds*, probes and questions that are aligned to the design principles of living systems.

Seeds are funny things. We don't actually make them grow. Instead, we till the soil, ensure adequate sunlight, provide necessary nutrients, and get rid of pests. Seeds don't grow because we make them; they grow because we nurture the optimal conditions in which they *can* grow.

In that spirit, Inquiry Seeds are designed to help you *ask* better questions and *act* more sustainably, so that slowly but surely — with "urgent patience" — your questions and actions can help foster the growth of a shared learning culture that is more emergent, dynamic, and *alive*.

NOW WHAT?

Inquiry Seeds for Identity

At the heart of every community is a co-created identity of who, how, and why we are. Over time, shared values and a shared sense of mission, purpose, and meaning develop that help us define, organize and sustain our work. And yet although the specific work may change, our system's identity remains — unless new information provokes us to reexamine, and reimagine, our shared sense of who (& why) we are.

Whether it's us or the system in which we find ourselves, everything emerges from identity. The primary role of leadership is to help everyone understand what that identity is, and why it matters.

me

ASK yourself: What sort of a learner have you been throughout your life? What sort of learner do you hope to become?

ASK yourself: What were you doing, and how were you learning (i.e., alone or with others, outdoors or inside, etc.) when learning was the most powerful for you, when you felt totally engaged, and when time stood still?

WRITE a letter to your school-age self. (Pick the age when learning felt hardest or least inspiring for you.) Tell your younger self what did you wish you had known about yourself as a learner.

we

HOST a small dinner party in which everyone can discuss some or all of the questions above in a group setting. Choose a venue in which everyone can be seated around the same table, and where everyone can hear everyone else. Once everyone has shared their stories, encourage participants to ask one another follow up questions, and to look for and name patterns that emerge across the stories. What has become clear to you? What implications do those observations have for the way you think about the organizational cultures in which you work and learn?

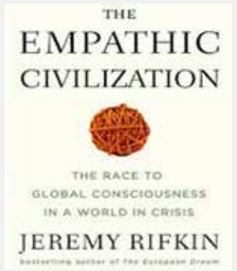
DESIGN a scavenger hunt in which the participants must look for all the ways your organization's mission, North Star, and values show up. Then host an Expo at the end in which participants share and explore what they discovered. What was most visible? What was least visible? In what ways in this picture an accurate and/or inaccurate reflection of what you truly value when it comes to cultivating a clear sense of individual and shared identity?

CREATE two public question walls — a "Wonder Wall," on which people can share the things they're wondering and/or dreaming about; and a "Question Wall," on which everyone is encouraged to write down questions they want others to consider and address. Convene regular conversations to discuss what the walls are inviting you to notice.

REDESIGN a fundamental part of your organization to align with the design principles of Identity. For example, a school might take the transcript (a static, two-dimensional list of courses and grades) and imagine what a more dynamic and accurate reflection of each student's deeper identity and unique skill set would need to look like.

MAP your learning culture according to the two hemispheres of the human brain. In which ways is your culture organized — either intentionally or unintentionally — to value "me"-based, linear/analytical/rational left-hemisphere thinking? In which ways is it structured to value "we"-based nonlinear/metaphorical/holistic right-hemisphere thinking? In what ways might you need to alter your rituals and practices in order to bring your culture into greater balance, so that there is a healthy blend of "me" and "we" thinking?

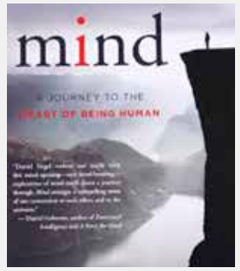
GO DEEPER



The Empathic Civilization: The Race to Global Consciousness in a World in Crisis

Jeremy Rifkin

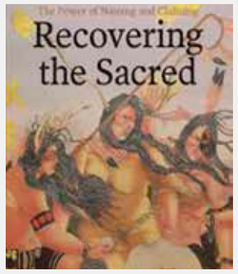
In his most ambitious book to date, bestselling social critic Jeremy Rifkin shows that this disconnect between our vision for the world and our ability to realize that vision lies in the current state of human consciousness.



Mind: A Journey to the Heart of Being Human

Daniel Siegel, MD

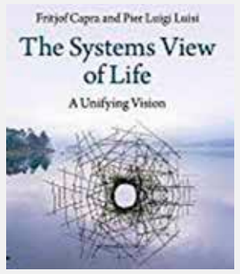
Mind takes the reader on a deep personal and scientific journey into consciousness, subjective experience, and information processing, uncovering the mind's self-organizational properties that emerge from both the body and the relationships we have with one another, and with the world around us.



Recovering the Sacred: The Power of Naming and Claiming

Winona LaDuke

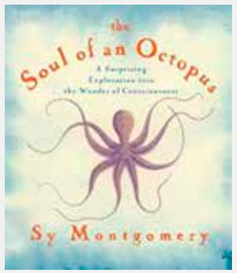
Using a wealth of Native American research and interviews with indigenous scholars and activists, LaDuke examines the connections between sacred objects and the sacred bodies of her people, focusing more closely on the conditions under which traditional beliefs can best be practiced.



The Systems View of Life: A Unifying Vision

Fritjof Capra and Pier Luigi Luisi

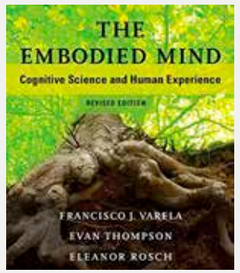
Over the past thirty years, a new systemic conception of life has emerged at the forefront of science. This volume integrates the ideas, models, and theories underlying the systems view of life into a single coherent framework.



The Soul of an Octopus: A Surprising Exploration into the Wonder of Consciousness

Sy Montgomery

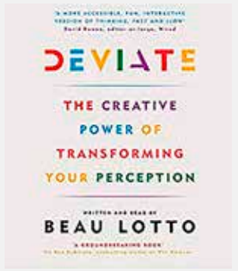
Can an octopus have a mind and emotions, let alone a soul? Sy Montgomery faces these questions head-on in her engaging new book as she explores the world of octopuses, making friends with several and finding heartbreak when they die. They aren't, she discovers, simply brainless invertebrates, but personable, playful, conscious beings.



The Embodied Mind: Cognitive Science and Human Experience

Francisco Varela, Evan Thompson and Eleanor Rosch

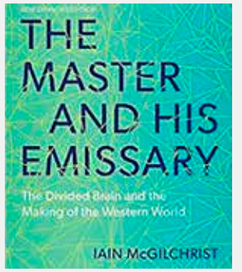
This classic book was one of the first to propose the "embodied cognition" approach in cognitive science. It pioneered the connections between phenomenology and science and between Buddhist practices and science—claims that have since become highly influential.



Deviate: The Creative Power of Transforming Your Perception

Beau Lotto

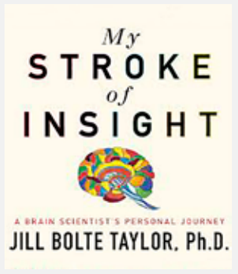
By revealing the startling truths about the brain and its perceptions, Beau Lotto shows that the next big innovation is not a new technology: it is a new way of seeing.



The Master and His Emissary: The Divided Brain and the Making of the Western World

Iain McGilchrist

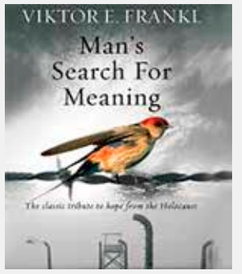
Drawing on a vast body of experimental research, Iain McGilchrist argues that while our left brain makes for a wonderful servant, it is a very poor master. As he shows, it is the right side which is the more reliable and insightful. Without it, our world would be mechanistic – stripped of depth, color & value.



My Stroke of Insight: A Brain Scientist's Personal Journey

Jill Bolte Taylor

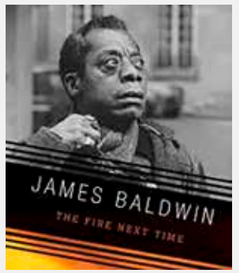
Reaching wide audiences through her talk at the Technology, Entertainment, Design (TED) conference, Taylor provides a valuable recovery guide for those touched by brain injury and an inspiring testimony that inner peace is accessible to anyone.



Man's Search For Meaning

Viktor Frankl

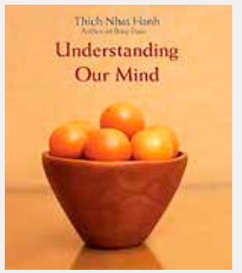
Frankl's theory—known as logotherapy, from the Greek word logos, "meaning"—holds that our primary drive in life is not pleasure, as Freud maintained, but the discovery and pursuit of what we personally find meaningful.



The Fire Next Time

James Baldwin

At once a powerful evocation of James Baldwin's early life in Harlem and a disturbing examination of the consequences of racial injustice, the book is an intensely personal and provocative document.



Understanding Our Mind: Fifty Verses on Buddhist Psychology

Thich Nhat Hanh

Presenting the basic teachings of Buddhist applied psychology, *Understanding Our Mind* shows us how our mind is like a field, where every kind of seed is planted—seeds of suffering, anger, happiness, and peace.

GO YOUNGER

Where Oliver Fits

Cale Atkinson

Oliver has always dreamed about where he will fit. Will he be in the mane of a unicorn? The tentacle of a pirate squid? The helmet of an astronaut? When he finally goes in search of his perfect place, he finds that trying to fit in is a lot harder than he thought. But like any puzzle, a little trial and error leads to a solution, and Oliver figures out exactly where he belongs.

Red

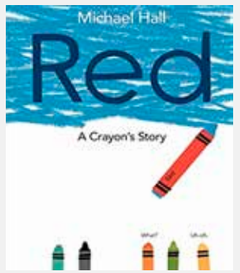
Jan De Kinder

In this poignant story, a girl finds it funny when her classmate starts blushing on the school playground. Her friends laugh along with her, but one student takes the teasing too far. Torn between her sympathy for her classmate and her fear of the bully, the girl must make a difficult choice.

Not Quite Narwhal

Jessie Sima

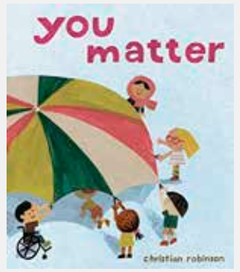
Growing up in the ocean, Kelp has always assumed that he was a narwhal like the rest of his family. Then one night, an extra strong current sweeps Kelp to the surface, where he spots a mysterious creature that looks just like him! Kelp discovers that he and the creature are actually unicorns. The revelation leaves him torn: is he a land narwhal or a sea unicorn?



Red: A Crayon's Story

Michael Hall

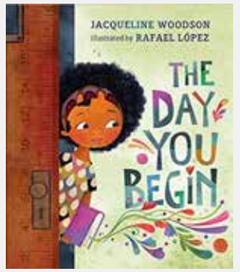
A frustrated crayon has a bright red label on the outside, yet is clearly blue under the label. His family and friends try to help. Red is miserable. He just can't be red, no matter how hard he tries. This heartwarming, colorful picture book is about being true to your inner self and following your own path despite obstacles that may come your way.



You Matter

Christian Robinson

In this bright and beautiful picture book, many different perspectives around the world are deftly and empathetically explored—from a pair of bird-watchers to the pigeons they're feeding. Young readers will be drawn into the playful illustrations inviting them to engage with the world in a new way and see how everyone is connected, and that everyone matters.



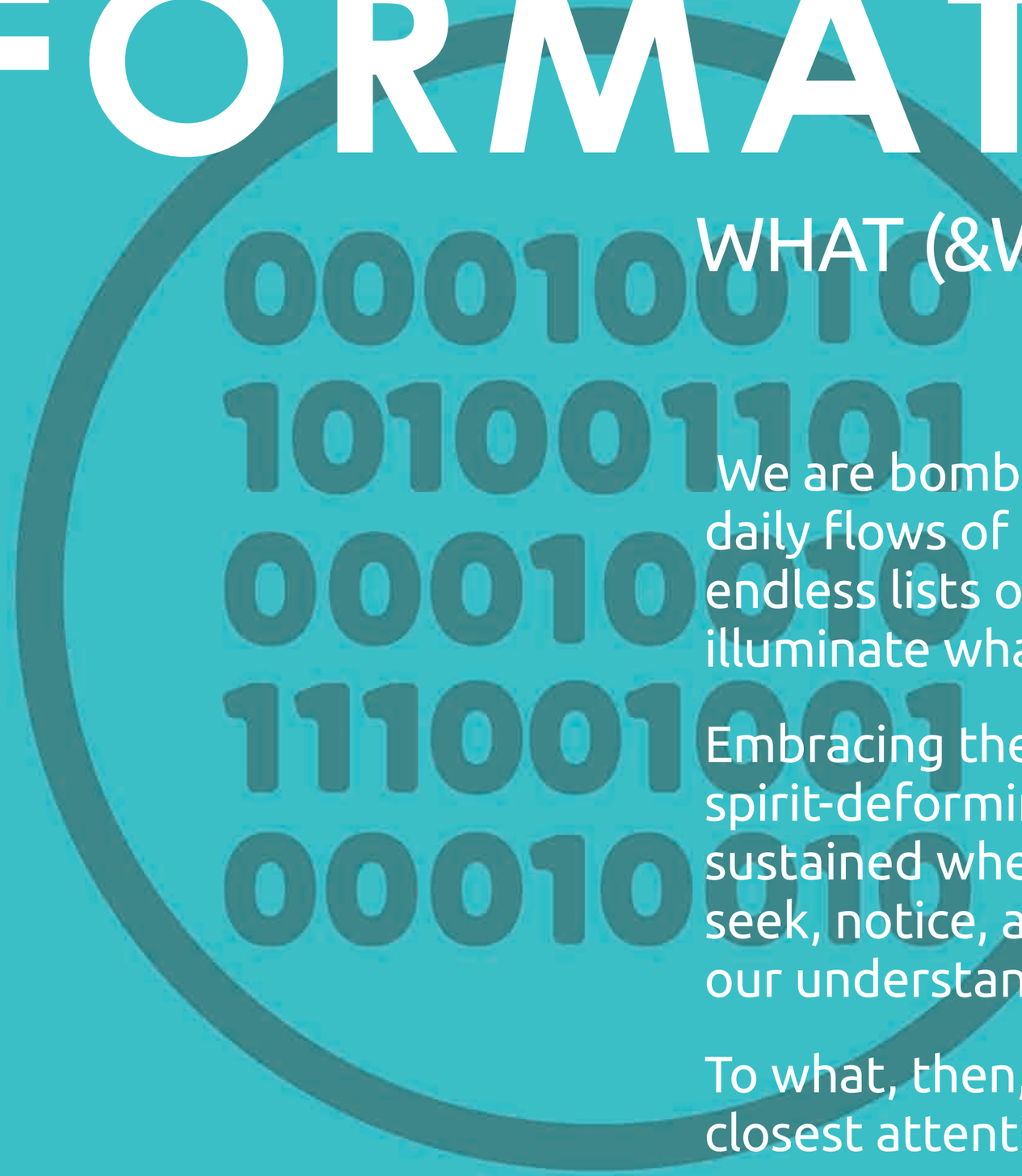
The Day You Begin

Jacqueline Woodson

There are many reasons to feel different. Maybe it's how you look or talk, or where you're from or what you eat. This dazzling book reminds us that we all feel like outsiders sometimes—and how brave it is that we go forth anyway. And that sometimes, when we reach out and begin to share our stories, others will be happy to meet us halfway.

INFORMATION

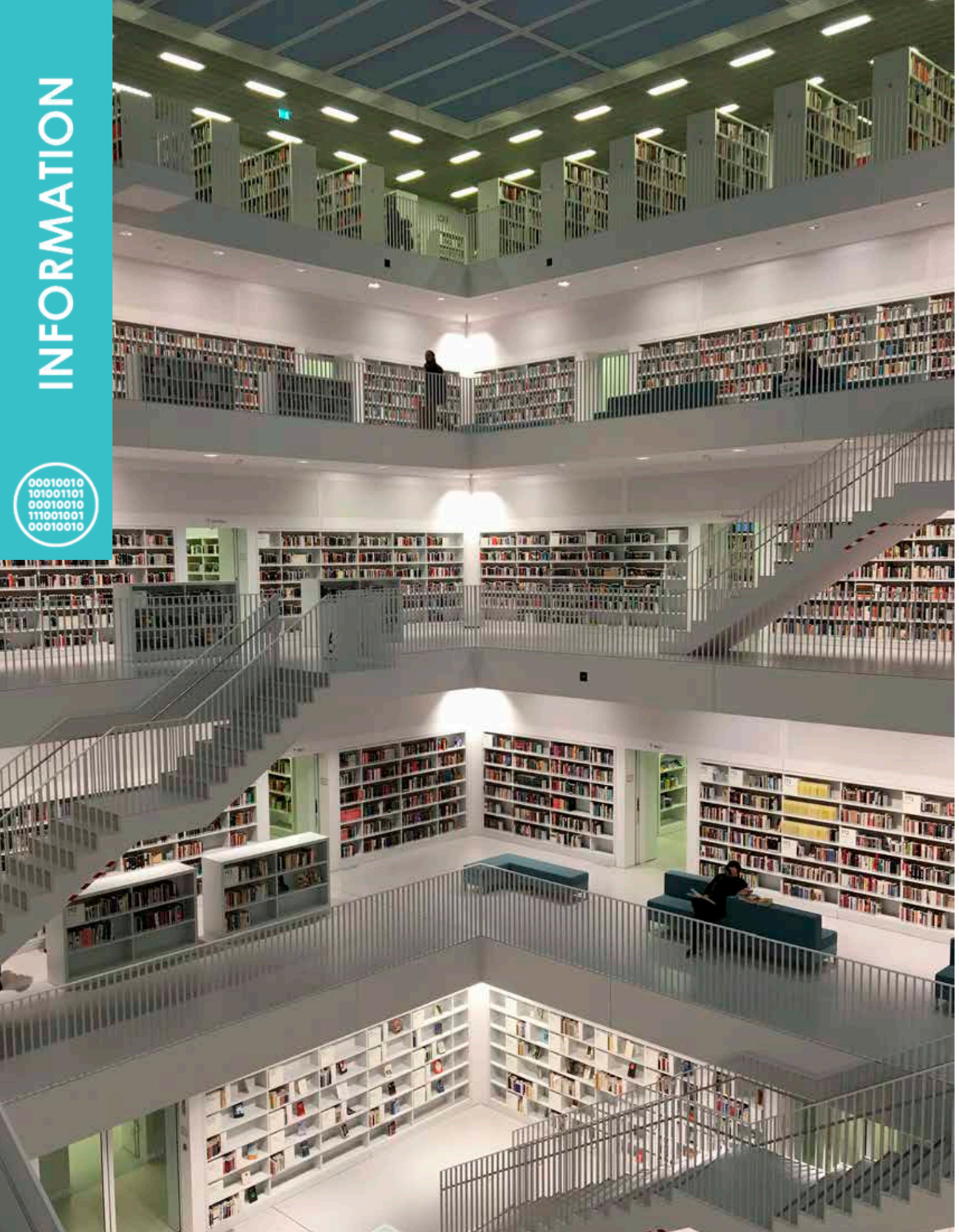
WHAT (&WHY) WE NOTICE



We are bombarded with relentless daily flows of information bits — endless lists of data that almost never illuminate what matters.

Embracing these false proxies is spirit-deforming. Our vitality is only sustained when the information we seek, notice, and respond to deepens our understanding of who we are.

To what, then, should we pay our closest attention?



The Question: *What's Meaningful?*

Too much information running through my brain. Too much information driving me insane.

— The Police

Amidst the deluge of daily life, what deserves our attention?

This is, relatively speaking, a new question for us to consider.

Until recently, *homo sapiens* were an incremental species. Our ancestors only learned to read 200 generations ago. The first universities are just 1,000 years old. We didn't even develop a germ theory of disease until the late 19th century.

Before, in other words, it took many generations for big changes to occur.

Now, however, we are experiencing multiple, massive shifts to the structure and flow of human life in a single generation. Whereas it took decades for the telephone to reach half of all U.S. households, it took just five years for cell phones to do the same. And although it seemed laughable in 1965 when Intel's Gordon Moore predicted that every other year we'd double the number of transistors that could fit onto a single chip of silicon, "Moore's Law" has become the most enduring technological prediction of our time; indeed, today's computer chips offer 4,000 times more performance than they did fifty years ago, are nearly 100,000 times more energy efficient, and cost about 60,000 times less to produce.

As a result, the Industrial Age has begun to give way to the Information Age, reshaping our timeworn frames for what is worth knowing — and who gets to decide.

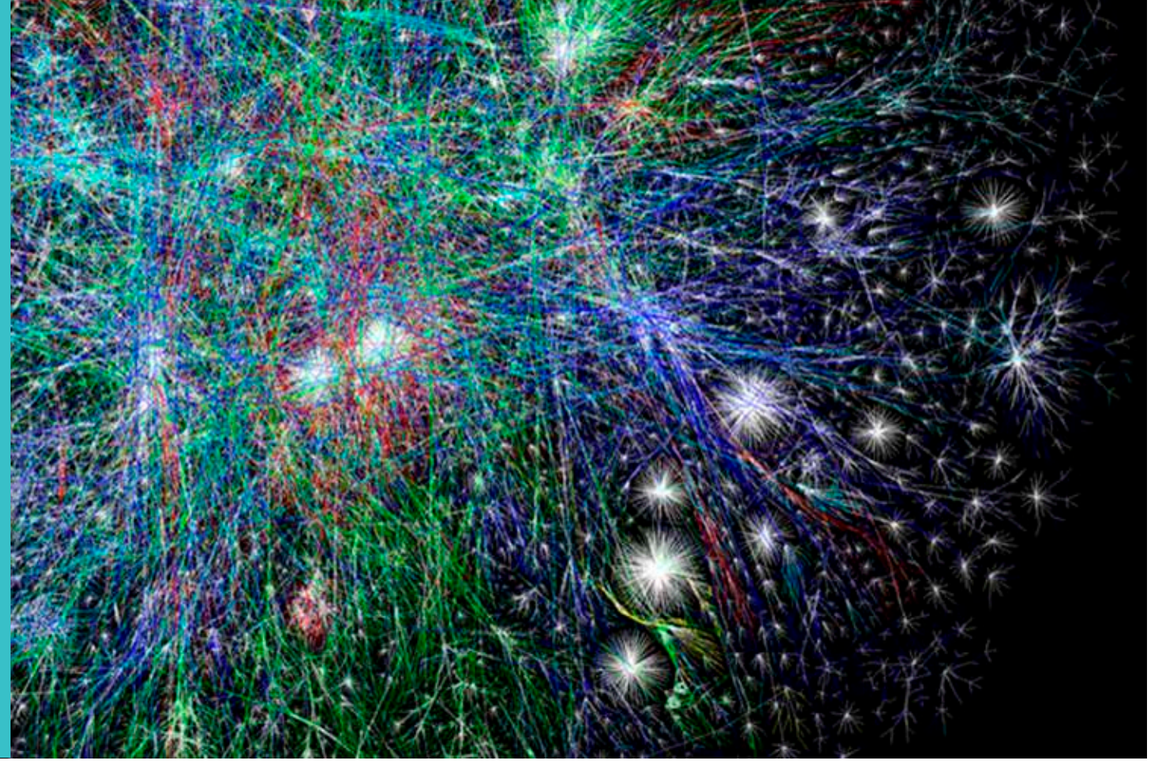
Whereas in the past, we collected the world's knowledge in an encyclopedia, in the present, we co-construct it via Wikipedia.

What will we do in the future? And how can we survive the deluge of information in our modern, networked world without feeling as though we are drowning in, well, TMI?

As always, the most valuable lessons for our human systems are to be found in the natural world, with its several billion years' worth of trial and error.

As you read in chapter one, a paradox of living systems is that each organism maintains a clear sense of its individual *identity* within a larger network of relationships that help shape that identity. But whereas establishing a clear sense of "who's there" is the building block of

INFORMACIÓN



any living system, the determinant of whether that system can evolve and adapt is its relationship to the very thing that is overwhelming us in our hectic modern lives.

This insight is counter-intuitive. Yet nature reveals that anything that disturbs a living system is also what helps it self-organize into a new form of order.

Growth comes from *disequilibrium*, not balance.

And information is not power; it's nourishment— but *only when and if the information that is absorbed is the kind that is most meaningful and relevant to the system that absorbs it.*

In scientific terms, this is known as a *dissipative structure*, a system that gives up its previous form in order to recreate itself into something new. And in practical terms, this is not how we have designed our schools, our organizations, or our civic structures — which are not only not "living" in any meaningful way, but are also likely to treat *information* as something to be guarded, repressed, or preferenced.

"We suffer from a fundamental misperception of information," says organizational theorist Margaret Wheatley. "We have treated it as a thing, as a physical entity, which has kept us from contemplating its other dimensions — the content, character, and behavior of information. We expect information to be controllable, stable, and obedient. We expect to be able to manage it. In the new science, however, information is a dynamic, changing element. Without information, life cannot give birth to anything new.

Information is what allows for the emergence of a new order."

Although our relationship to information has always shifted with each new innovation — from the alphabet to the printing press to the smartphone — the new order emerging around us has, in fact, been predicted for generations.

In 1937, H.G. Wells envisioned a "sort of cerebrum for humanity, a cerebral cortex which will constitute a memory and a perception of current reality for the whole human race." Generations later, Marshall McLuhan picked up the thread to suggest that Wells' cerebrum had, in 1967, finally arrived. "Today," he wrote, "we have extended our central nervous systems in a global embrace, abolishing both space and time as far as our planet is concerned. Rapidly, we approach the final phase of the extensions of man —the technological simulation of consciousness, when the creative process of knowing will be collectively and corporately extended to the whole of human society."

Today, of course, the global brain and body Wells and McLuhan anticipated is fully upon us — for better and for worse. What should we do with the daily flood of bits and bytes it is producing — and how should it impact the ways we think about preparing our children to build a better world?

As you'll see in the stories that follow, the first step is to ask, amidst the deluge, "What's meaningful" — and to follow one another's answers wherever they may take us.

If an organization wishes to become more alive and adaptive, it must open itself to information the way a living system does. "Only information that truly challenges or illuminates our understanding or interpretation of our learning identity has the greatest potential to provoke meaningful changes in our thinking and behavior," Wheatley explains.

"We learn because the information matters. And it matters because it has personal significance to who we are now and who we wish to become. This is true for us as individuals. And it is true for our systems."

"For so long," she continues, "we've been engaged in smoothing things over, rounding things off, keeping the lid on (the metaphors are numerous), that our organizations are literally dying for information they could feed on, information that was different, disconfirming, and filled with enough newness to disturb our system into wise solutions. We need to have information coursing through our systems, disturbing the peace, imbuing everything it touches with the possibility of new life. We need, therefore, to develop new approaches to information — not management but encouragement, not control but genesis. How do we create more of this wonderful life source?"

This, then, is the work: To pay close attention to whatever helps shape, and reshape, our individual and collective sense of identity. To follow the meaning. And to know that in a living system, change is the only constant.

It's what undergirds the science of feedback loops, which allow living organisms to maintain a sense of equilibrium.

It's what prompted the Palestinian playwright Amir Nizar Zuabi to produce a one-person play that tells the story of Syrian refugees not in a single theater — but in myriad cramped kitchens across an entire metropolitan area.

And it's what drives the adult educators of Reggio Emilia to model in their daily interactions with children a form of deep listening and emergent research that has yielded the finest (and most equitable) nursery schools in the world.

In the end, it may even result in a radically different conception of what we have up to now called *school*. "As the sheer volume of information increases," write scholars Jal Mehta, Robert Schwartz, and Frederick Hess, "the portal associated with formal schooling begins to look increasingly restrictive and, in a world of direct access to information, increasingly dysfunctional. What qualifies as 'official knowledge' looks old fashioned in an age when there are many possible portals for access to information and many possible ways to attach meaning to that information through the process of learning.

"Schools may not disappear entirely," they suggest provocatively, "but they will no longer be able to claim a monopoly on what is worth knowing and how to know it."

To which one can only say: perhaps — if we can build the discipline, and find the space, to quiet the din of our modern lives and focus solely on that which will help us build a better world, by design.

Amidst the noise, we must find the signal.

"Forgetting used to be a failing, a waste, a sign of senility," writes the author James Gleick in his book *The Information*. "Now it takes effort. It may be as important as remembering."

The future is being born now
in everything you do,
or don't do.

The Science: Feedback Loops

Our world is made of circles: Living and dying. Energy and entropy. Cause and effect.

Why, then, do we so often see straight lines?

According to systems theorist Peter Senge, "one of the reasons for this fragmentation in our thinking stems from our language. Language shapes perception. What we see depends on what we are prepared to see." And Western languages, with their subject-verb-object structure, are biased toward a linear view.

"If we want to see systemwide interrelationships," says Senge, "we need a language of interrelationships, a language made up of circles."

This is the language, and the science, of feedback loops.

Most commonly, we use the word *feedback* to describe the process of gathering opinions about ourselves — all too often, unidirectionally ("How did I do?"). In systems thinking, however, *feedback* is a broader concept that means a reciprocal flow of influence.

We are always a part of the process, in other words, and never an impartial observer.

Everyone shares responsibility for the problems created by the systems they inhabit.

And every influence is both *cause* and *effect*.

This represents a profound shift in awareness, one that requires us to acknowledge that we are both influenced by and influencing our reality (and one another's) all the time.

Feedback loops provide a language to map and explain that activity, *biologically.*

There are two types of loops, the first of which is called regulatory or negative feedback. The balancing feedback these loops provide exist whenever and wherever there's a goal-oriented behavior required. The work of a thermostat is an easy example — as is the myopia of a school district oriented around its test scores.

In these sorts of systems, if the goal is one you like, you'll be happy — and if it isn't, you'll be thwarted at every effort to change things until you either change the goal or weaken its influence. Negative feedback loops, therefore, keep systems on track once the course has been established, and use information to help the system achieve its predetermined outcomes — even if those outcomes are not explicitly named or understood.

This sort of system is great for machines — and lousy for human beings.

But there is a second type of feedback loop, positive or amplifying. These loops use information differently — not to maintain the status quo, but to notice something new and amplify it into messages that signal a larger need to change.

Positive loops do not promote order, but *disequilibrium,* which is the hallmark of a true living system— to continuously import energy from the environment and export entropy in order to constantly change and grow. Our understanding of them grows out of Nobel Laureate Ilya Prigogine's work on thermodynamics, which demonstrated that, prior to the conventional wisdom up to that point, disequilibrium is in fact *the* necessary condition for growth in a living system.

As he explained, they're called dissipative structures because of their paradoxical nature — they give up their previous form(s) in order to become something new, over and over. This is why they're called *self-organizing systems.* As Margaret Wheatley puts it in *Leadership & The New Science*, "The viability and resiliency of a self-organizing system comes from its great capacity to adapt as needed, to create structures that fit the moment. Neither form nor function alone dictates how the system is organized. Instead, they are process structures, reorganizing into different forms in order to maintain their identity."

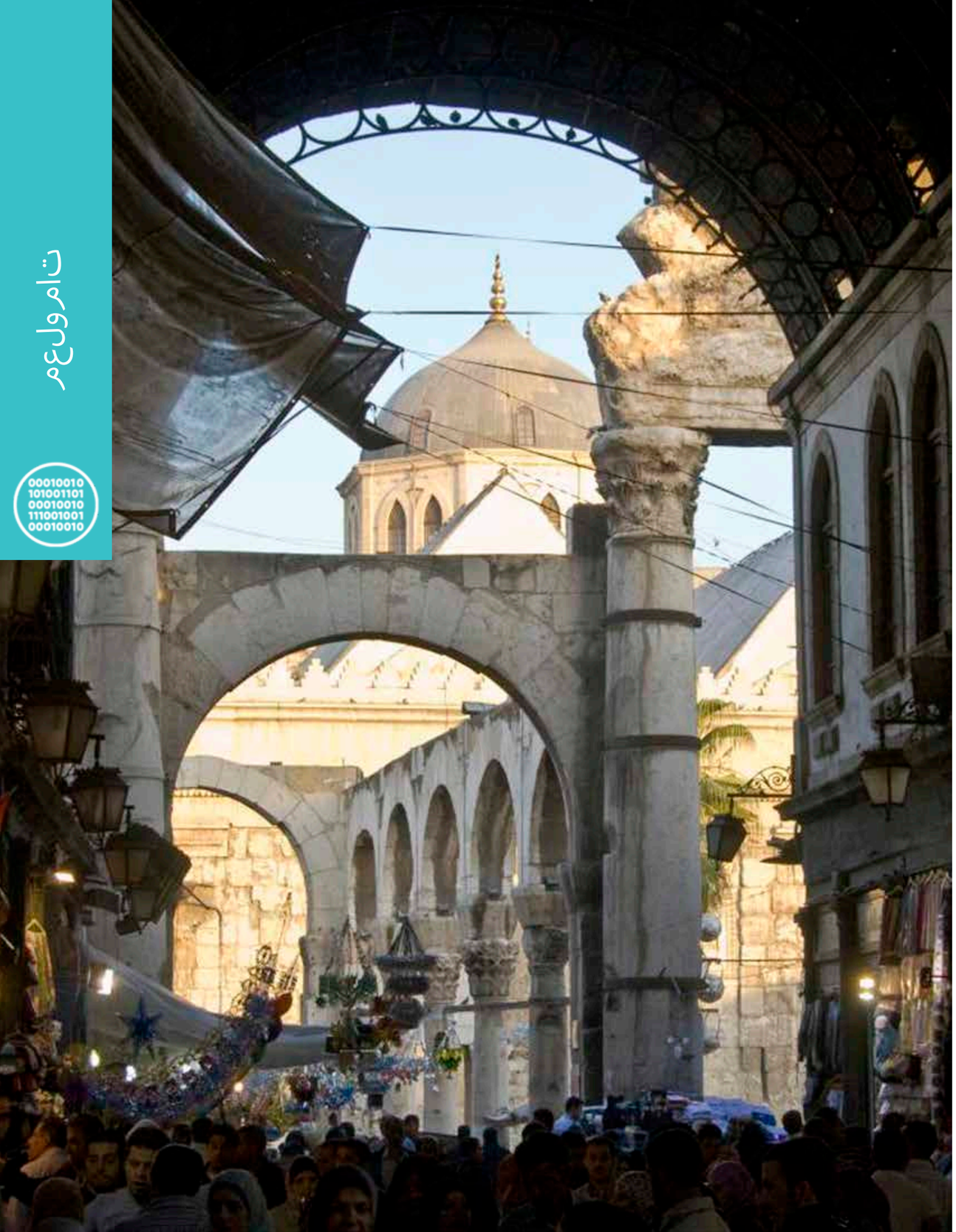
They are, in other words, precisely what our human systems are not — and need to become.

Adaptive, not rigid.

Resilient, not stable.

If stability is the goal, runaway amplification can be very threatening — think of a shrieking microphone — and we may be wise to quell it before our eardrums burst. But if what we seek is something more emergent in its response to new information, positive feedback is essential to life's ability to adapt and change, whether it's your own backyard, a healthy workplace culture, or the Twitter storm that helped fuel the Arab Spring.

It is, simply, nature's way of saying that the system needs to change.



The Art:

“Oh, My Sweet Land”

For as long as we’ve walked the earth, we’ve made sense of it through stories.

And for thousands of years, the theater has been our most enduring place to share them — a darkened space in which we are invited to imagine alternate worlds, and have our senses activated through the magic of language, lighting, and design.

It has not been the place we go to experience the sting of freshly chopped onions, or to hear the crackling sizzle of a heated pan.

But a new play, and a new frame for thinking about how and where our dramatic stories can unfold, is changing all that —and making the theater

a space in which *all* our senses can be brought to life in the service of generating a deeper connection to the stories we tell.

The one-woman play, *Oh My Sweet Land,* is the work of Amir Nizar Zuabi, an award-winning Palestinian playwright; and Corinne Jaber, a German-Syrian actress. It’s based on interviews with Syrian refugees in Jordan, and what unfolds over its 90 minutes is a visceral, personal look at the Syrian refugee crisis — and the brutal war that led up to it.

The setting is simple and straight-forward: a woman of mixed Syrian-German parentage recalls her encounter with Ashraf, a Syrian man in Paris who charms her and then disappears, prompting the woman to set out in search of him — a journey that leads her to intersect with some of the millions of Syrian refugees in Lebanon and Jordan.

In this production, however, the nameless woman is not speaking to us from a stage, but from someone’s private kitchen, a place in which only 20 or so people can fit — and a setting the production team only has access to about an hour before the show starts. And while she’s speaking she’s not blocking out rigid stage directions, but preparing *kibbeh*, a Syrian delicacy. “Since I came back, I make kibbeh again and again,” she says as the show begins, “as if I want to close a hole in my soul with these little pockets of warmth.”

Because of the setting, audience members are likely to be affected by more than just the language. “This man’s imprisonment matters so much more than a pan of onions,” wrote theater critic Alexis Soloski when the play was staged in New York City. “But you are sitting in a cream-colored Brooklyn kitchen and the stove is a lot closer to you than Syria. So it’s the onions that really trouble you. Because surely the steam has turned to smoke. Surely they are burning.”

For Zuabi, that fuller engagement of the senses is part of the point.

"Where I come from, hospitality, feeding you, is a core value," he said.

"For me it was a no-brainer that the play needs to do with food and the sensuality of food, because it's about a culture that's under attack — not just about the horrors of Syria, but about celebrating what this culture is."

The intimacy of the setting adds another factor. "The way that this play has been written — it's poetic, it's personal, it's intimate, it's very vulnerable," says Torange Yeghiazarian, who directed the play for its San Francisco run. "The storyteller opens herself up and shares intimate details that I hope will entice the audience to also open up and make themselves vulnerable. That's why we're having post-play conversations and sharing food. I feel like as a society we're hungry for that kind of intimate and vulnerable conversation."

Consequently, *Oh, My Sweet Land* and efforts like it are reframing the nexus between art and everyday life, in ways that can open us up to a broader emotional experience.

"You might feel like a bit of a monster," Soloski continues, "for fretting about those onions while Ms. Malouf describes people who have suffered torture and worse. Yet this is what makes Mr. Zuabi's play so devastating. Because yes, it's about kibbe and sex and stressful journeys across borders. But as you sit crammed together in that pleasant little kitchen, the play is also about our incomplete ability to wrap our heads around a war being fought half a world away, about our finite capacity for empathy.

"Decent people can't look away from what is happening," the nameless woman tells herself. But people can and people do, like the woman who will soon look away from us as she removes the kibbe from boiling oil. So we go on — cooking, cleaning, watching plays — and we put slaughter out of our minds.

"What else can we do?"

The Practitioner: Robin Wall Kimmerer

Robin Wall Kimmerer is a professor of environmental biology at the State University of New York, and the founding director of the Center for Native Peoples and the Environment, whose mission is to create programs which draw on the wisdom of both indigenous and scientific knowledge for our shared goals of sustainability.

Of European and Anishinaabe ancestry, Robin is an enrolled member of the Citizen Potawatomi Nation. As a writer and a scientist, her interests include not only restoration of ecological communities, but restoration of our relationships to land. She is the author of Gathering Moss, which incorporates both traditional indigenous knowledge and scientific perspectives; and Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants.

(The following comments are excerpted from Dr. Kimmerer's appearance on On Being with Krista Tippett. To learn more, visit onbeing.org.)

Q: What led you to fall in love with the natural world?

A: I was lucky enough to grow up in the fields and the woods of upstate New York. I was lucky in that regard, but disappointed also, in that I grew up away from the Potawatomi people, away from all of our people by virtue of history, the history of removal and the taking of children to the Indian boarding schools.

And so, in a sense, the questions that I had about who I was in the world, what the world was like, those are questions that I really wished I'd had a cultural elder to ask,

but I didn't, but I had the woods to ask.

And there's a way in which just growing up in the woods and the fields, they really became my doorway into culture. In the absence of human elders, I had plant elders instead.

So there was no question but that I'd study botany in college.But the botany that I encountered there was so different than the way that I understood plants. Plants were reduced to objects. What was supposedly important about them was the mechanism by which they worked, not what their gifts were, not what their capacities were. They were really thought of as objects, whereas I thought of them as subjects.

And that shift in worldview was a big hurdle for me in entering the field of science.

Q: Was there a turning point, a day or a moment where you felt compelled to take a stand for these different ways of knowing and seeing and studying the world?

A: Yes. I think the place that it became most important to me to start to bring these ways of knowing back together again is when, as a young Ph.D. botanist, I was invited to a gathering of traditional plant knowledge holders. And I was just there to listen, and it was such an amazing experience. Four days of listening to people whose knowledge of the plant world was so much deeper than my own. Their education was on the land and with the plants and through the oral tradition. But I just sat there and soaked in this wonderful conversation, which interwove mythic knowledge and scientific knowledge into this beautiful cultural, natural history. And, for me, it was absolutely a watershed moment, because it made me remember those things that starting to walk the science path had made me forget, or attempted to make me forget. And I just saw that their knowledge was so much more whole and rich and nurturing that I wanted to do everything that I could to bring those ways of knowing back into harmony.

One of the difficulties of moving in the scientific world is that when we name something, often with a scientific name, this name becomes almost an end to inquiry. We sort of say, well, we know it now. We're able to systematize it and put a Latin binomial on it, so it's ours. We know what we need to know. But that is only in looking, of course, at the morphology of the organism, at the way that it looks. It ignores all of its relationships. It's such a mechanical, wooden representation of what a plant really is. And we reduce them tremendously if we just think about them as physical elements of the ecosystem.

Q: This notion of the animacy of the natural world and everything in it, including plants, is very pivotal to your thinking, and to the way you explore the natural world. Is there a grammar of animacy?

A: In the English language, if we want to speak of that sugar maple or that salamander, the only grammar that we have to do so is to call those beings an "it." And if I called my grandmother or the person sitting across the room from me an "it," that would be so rude, right? And we wouldn't tolerate that for members of our own species, but we not only tolerate it, but it's the only way we have in the English language to speak of other beings, is as "it."

In Potawatomi, the cases that we have are animate and inanimate, and it is impossible in our language to speak of other living beings as "it"s. And the language of "it," which distances, disrespects, and objectifies, I can't help but think is at the root of a worldview that allows us to exploit nature. And by exploit, I mean in a way that really seriously degrades the land and the waters, because, in fact, we have to consume. We have to take. We are animals, right? But that, to me, is different than really rampant exploitation. But this is why I've been thinking a lot about: Are there ways to bring this notion of animacy into the English language?

What I mean when I talk about the personhood of all beings, plants included, is not that I am attributing human characteristics to them, not at all. I'm attributing plant characteristics to plants. Just as it would be disrespectful to try and put plants in the same category through the lens of anthropomorphism, I think it's also deeply disrespectful to say that they have no consciousness, no awareness, no being-ness at all. And this denial of personhood to all other beings is increasingly being refuted by science itself. I can't think of a single scientific study in the last few decades that has demonstrated that plants or animals are dumber than we think. It's always the opposite, right? What we're revealing is the fact that they have extraordinary capacities, which are so unlike our own, but we dismiss them because, well, if they don't do it like animals do it, then they must not be doing anything, when, in fact, they're sensing their environment, responding to their environment in incredibly sophisticated ways. The science which is showing that plants have capacity to learn, to have memory, we're at the edge of a wonderful revolution in really understanding the sentience of other beings.

Q: *Sustainability* is a word we use a lot to describe the world we're living into or need to live into. Is it the right word?

A: If something is going to be sustainable, its ability to provide for us will not be compromised into the future. And that's all a good thing. But at its heart, sustainability, the way we think about it, is embedded in this worldview that we, as human beings, have some ownership over these, what we call, resources, and that we want the world to be able to continue to keep — that human beings can keep taking and keep consuming.

The notion of reciprocity is really different from that. It's an expansion from that, because what it says is that our role as human people is not just to take from the

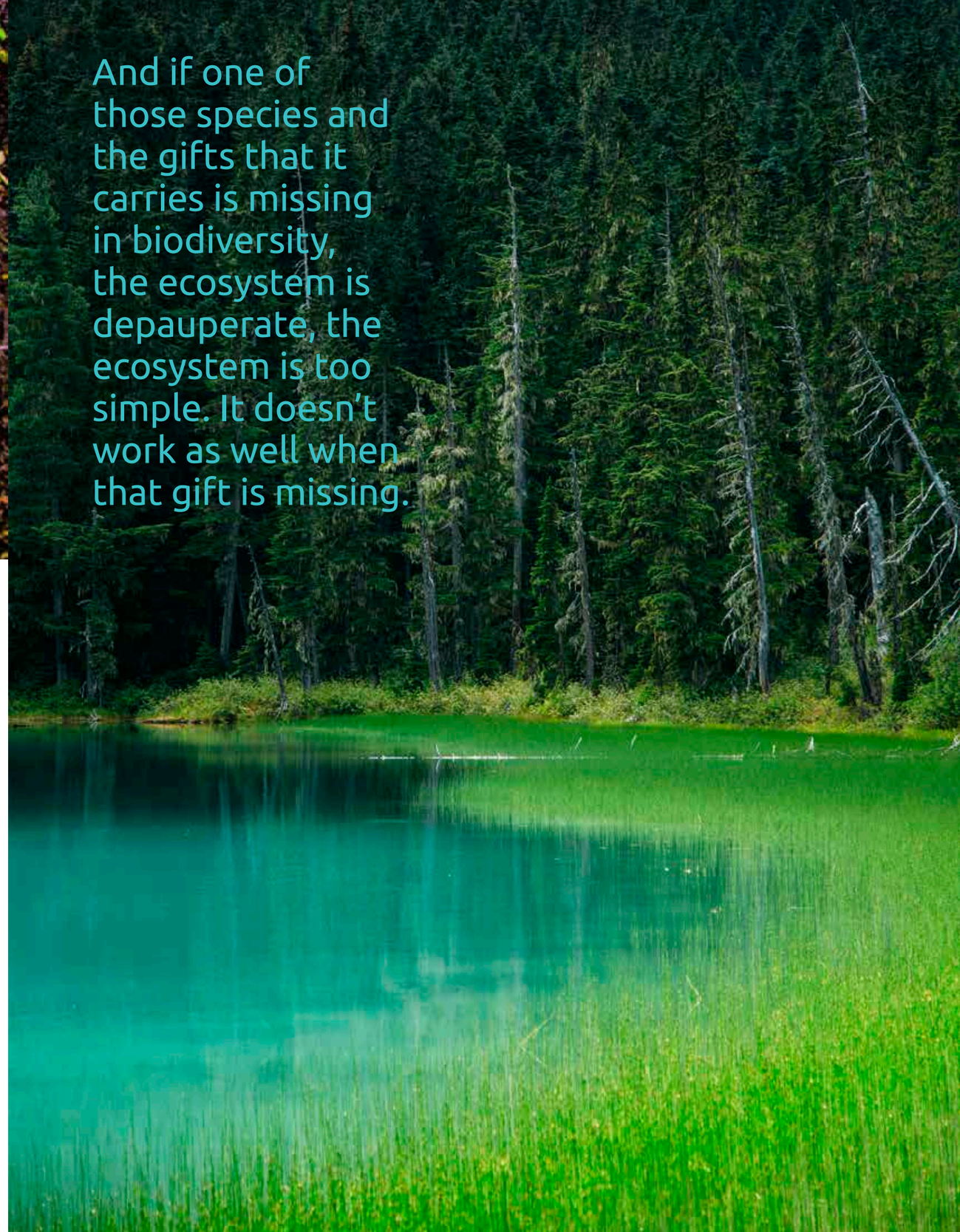
earth, and the role of the earth is not just to provide for our single species. So reciprocity actually kind of broadens this notion to say that

not only does the earth sustain us, but that we have the capacity and the responsibility to sustain her in return.

So it broadens the notion of what it is to be a human person, not just a consumer. And there's such joy in being able to do that, to have it be a mutual flourishing instead of the more narrow definition of sustainability so that we can just keep on taking.

I think that longing and the materiality of the need for redefining our relationship with place is being taught to us by the land, isn't it? We've seen that, in a way, we've been captured by a worldview of dominion that does not serve our species well in the long term, and, moreover, it doesn't serve all the other beings in creation well at all. So we are attempting a mid-course correction here. And I think that it's really important to recognize, that for most of human history, I think the evidence suggests that we have lived well and in balance with the living world. And it's, to my way of thinking, almost an eyeblink of time in human history that we have had a truly adversarial relationship with nature.

The idea of reciprocity, of recognizing that we humans do have gifts that we can give in return for all that has been given to us is, I think, a really generative and creative way to be a human in the world. Some of our oldest teachings are saying, what does it mean to be an educated person? It means that you know what your gift is and how to give it on behalf of the land and of the people, just like every single species has its own gift.



The Community: Reggio Emilia (Emilia-Romagna, Italy)

Reggio Emilia, a mid-sized city that sits roughly halfway between Milan and Bologna, is not your grandmother's Italy.

For starters, it's more hardscrabble than picturesque — heavily graffitied, with streets and buildings that feel weathered and worn from everyday use. And although you'll still find the charming clock tower, the cobblestone streets and the Renaissance-era churches in the city center, you'll also find a city in which one out of five residents is not from Italy itself, but places as far-flung as Ghana and Nigeria, Morocco and Albania, Yemen and Syria.

It is, in short, a microcosm of the changing face of Italy, and of the wider world: nascent, uprooted, and precariously perched between worlds and worldviews.

Why, then, is it also the home to the finest nursery schools in the world?

We traveled there to find out — as part of an international study group, scores of which regularly visit Reggio's integrated public system of more than eighty infant/toddler and early childhood centers to bear witness to what has been created here — and wonder how it might be replicated elsewhere.

Because Reggio schools don't exist anywhere else in the world — the closest you'll find are schools that say they're "Reggio-inspired" — they're not well known outside of progressive education circles. But for those that *do* know, a visit to Reggio is akin to a pilgrimage to Mecca.

Reggio Emilia is a city of altars — to childhood, to imagination, and to the spirit of shared governance and democratic participation. It is magical, but not in a precious way; it is revolutionary, but only because it has had the time and space to evolve; and it is illustrative, but not because it is prescriptive or straight-forward.

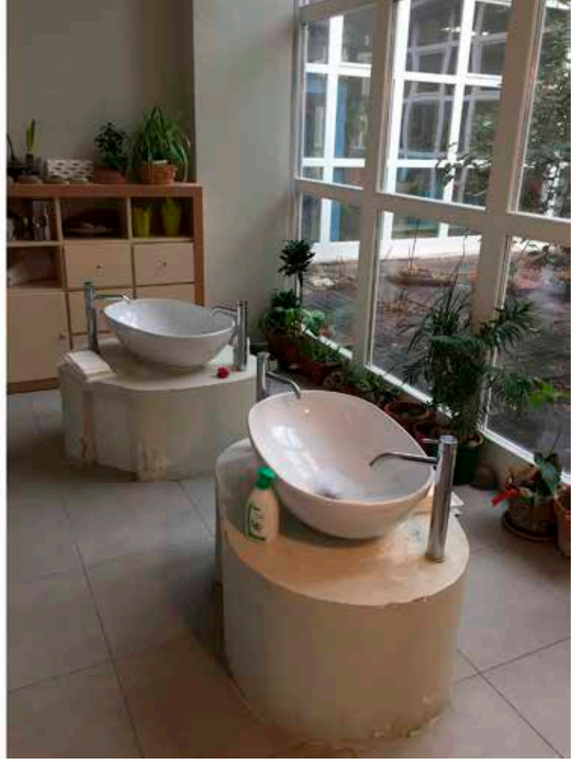
In Reggio, the whole is always more than the sum of its parts. There are no shortcuts. And yet the path is as clear as can be.

To understand why, you must first travel back to 1945, when, after four years of worldwide war and two decades of domestic terrorism, a group of local residents made an unexpected (and unintended) discovery: one tank, six horses, and three trucks that were left behind by fleeing Nazi troops.

After some discussion, it became clear that by selling what they had found, the townspeople could underwrite an initial investment in their post-war future, and begin to write a new history in the wake of all that had been lost.

The men wanted to build a cinema.

The women wanted to build a school.



Fortunately, the women won, and within weeks, construction was underway. A young man named Loris Malaguzzi heard what was happening, and hopped on his bicycle to see for himself. “There were piles of sand and bricks,” he recalled, “a wheelbarrow full of hammers, shovels and hoes. Behind a curtain made of rugs to shield them from the sun, two women were hammering the old mortar off the bricks.

“We’re not crazy!” they exclaimed, unprompted. “If you really want to see, come on Saturday or Sunday, when we’re all here. We’re really going to make this school!”

For Malaguzzi, an elementary school teacher in a nearby town who would, in time, become the ceremonial leader of the Reggio network, it was a life-changing moment.

“It forced everything back to the beginning. It opened up completely new horizons of thought. I sensed that it was a formidable lesson of humanity and culture, which would generate other extraordinary events. All we needed to do was to follow the same path.”

The bedrock of that path was illuminated by a disturbing wartime lesson about humanity. “Mussolini and the fascists made us understand that obedient human beings are dangerous human beings,” he explained. “When we decided to build a new society after the war we understood that we needed to have schools in which children dared to think for themselves, and where children got the conditions for becoming active and critical citizens.”

Consequently, after seven decades of tinkering and revision, what a visitor will see in Reggio’s schools today are a series of design choices and principles that run counter to the way most of the world does ‘school.’

The goal is not knowledge; it’s communication

In Reggio schools, all adults believe that all children have at their disposal a hundred different languages — and that typically, “the school steals ninety-nine.” By languages, these adults do not mean merely the use of words, but also clay, paper, color, joy, imagination — anything that can help a child communicate his or her inner thoughts with the people around them. “We have not correctly legitimized a culture of childhood,” says Lella Gandini, a longtime Reggio teacher, “and the consequences are seen in all our social, economic, and political choices and investments.”

To counter this, Reggio’s schools are relentlessly child-centered — not to achieve notable results in literacy and numeracy, but to achieve notable qualities of identity formation and to ensure that all children know how to belong to a community. “Our approach offers children the opportunity to realize their ideas are different and that they hold a unique point of view,” said Gandini. “At the same time, children realize that the world is multiple and that other children can be discovered through a negotiation of ideas. Instead of interacting only through feelings and a sense of friendship, they discover how satisfying it is to exchange ideas and thereby transform their environment.”

We know. It sounds amazing, but how do you actually *teach* that? What’s the curriculum in a Reggio school?

The curriculum is not fixed; it's emergent

By design, Reggio schools were created to protect children from what Malaguzzi called the 'prophetic pedagogy,' or an education built on predetermined knowledge that got delivered bit by bit — a format Malaguzzi felt was humiliating for both teachers and children because of the ways it denied their ingenuity and emergent potential.

Consequently, Reggio teachers have no predetermined curricula (as the behaviorists would like), but neither do they work as constant improvisers. Instead, every year each school delineates a series of related projects, some short-range and some long. These themes serve as the main structural supports, but then, as Malaguzzi says, "it is up to the children, the course of events, and the teachers to determine whether the building turns out to be a hut on stilts or an apartment house or whatever. The teachers follow the children, not plans."

To see this in action is part of what makes Reggio so magical, and the central feature it requires is a very different notion on the part of adults as to what their central role is, and is not. In this sense, teachers (and there are two in every classroom) are not there to deliver content, but to activate the meaning-making competencies of all children.

As Malaguzzi put it, "they must try to capture the right moments, and then find the right approaches, for bringing together, into a fruitful dialogue, their meanings and interpretations with those of the children."

Context, in other words, matters more than content. And the physical environment, after adults and peers, is the third teacher.

The space is not ancillary, it's exalted

This is why every Reggio school feels like a collection of altars. Great care is given to the construction of space, and to the conditions into which children will explore their one hundred languages. Intricate patterns of stones snake through an outdoor courtyard, inviting children to continue the pattern, or begin a new one. A bright orange slide cuts through thick stalks of bamboo, just because. The art materials are ubiquitous, and organized, and easily accessible. And the boundary between inside and outside is always as permeable as possible.

Here, the light is always able to come in.

It's what led the celebrated psychologist Jerome Bruner to take particular note of a group of four-year-old children who were projecting shadows onto a wall on the day of his visit. "The concentration was absolute, but even more surprising was the freedom of exchange in expressing their imaginative ideas about what was making the shadows so odd, why they got smaller and swelled up or, as one child asked: "How does a shadow get to be upside down?" The teacher behaved as respectfully as if she had been dealing with Nobel Prize winners. Everyone was thinking out loud: "What do you mean by upside down?" asked another child.

"Here we were not dealing with individual imaginations working separately," Bruner concluded.

"We were collectively involved in what is probably the most human thing about human beings, what psychologists and primate experts now like to call 'intersubjectivity,'

which means arriving at a mutual understanding of what others have in mind. It is probably the extreme flowering of our evolution as humanoids, without which our human culture could not have developed, and without which all our intentional attempts at teaching something would fail."

The community is not apart; it's integral

That sense of intersubjectivity is everywhere in Reggio Emilia; it is, in fact, the clearest measure of the school's longitudinal success. As former mayor Graziano Delrio put it, "We in Reggio Emilia believe that we should manage our cities with the objective of building an equal community, acting for the common good of citizens to guarantee equal dignity and equal rights. We assert the right of children to education from birth. The child is therefore a competent citizen. He or she is competent in assuming responsibility for the city. I often quote this statement by John Adams, the second president of the United States: "Public happiness exists where citizens can take part responsibly for public good and public life. Everyone is highly motivated by a desire of being seen, heard, considered, approved and respected by the people around him and known by him."

Indeed, the success of Reggio schools would not have been sustained without meaningful partnership and support from its elected leaders. Today, almost 20% of the city's budget goes towards its early childhood education programs. There is no neighborhood more desirable than another because of the schools; the system has equity throughout. Parents are integral to the success of each school, and play an active role in shared governance. And the spirit of civic participation here, in a city founded by the Romans in the second century B.C., and in a community that can trace its collectivist tendencies back to the craft guilds and communal republics of the medieval 14th century, is what led a mayor of an Industrial city in Northern Italy to proclaim that the infant-toddler centers are "public common spaces where the multitudes aim to become a community of people growing together with a strong sense of the future, a strong idea of participation, of living together, of taking care, one for others. The school expresses the society through which it is generated, but school is also able to generate a new society."

The focus is not content; it's meaning

Enter any Reggio classroom, and you will see teachers scribbling notes, taking pictures, recording conversations, or filming the children as they work. Here, assessment is not something that occurs at the end of a project or course of study to measure knowledge of information; it's the lifeblood of a culture of praxis, and the central way in which both adults and children make meaning out of their work together.

"The way we think of documentation," explains Carlina Rinaldi, "is as visible listening. Within the word *evaluation* is that word *value*. That is what we offer to the learning processes of the children and to those of our colleagues. From your documentation, the children can understand not only their processes but what you value as meaningful for their learning processes. In this way, assessment becomes more democratic. The children can see the meaning that the teacher has drawn from their work, and that they are seen, and heard, and appreciated, and understood."

For old and young alike, then, *understanding* means being able to develop a narrative that gives meaning to the world around them. These are the one hundred languages, and the information the adults gather about the children are what helps to reveal how children think, question, and interpret reality, both with the world and one another. "Expressing our theories to others transforms a world not intrinsically ours into something shared," Rinaldi adds. "Herein lies the basis for the 'pedagogy of relationships and listening' that distinguishes the work in Reggio Emilia."

The bedrock is not love; it's respect

Finally, this.

It is easy to imagine that all we need to do is love children more, or give them more space, and the rest will take care of itself. But what one witnesses in Reggio is less a case of adults loving children — though there is always plenty of that, too. It's a level of listening, attention, and care that comes from an unwavering belief that all children, even the newest among us, are social beings, predisposed, and possessing from birth a readiness to make significant ties with others, to communicate, and to find one's place in the world of others.

"We think of school for young children as an integral living organism," said Malaguzzi, "as a place of shared lives and relationships among many adults and many children. We think of school as a sort of construction in motion, continuously adjusting itself. Either a school is capable of continually transforming itself in response to children or the school becomes something that goes around and around, remaining in the same spot."

This is the path. These are the ingredients. And yet none of it is possible until, as the great theorist David Hawkins once said,

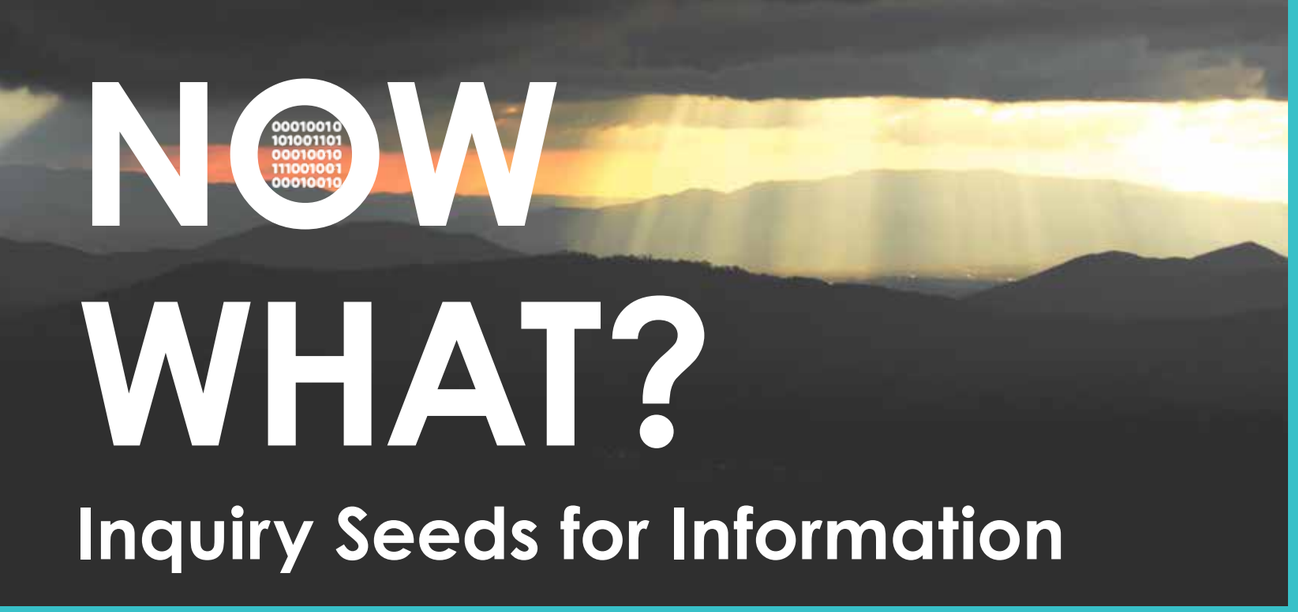
> we realize that "the more magic gift is not love, but *respect* for others as ends in themselves, as actual and potential artisans of their own learnings and doings, of their own lives, and thus uniquely contributing, in turn, to their learnings and doings.

"Respect for the young is not a passive, hands-off attitude. It invites our own offering of resources. It moves us toward the furtherance of their lives and thus, even, at times, toward remonstrance or intervention. Respect resembles love in its implicit aim of furtherance, but love without respect can blind and bind. Love is private and unbidden, whereas respect is implicit in all moral relations with others. Adults involved in the world of man and nature must bring that world with them to children, bounded and made safe to be sure, but not thereby losing its richness and promise of novelty."

Amen.

Reggio Emilia is like a leaf

Authors: children aged 5-6 years, Diana municipal Preschool, Reggio Emilia© Preschools and Infant-Toddler Centers – Istituzione of the Municipality of Reggio Emilia



NOW WHAT?

Inquiry Seeds for Information

Living systems are dynamic open systems that enable the continuous flow and exchange of information. Information serves as the system's nourishment and its source of vibrancy and sustainability.

However, not all information is equally valued or responded to — because not everything that enters a system is equally relevant to its identity or essential to its purpose.

In a *living* system, we don't respond to information that doesn't relate to who we are and what we value. We may notice it, but we do not act on it, or give it permission to distract us or shift our attention. And so our core question must always be this: *What information is meaningful to advancing our shared purpose? How do we ensure we receive this information in ways that will let us heed its advice?*

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ASK yourself: What sorts of information are most meaningful to me, personally and professionally? In what ways am I prioritizing that sort of information? Are there other types of information I'm prioritizing that may not actually be in line with what I most want and need?

MARK your time. Does the reality of your daily life match the rhetoric of your deepest aspirations? Make a short list of what is most important to you: the people, the activities, and the values. Pare the list to ten or fewer items. Then take your day planner and examine how you've spent your time in the past week and month. How many hours can you assign to each of the life priorities you identified? Where have you successfully aligned your values with your time? Where do you find gaps between what you preach and what you actually practice?

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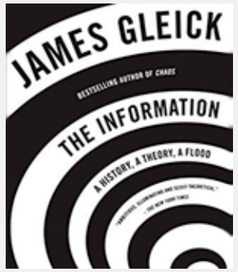
IDENTIFY what, as a community, you want your students to know (competencies), do (skills), be (habits of mind and heart), and experience (actively engage in) in order to learn deeply and become authors of their own lives.

EVALUATE, using that same portrait, the extent to which you are — and are not — intentionally creating the conditions for those skills, habits and experiences to be nourished. On blue Post-it notes, record all the things you do to enable students to grow into that ideal portrait. On red Post-it notes, record all the gaps or obstacles that are getting in the way.

SHADOW a student. The Shadow a Student Challenge is a journey that starts with seeing school through your student's eyes, identifying meaningful opportunities to improve the school experience for your students, and then taking action to create change at your school site. The purpose of your Shadow Day is not to observe classes, but to immerse yourself in a student's experience. Plan to spend the entire day - from bus stop to final bell - walking in the shoes of your student. And try to do everything your student does without judgment. Be curious, ask open-ended questions to understand their needs, and continue to look with beginner's eyes at your school. And then share what you learned at shadowastudent.org.

DRAW a horizontal line on the wall with blue painter's tape, and label it "The Predictable Path." Using Post-its, ask people to describe the predictable ways information is gathered and shared in your organization (e.g., SAT scores, sales metrics etc.). Now draw a second line, coming off the Predictable Path at a 45° angle. Using Post-its, ask people to describe what a "Bold Path" for collecting information would look like if it captured what you most valued (e.g., skill mastery, social impact etc.). Ask people to identify all the trends that might be used to drive the shift from a predictable to a bold path. What do you notice about the way things are, and the way they could be? Which trends and forces should you pay closer attention to — and potentially make use of? And what has become clear to you about the ways your organization must change as a result?

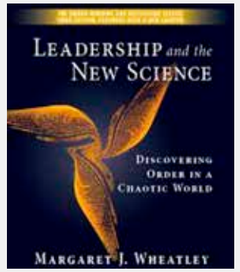
GO DEEPER



The Information: A History, A Theory, A Flood

James Gleick

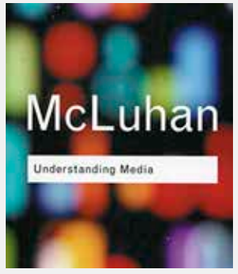
Acclaimed science writer James Gleick presents an eye-opening vision of how our relationship to information has transformed the very nature of human consciousness. A fascinating intellectual journey through the history of communication and information.



Leadership and the New Science: Discovering Order in a Chaotic World

Margaret Wheatley

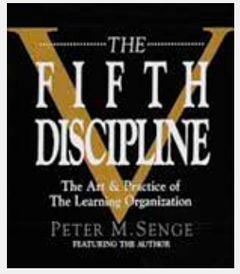
Wheatley provides examples of how non-linear networks and self-organizing systems are flourishing in the modern world. In the midst of turbulence, Wheatley shows, we create work and lives rich in meaning.



Understanding Media

Marshall McLuhan

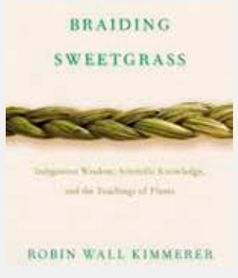
When Marshall McLuhan first coined the phrases "global village" and "the medium is the message" in 1964, no-one could have predicted today's information-dependent planet. McLuhan's insights into our engagement with a variety of media led to a complete rethinking of our entire society.



The Fifth Discipline: The Art and Practice of the Learning Organization

Peter Senge

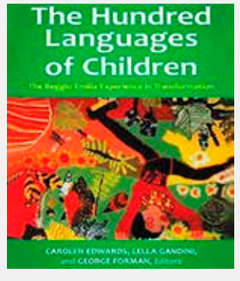
Senge describes how companies can rid themselves of the learning “disabilities” that threaten their productivity and success by adopting the strategies of learning organizations—ones in which new and expansive patterns of thinking are nurtured, and people are continually learning how to create results they truly desire.



Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants

Robin Wall Kimmerer

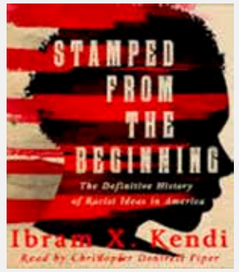
Drawing on her life as an indigenous scientist, and as a woman, Kimmerer shows how other living beings—asters and goldenrod, strawberries and squash, salamanders, algae, and sweetgrass—offer us gifts and lessons, even if we've forgotten how to hear their voices.



The Hundred Languages of Children

Carolyn Edwards, Lella Gandini and George Forman

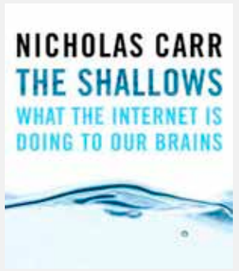
This book describes how the world-renowned preschool services and practical strategies for children under six in Reggio Emilia have evolved in response to the community's demographic and political transformations, and to generational changes in both the educators and the parents of the children.



Stamped from the Beginning

Ibram Kendi

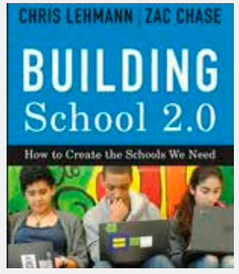
In this deeply researched and fast-moving narrative, Kendi chronicles the entire story of anti-black racist ideas and their staggering power over the course of American history.



The Shallows: What the Internet is Doing to Our Brains

Nicholas Carr

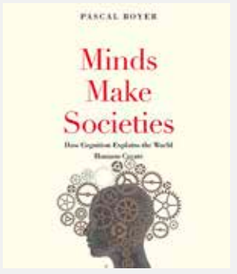
As he describes how human thought has been shaped through the centuries by “tools of the mind”—from the alphabet to maps, to the printing press, the clock, and the computer—Carr interweaves a fascinating account of recent discoveries in neuroscience.



Building School 2.0

Chris Lehmann and Zac Chase

Moving beyond a basic examination of using technology for classroom instruction, *Building School 2.0* is a larger discussion of how education, learning, and our physical school spaces can—and should—change because of the changing nature of our lives brought on by these technologies.



Minds Make Societies: How Cognition Explains the World Humans Create

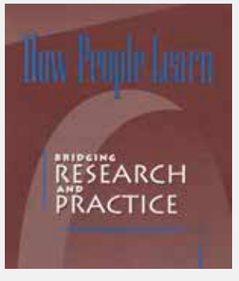
Pascal Boyer

Integrating recent insights from evolutionary biology, genetics, psychology, economics, and other fields, Boyer offers precise models of why humans engage in social behaviors to explore the development and workings of human societies.

Think Wrong: How to Conquer the Status Quo and Do Work That Matters

John Bielenberg, Mike Burn and Greg Galle

Today, challenges emerge at an ever-accelerating rate, and we struggle to find the imaginative answers we crave. When we do, biology and culture conspire to obstruct our progress. *Think Wrong* teaches you how to use a radical problem-solving system to reliably produce surprising, ingenious, and seemingly magical answers to your most wicked questions.



How People Learn: Bridging Research and Practice

National Research Council

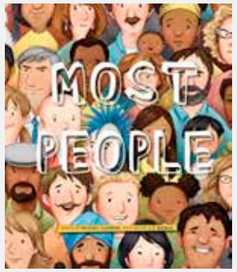
First released in the Spring of 1999, *How People Learn* has been expanded to show how the theories and insights from the original book can translate into actions and practice, now making a real connection between classroom activities and learning behavior.

GO YOUNGER

Why Am I Here

Constance Orbeck-Nilssen

In this empathetic book, a young girl wonders what life would be like if she lived somewhere else. What if she lived in a city with millions of people? What would it be like to be a refugee from a war-torn country? Is she meant to be in a different place? Or is she right where she's supposed to be?



Most People

Michael Leannah

Michael Leannah wrote *Most People* as an antidote to the scary words and images kids hear and see every day. Jennifer Morris's emotive, diverting characters provide the perfect complement to Leannah's words, leading us through the crowded streets of an urban day in the company of two pairs of siblings (one of.whom is of color).

The Fog

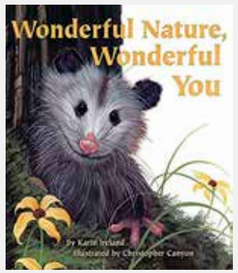
Kyo Maclear

Warble is a small yellow warbler who lives on the beautiful island of Icyland, where he pursues his hobby of human watching. When a deep fog rolls in and obscures his view, the rest of the birds don't seem to notice. *The Fog* is a poignant yet humorous reminder of the importance of environmental awareness.

One Little Bag: An Amazing Journey

Henry Cole

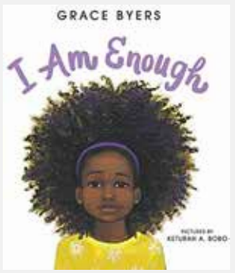
An evocative wordless picture book that is a loving tribute to mindful living on our precious planet. From a tall tree growing in the forest, to the checkout counter at the grocery store, one little bag finds its way into the hands of a young boy. And so begins an incredible journey of one little bag that is used and reused and reused again.



Wonderful Nature, Wonderful You

Karin Ireland

This inspirational book will allow children to develop a deeper appreciation for the life lessons one can learn by observing nature outdoors. Mindfulness and fascinating facts about nature are gracefully woven together, making this book the perfect social emotional book. Nature can be a great teacher!



I Am Enough

Grace Byers

A reminder to us all — Love who you are, respect others, and be kind to one another. We are all here for a purpose. We are more than enough. We just need to believe it.

We cannot fix anything.
We can only re-weave.

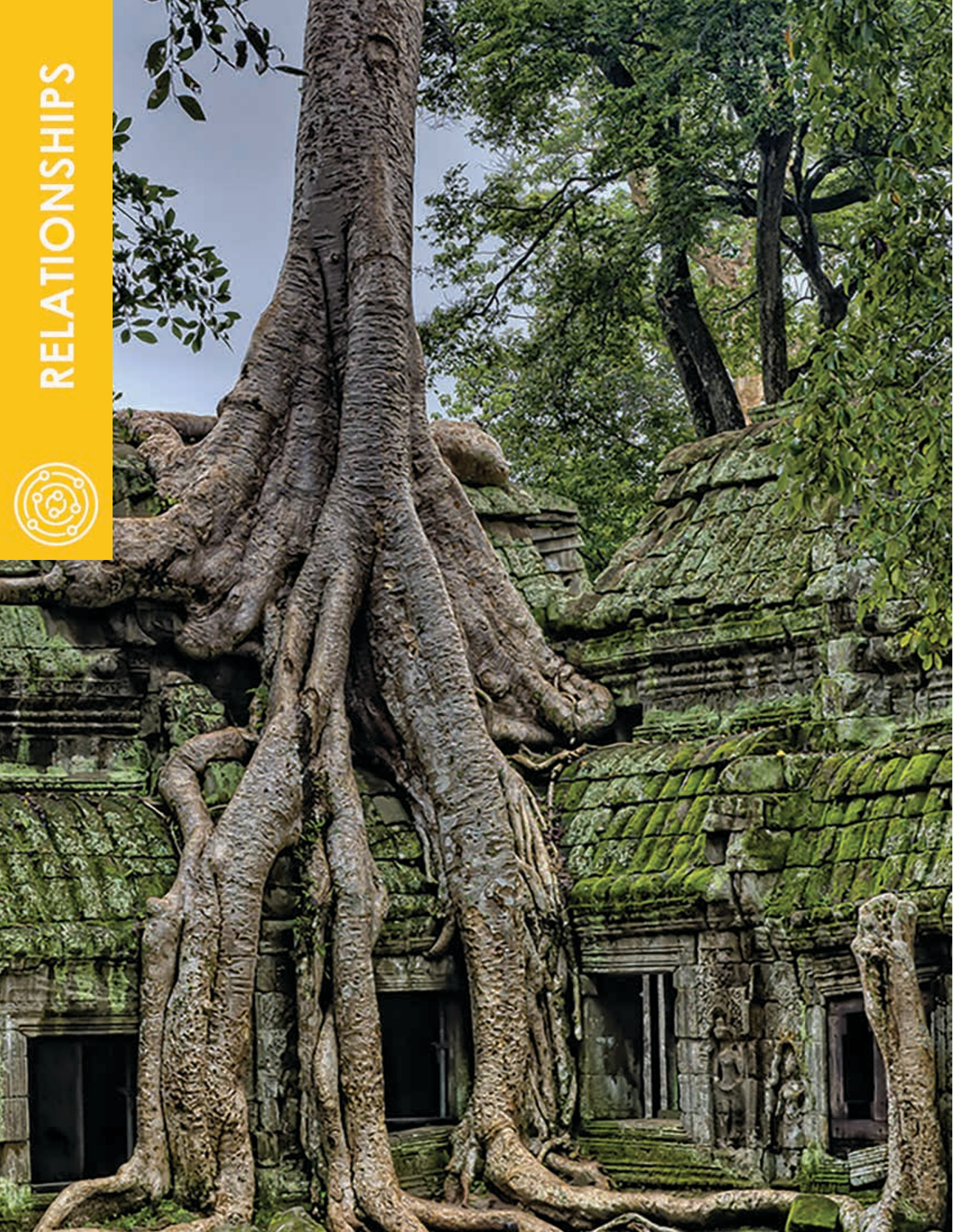
RELATIONSHIPS

HOW (&WHY) WE CONNECT

In a living system, everything is connected. There are no parts to be exchanged or fixed.

Critical connections, not critical mass, are what determine a system's vibrancy.

How, then, can we deepen both the quantity and the quality of the connections in our lives?



The Question: *Who's Connected?*

When we try to pick out anything by itself, we find it hitched to everything else in the Universe.

—John Muir

In the beginning, everything was connected.

Along the way, some of us changed our minds.

And now, in the shadow of the Earth's sixth mass extinction, our survival depends on our ability to rediscover the wisdom we have lost.

In the end, it turns out, everything *is* connected, and at every scale — from the cosmologic to the subatomic.

"Exalted we are," writes the American biologist E.O. Wilson, "risen to be the mind of the biosphere without a doubt, our spirits uniquely capable of awe and ever more breathtaking leaps of imagination. But we are still part of Earth's fauna and flora, bound to it by emotion, physiology, and, not least, deep history."

"There are no individuals in a forest, no separable events," says novelist Richard Powers. "The bird and the branch it sits on are a joint thing. Forests mend and shape themselves into subterranean synapses. And in shaping themselves, they shape, too, the tens of thousands of other, linked creatures that form it from within."

This sense of deep relational weaving is central to indigenous cultures the world over. As Anishinaabekwe activist Winona LaDuke points out, "teachings, ancient as the people who have lived on a land for five millennia, speak of a set of relationships to all that is around, predicated on respect, recognition of the interdependency of all beings, an understanding of humans' absolute need to be reverent and to manage our behavior, and an understanding that this relationship must be affirmed through lifeways and through acknowledgment of the sacred."

Several hundred years ago, however, a new story began to emerge in Europe — one that was fueled by the discoveries of Copernicus, Kepler, and Galileo, and that would come to shape the later thinking of Descartes, Bacon, and Newton. It was a story that displaced us from the universal center, and urged us to no longer view nature as something to which we were bound, but something to be, in Bacon's words, "hounded in her wanderings, and bound into service, and made a slave."

When, in the 17th century, Decartes proclaimed *Cogito ergo sum* ("I think, therefore I exist"), and Newton developed a mathematical formulation that could provide a consistent mathematical theory

of the world (i.e., classical physics), the narrative shift that had begun centuries earlier had finally been completed — away from the notion of an organic, living and spiritual universe, and toward a mechanistic, linear world of separable parts.

It's the story that has dominated Western culture ever since.

Recently, however, its foundations have begun to crumble. New discoveries in the fields of quantum mechanics and electromagnetism have, as Lynne McTaggart writes, "demonstrated that all matter exists in a vast quantum web of connection and that an information transfer is constantly going on between living things and their environment." This discovery, McTaggart says, implies that *homo sapiens* have been "viewing the world through a blurred lens, and that applying these new discoveries to our lives would require nothing less than making our world anew." Even Einstein would agree: "All my attempts to adapt the theoretical foundations of physics to this [new type of knowledge have] failed completely," he once wrote. "It was as if the ground had been pulled out from under one, with no firm foundation to be seen anywhere, upon which one could have built."

In fact, the natural relationship between parts and wholes confirms what some have been saying all along — that the universe is not a clock; it's a cloud.

"Nature is not blind and mechanistic," writes Lynn McTaggart, "but open-ended, intelligent, and purposeful. Its unifying mechanism is not a fortunate mistake but information which has been encoded and transmitted everywhere at once."

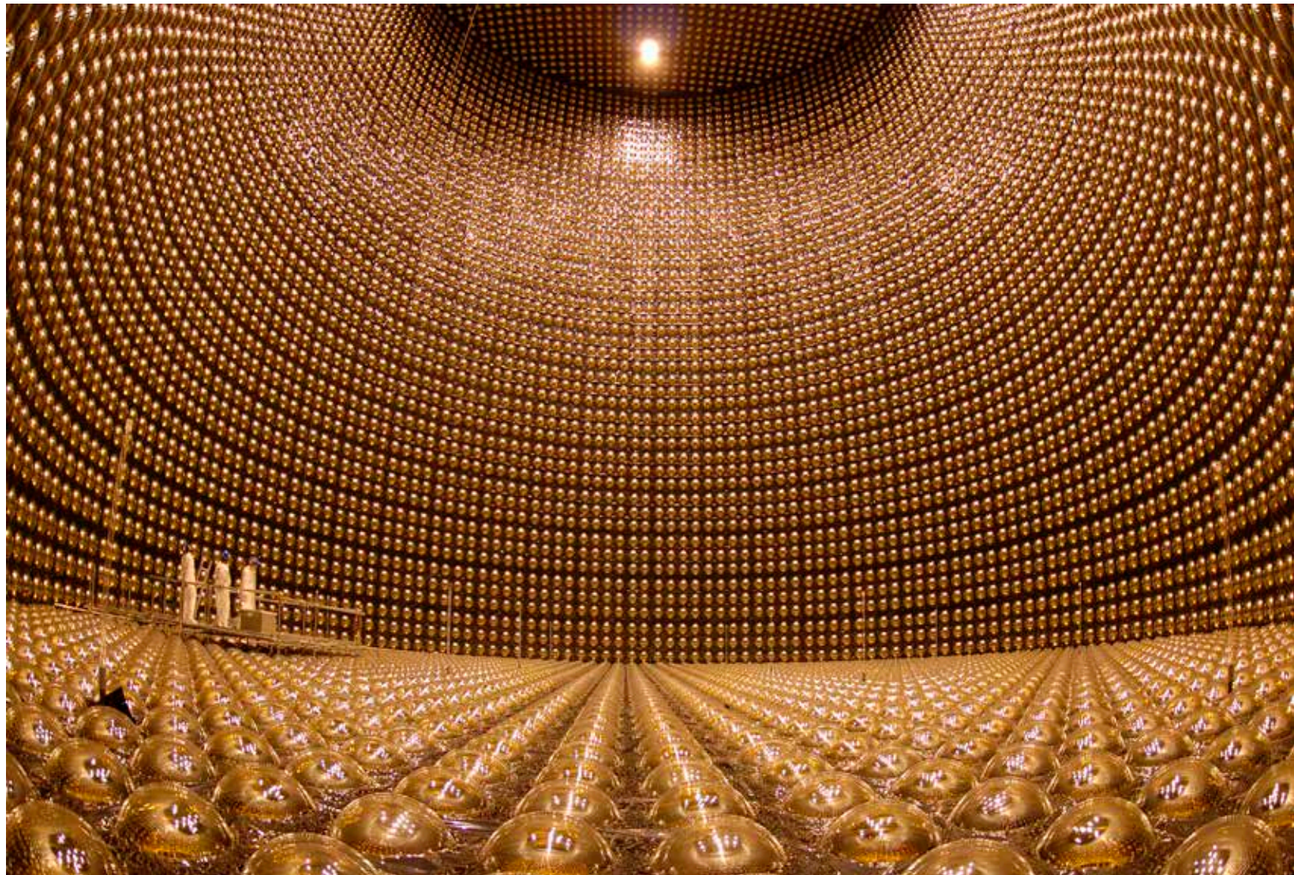
Austrian scientist and systems theorist Fritjof Capra agrees. "As individuals and societies," he explains, "we are all embedded in (and ultimately dependent on) the cyclical processes of nature. Nature sustains life by creating and nurturing communities."

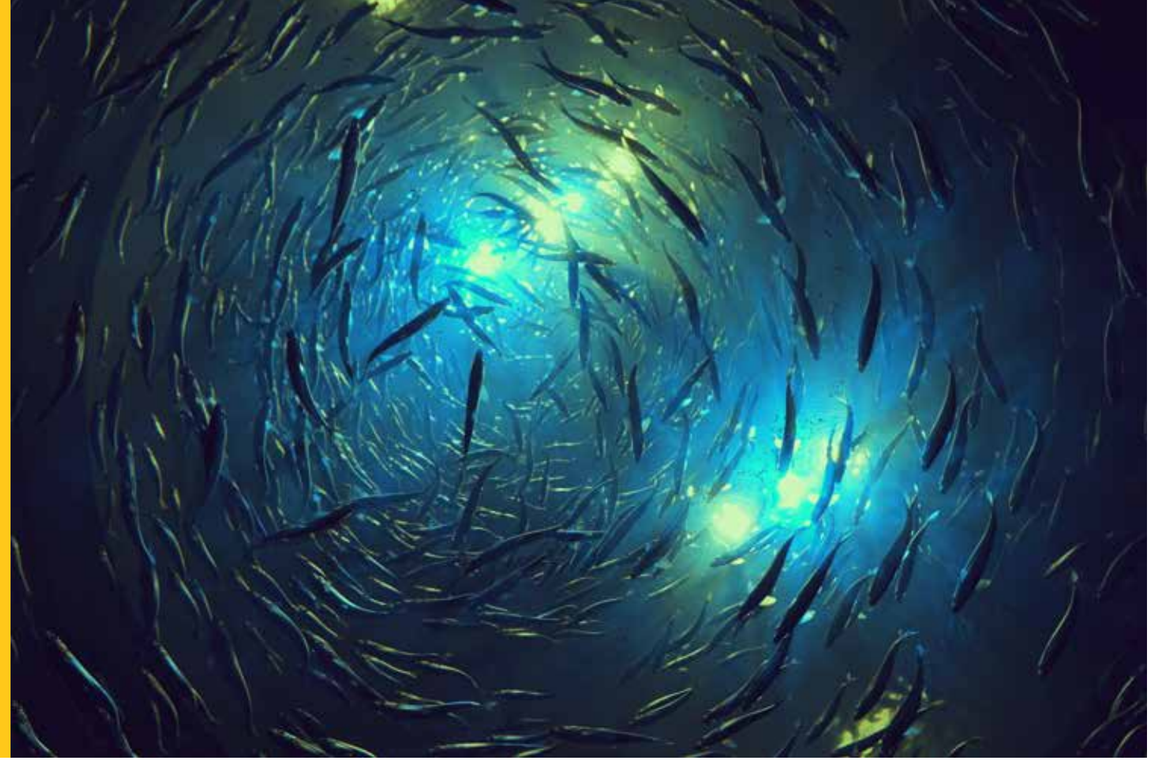
In fact, we are not just embedded in nature, but also to one another. "When you form groups," writes Iain Couzin, who leads the Centre for the Advanced Study of Collective Behavior at the University of Konstanz, "you suddenly have a network system where social interactions exist. We have traditionally assumed that intelligence resides in our brains, in the individual animal. But we have found the first evidence that intelligence can also be encoded in the hidden network of communication between us."

This is the profound lesson we need to learn from nature — a lesson that is equally true at the smallest scale.

"In the quantum world," explains Margaret Wheatley, "*relationship* is the key determiner of everything." Subatomic particles come into form and are observed only as they are in relationship to something else. They do not exist as independent entities. These unseen connections between what were previously thought to be separate entities are the fundamental ingredient of all creation.

"In this world, the basic building blocks of life are relationships, not individuals. Nothing exists on its own or has a final, fixed identity. We are all bundles of potential. Relationships evoke these potentials. We change as we meet different people or are in different circumstances."





This is why the path towards creating a living system requires cultivating the individual and collective self-awareness that comes from understanding identity — who (& why) we are; applying information — what (& why) we notice; and strengthening relationships — how (& why) we connect. "Although each of these three domains has its own dynamism and motion," explains educator Stephanie Pace Marshall, "it is their confluence and synergy that create the generative landscape essential for individual and system wholeness, meaning, and connections.

Relationships represent the dynamic, self-generating learning network of our systems, and they establish its capacity for collaborative inquiry."

But what does that *really* mean in the work we do with one another in our communities, our organizations, and our schools? And how can we attend more intentionally, and see more clearly, the webwork of ways in which we are all interwoven?

As you'll see in the stories and examples that follow, a higher level of relational attunement is not just what lets us build healthier cultures; it's what allows us to comprehend the full weight of our spiritual role in the cosmos — to be, as Wilson put it, the mind of the biosphere itself.

"A human being is part of the whole called by us 'the universe,'" said Einstein, "a part limited in time and space. We experience ourselves, our thoughts and our feelings, as something separate from the rest — a kind of optical illusion of our consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of understanding and compassion to embrace all living creatures and the whole of Nature in its beauty."

This is, in part, the gift of the art of Liz Lerman, who helps us see what a truly trans-disciplinary, trans-generational, trans-media approach to storytelling can reveal about who we are and how we connect.

It's what we learn from the science of honeybees, whose deeply democratic, highly-effective form of life-or-death group decision-making helps demonstrate what a high-functioning collective intelligence can actually engender.

It's what the work of UCLA psychology professor Dan Siegel makes visible, by providing us with a scientific definition of that most elusive of all human features — the mind — and helping us understand precisely what connects us both internally and externally.

And it's what undergirds every aspect of the June Jordan School for Equity, a public school in San Francisco that fosters a strong sense of collective identity in order to provide clearer support to each student's more precarious individual search for who they are, and what they value.

"Mutuality is the principle of the individual body as well as the law governing the interplay of all bodies. It is the key to understanding reality," explains biologist Andreas Weber.

"To understand ourselves, we have to recognize ourselves in other living creatures. To be mirrored is a central element in the formation of human identity."

Virginia Woolf put it another way. "Behind the cotton wool is hidden a pattern. The whole world is a work of art . . . *Hamlet* or a Beethoven quartet is the truth about this vast mass that we call the world. But there is no Shakespeare, there is no Beethoven; certainly and emphatically there is no God.

"We are the words; we are the music; we are the thing itself."

What matters most cannot be mandated.

The Science: Honeybee Democracy

There may be no creature on earth more vital to our own well-being than the honeybee — the primary pollinator for fifty different fruit and vegetable crops that make up the most nutritious portion of our daily diet.

Less debatable is whether this same bee is also the ideal model for our ongoing efforts to craft a more perfect union — or at least Shakespeare thought so, when he described honeybees as the

"creatures that by a rule in nature teach the act of order to a peopled kingdom."

But why? And how?

According to the American biologist Thomas Seeley, it's because of the ways honeybees relate to one another — clearly, constructively, and collaboratively.

"The process of evolution operating over millions of years," he explains, "has shaped the behavior of bees so that they coalesce into a single collective intelligence.

Just as a human body functions as a single integrated unit even though it is a multitude of cells, the superorganism of a honeybee colony operates as a single coherent whole even though it is a multitude of bees."

Although there are many examples of this in honeybee behavior, the most illustrative occurs every year in late spring and early summer, when a beehive is most likely to get overpopulated. When this occurs, roughly one-third of the hive's bees promptly elect to stay and rear a new queen — who will ultimately be chosen, no holds barred, from the current queen's few surviving daughters — while the remaining two-thirds politely accept their eviction notices and leave with the old queen to set out into the great unknown and create a new colony.

When they depart, as many as 10,000 honeybees can form a swarm cloud as large as 60 feet across. Yet within minutes, the bees will quickly reassemble somewhere into a beard-shaped cluster, and then hang that way for the next several hours or days,

awaiting word, while several hundred of the swarm's oldest citizens spring into action as nest-site scouts and begin exploring a swath of the surrounding countryside — as large as 30 square miles — for a suitable new home.

This is, to be clear, a life or death decision.

To survive in winter, a hive must be able to contract itself into a tight, well-insulated cluster — about the size of a basketball. They must find a home that is high enough to avoid detection by hungry predators. And they must have space for the copious amounts of provisions — i.e., *honey,* as much as 40 pounds of it — that will have to sustain them until Spring.

Despite these stakes, the swarm will make this decision within hours, and from as many as 30 different possible nest sites. And they will do all of this democratically, without any central leader.

Indeed, despite her name, the Queen Bee is not the boss of anyone, and a honeybee hive is governed collectively — a harmonious society of hexagonal cells wherein thousands of worker bees, "through enlightened self-interest, cooperate

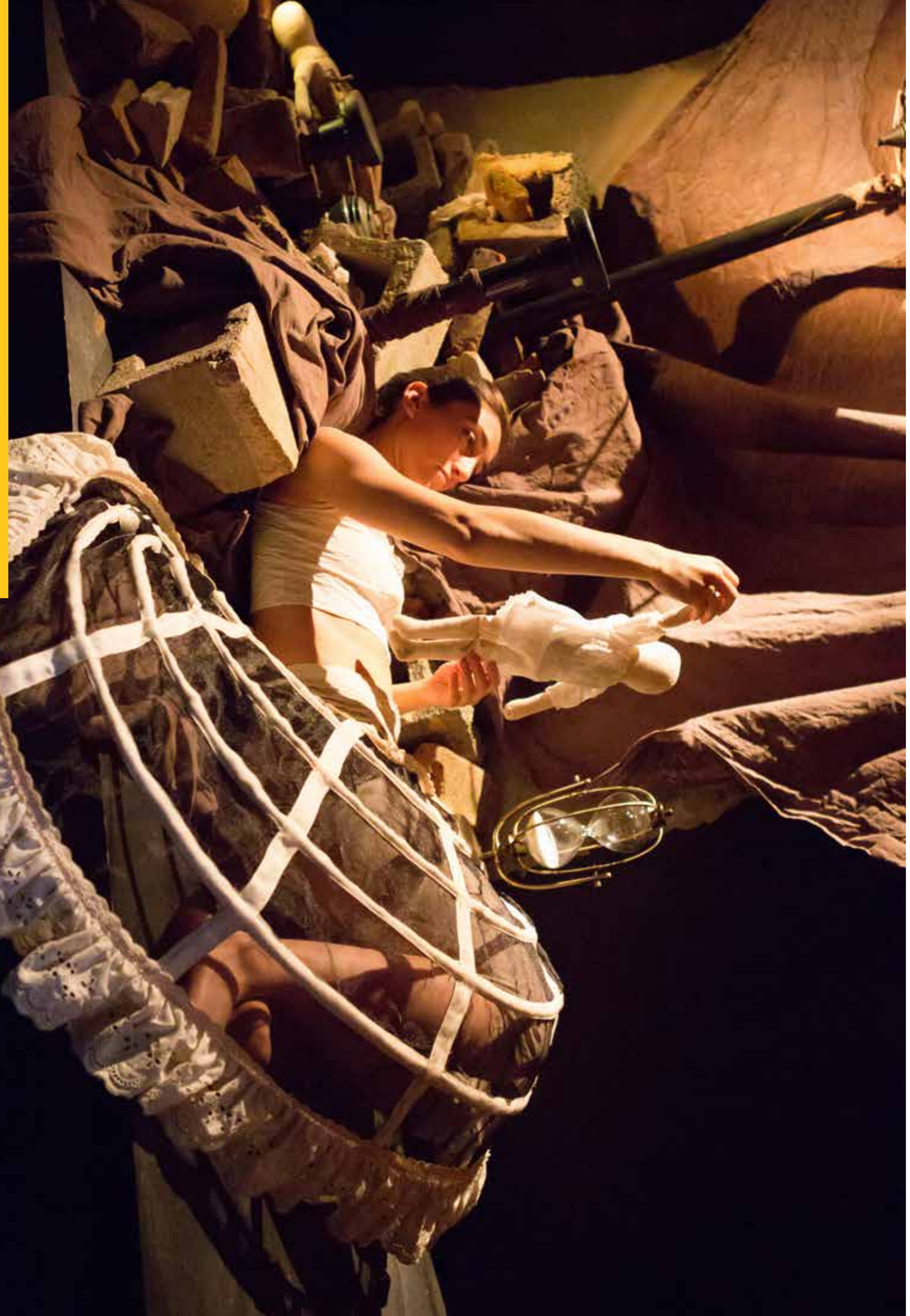
to serve a colony's common good."

In a swarm, this happens when the nest scouts all set out in different directions in search of the perfect new home. When they think they've found one, they return to the group and offer a sort of "waggle dance," a series of movements that outline the central characteristics of the proposed site, and invite other bees who agree on its merits to join them in waggle-dancing.

This continues as more and more scouts return, and gradually, a face-to-face, consensus-seeking assembly takes place in which a winner is democratically determined. "One way to think of a honeybee colony, then, is as a society of many thousands of individuals," Seeley explains. "But to understand the distinctive biology of this species of bee, it is often helpful to think of a colony in a slightly different way, not just as thousands of separate bees but also as a single living entity that functions as a unified whole."

In that sense, the collective decision making of a bee swarm resembles an archetypal New England town meeting, one in which each decision reflects the freely given contributions of several hundred individuals; is informed by multiple sources simultaneously, even ones that are widely scattered; and is made by staging an open competition among the proposed alternatives. "In this way," Seeley continues, "the roughly three pounds of bees in a swarm, just like the three pounds of neurons in a human brain, achieve their collective wisdom by organizing themselves in such a way that even though each individual has limited information and limited intelligence, the group as a whole makes first-rate collective decisions."

(Y)our move, *homo sapiens* . . .



The Art: Liz Lerman

Picture a long, upright line that runs from top to bottom.

At the top is art so separate from its culture that its greatness is measured by its uselessness.

At the bottom is art so everyday that no one even thinks to call it art.

This, Liz Lerman explains, is the hierarchy of ideas under which almost all of us labor. And it is a false divide.

"Now imagine turning that line sideways to lay it horizontal," she offers. "That way each of these poles exerts an equal pull and has an equal weight.

If we are lucky enough, we can actually take the long highway between the sometimes opposing forces, discovering impulses that can feed our artistic impulses along the way."

This is what it means to, as Lerman, says, "hike the horizontal." And this is the journey she has been curating for all of us for the past five decades — a journey that is designed to blur the lines between artist and citizen, artist and scientist, and artist and audience.

Lerman's career began as a young girl in constant motion — "up giant slides before my parents could stop me, racing into the flooded backyard to jump through the water, and begging for dance classes which I was finally allowed to begin when my family left California for Washington, DC, in the early 1950s."

It continued through her teenage years, dancing in a ballet performance for President Kennedy, appearing in *Life* Magazine, and witnessing the tension between making art and living in a world that was alight with the revolutionary sparks of the civil rights movement.

"What I realized," she says, "is that dance is a birthright, and birthrights are easily stolen. It is the human connection to the body, and the body's connection to the mind, that provides a ladder, a safety net, or a trampoline, enabling people to experience the spiritual.

People use their bodies to learn their history. And so to make change at all,

you first have to notice what is going on around you or inside you."

This epiphany led Lerman to found The Dance Exchange in 1976, and to organize its work around four essential questions:

Who gets to dance?
What is the dance about?
Where is it happening?
And why does it matter?

In partnership with her colleagues, Lerman choreographed and performed dances that were deeply grounded in both community issues and the communities themselves. The Dance Exchange performed in concert halls, but also community centers, children's hospitals, and retirement homes.

"I wanted to document ways of seeing and being that have the power to change the environments we live and work in," she explained, "and the encounters that we have with each other.

I hunted for ways to maintain my commitment to the excellence of the concert world in a balance with the dynamic, meaningful, and equally challenging world of communities."

Early in her career, this sentiment led her to make what was at the time a radical choice — a dance of performers both young and old. "I began to question accepted notions of who and what was beautiful," she recalled. "It was then that I began to see that from an artistic point of view, we could change people's lives, and from a community point of view, we could change how people interacted.

"The older people made it so easy to extend oneself, converse with strangers, and be big about it all. Older bodies make for great storytelling, beautiful movement, and a curious form of courage."

What surprised Lerman the most, however, was the impact of the relationship between

her oldest and youngest dancers. "I decided that they were dancing so well because they were so loved.

The dance environment in which most of these students had grown up was harshly judgmental. It was a liberating experience that offered such unreserved appreciation for their dancing and admiration for their bodies."

This formula is one Lerman has revisited throughout her career, one that eventually led her into a creative alliance with scientists, and multimedia performances about subjects ranging from atomic energy to the trauma of war to the double helix."It's by now well established that science and art have a lot in common," she says, "as

well as much to teach each other. Artists and scientists have a keen understanding that not knowing is fuel for the imagination rather than fuel for humiliation. There is nothing to hide.

“I think we are at our most successful when we make it possible for people to undergo a fresh understanding of their surroundings, of an idea, or of their own relationship to artistic experience.

We look at a body and we see the person, the shape, the line, the personality. If we know the person or we know how to look deeper, we see their history as well. The same happens to us in a building or a park or our homes. We see the place, the shape, the line, the personality. If we look deeper, we can perceive their history too. When we allow ourselves to witness and respond to both things at once, we can learn much about ourselves, about the spaces and places around us.

“The opening and closing curtains bracket a moment in time; they are a pair of parentheses within the long, ongoing project of making sense of the world. The theater calls our attention, brings us together, makes us focus, asks us questions, makes us wonder, and then releases us out again into the chaos.

"We each belong to many domains, and although we may live in one, we have a history, need, and empathy for others. We are dwellers in the transdomain.”

The Practitioner: Dan Siegel

Daniel J. Siegel is a clinical professor of psychiatry at the UCLA School of Medicine and the founding co-director of the Mindful Awareness Research Center at UCLA. An award-winning educator, he is a Distinguished Fellow of the American Psychiatric Association and recipient of several honorary fellowships. Dr. Siegel is also the Executive Director of the Mindsight Institute, an educational organization which offers online learning and in-person seminars that focus on how the development of mindsight in individuals, families and communities can be enhanced by examining the interface of human relationships and basic biological processes.

Dr. Siegel's publications for professionals and the public have been translated into over forty languages. His unique ability to make complicated scientific concepts exciting and accessible has led him to be invited to address the King of Thailand, Pope John Paul II, His Holiness the Dalai Lama, Google University, and London's Royal Society of Arts (RSA). He lives in Southern California with his family.

Q: What led you to want to craft a working definition of the mind?

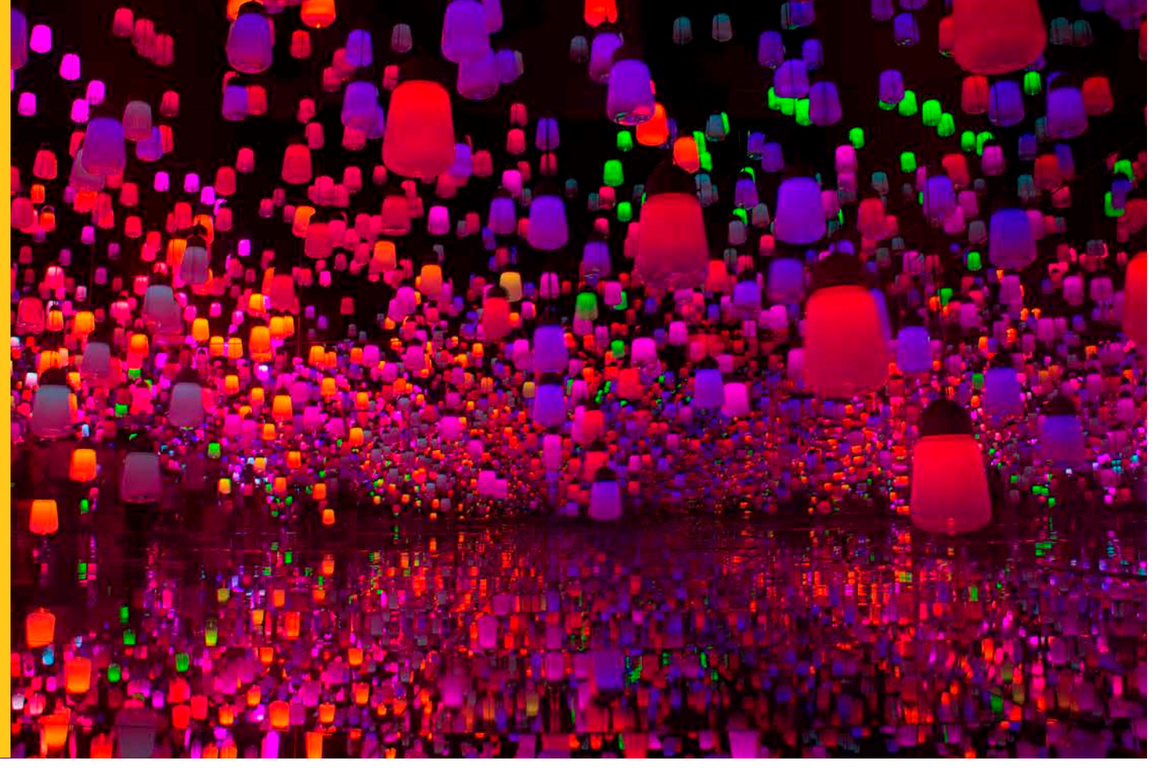
A: Mind is the essence of our fundamental nature, our deepest sense of being alive, here, right now, in this moment. If who we are — both in our personal identity and felt experience of life — emerges as a mental process, a mental product, a function of mind, then who we are is who our mind is.

What has intrigued me, as a scientist, educator and physician working with the mind for almost four decades, is how a definition of what the mind actually is, a clear view of the mind's essence beyond lists of its functions, is still missing from a wide range of fields that deal with the mind, from clinical practice and education to scientific research and philosophy. A frequently stated belief, that the "mind is what the brain does," has been held for hundreds and even thousands of years.

But is the stuff in your head, the brain, truly the sole source of mind? What about the body as a whole? And what about our relationships with others, or the social environments in which we live? How do those directly influence our mental life?

The more I searched, then, the more I realized that mind is not just what the brain does, not even the social brain. The mind may be something emerging from a higher level of systems functioning than simply what happens inside the skull.This system's basic elements are energy and information flow — and that flow happens inside of us, and between ourselves and others and the world.

That means the mind is relational and embodied — it's not just enskulled. The mind is within us — within the whole body — and between us. It is within our connections to one another, and even to our larger environment, our planet.



The mind is, we are proposing, a self-organizing emergent property of energy and information flow happening within you and between you, in your body, and in your connections with others and the world in which you live.

That means mind emerges as much in relationships as it does from physiological, embodied processes including brain activity. In other words, *mind* seen this way could be in what seems like two places at once as inner and inter are part of one interconnected, undivided system.

In reality, these are not two places, but one system of energy and its flow. And this flow arises both within us and between us.

Our work as clinicians is greatly aided with this definition. It allows us to work with our relationships and our embodied brains in trying to move an individual's life toward more integration in a range of domains — from how we connect with one another with respect, to how we link different aspects of our brain to each other.

Q: What does it mean to move "toward integration?"

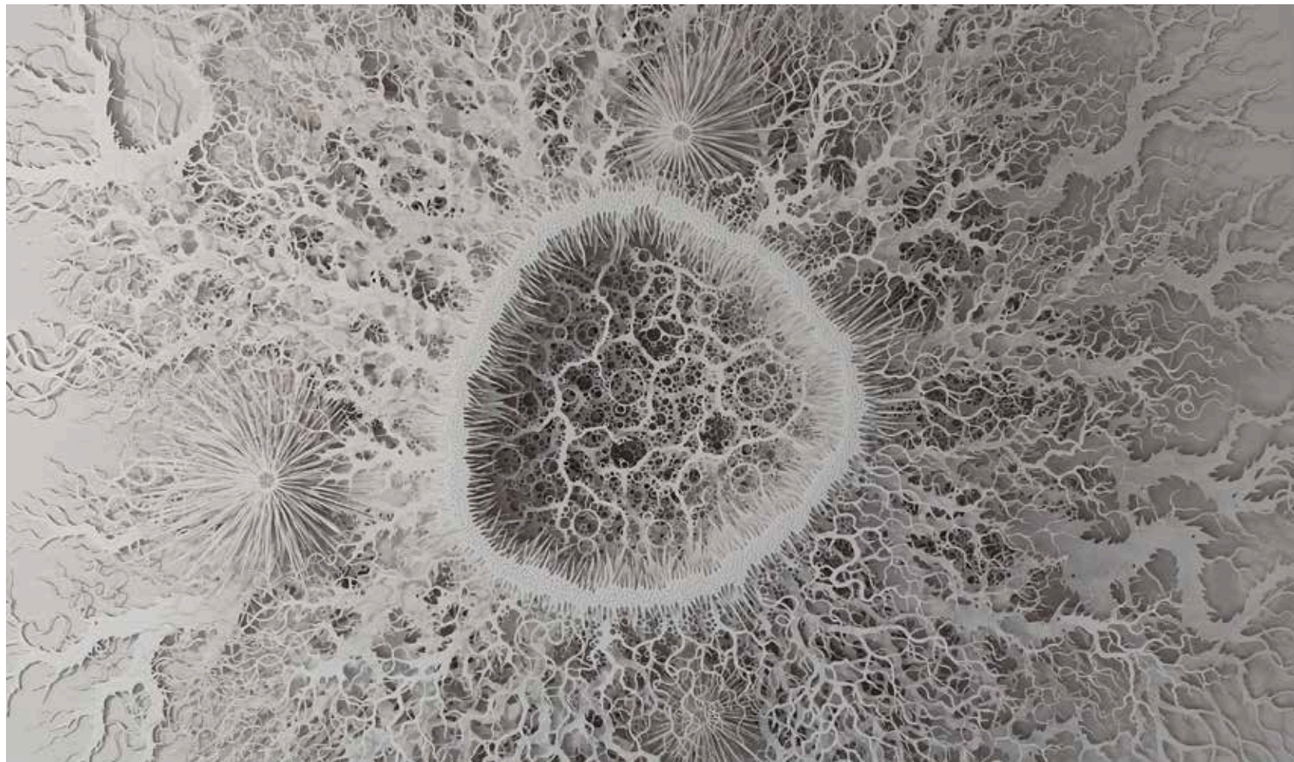
A: The essence of life, we now know, is integration — whether it's the linking of organs or the interplay of a forest's many inhabitants. Every part has a role. Those parts make up the whole. And the strength of the relationships between the parts is the ultimate measure of what we call 'health.'

We are all on a journey toward integration; we never arrive and are never done.

Being a human is not easy; finding a way to embrace the tension of opposites — longing for certainty but accepting uncertainty; longing for permanence but accepting transience; longing to live forever but accepting mortality — is the essence of integration. Integration happens internally and relationally. It is the emergent self-organizing way a complex system innately links differentiated parts.

A healthy mind, then, is one that has optimized self-organization. How? By promoting integration. Where? Within and between.

Identity integration is all about the notion that we have a personal interior as well as an interpersonal exterior. This is the within and between. Honoring the distinctions of a self that is both within and between, personal and connected, enables identity integration to unfold. Integration takes the distinct parts of your brain and helps them work together as a whole.



Q: What is the significance of relationships in our shared civic life?

A: We have a brain in our body, an embodied brain. We also have relationships with other people and the planet, our relational reality. Energy and information flow within us (through the mechanisms of the body including its brain) and between us (in our communication within relationships).

The science of mind shows how our relationships, as much as our body and its brain, are the crucible in which our lives unfold as they shape our life story, molding our identity and giving birth to the experience of who we are, and liberating — or constraining — who we can become. We can view this as the self-organizing aspect of mind that is fully embodied and relational.

Our relationships with one another shape the direction and nature of energy and information flow — between and within us. These relationships shape us throughout our lives.

We limit our well-being if we limit our sense of self to a completely separate identity from others and the world around us. We need to connect to something 'bigger than the self.'

Q: So how do we bridge the distance between "me" and "we?"

A: Data reveal that in studies of longevity, happiness, and mental and medical health, the primary shared factor is supportive social networks — relational connections to others. That's the "we" of our lives. We also know that getting good sleep, exercising, being grateful, and being present in life as it unfolds in our subjective experience also promote well-being — improving our immune system's functioning, raising levels of the enzyme *telomerase* that repairs and maintains the ends of our chromosomes, and optimizing epigenetic regulation to help prevent inflammation. That's the "me" of our lives.

To integrate our identity, we can embrace these differentiated sources of identity and then link them: Me plus We equals MWe. That's an integrated identity that science would suggest is the way we can bring more well-being into our individual and collective lives.

Q: All parents want to raise kids who know themselves, and who care deeply about others. How can we do that?

A: The idea is that when parents or anyone caring for a child — a grandparent, a coach or a teacher — anyone who's supporting the growth of children, when they understand that the brain can get into a "yes brain" state and approach life with all of these positive features versus a "no brain" state, which is created when we feel threatened and we shut down, you're actually empowered as an adult to help raise children where these states of a yes brain that are repeatedly created become a trait of positivity in life.

For me, both as a dad and just as a human being on the planet, learning to be kind of aware, and it brings up the insight notion, aware of your own internal state, allows you to see that we're not alone in this world, we're very relational beings. And so the insight into your own internal state, like "Am I in balance?," or "Am I off balance and need to get back."

The idea there is where attention goes, neural firing flows and neural connection grows. What that means is that where you help a child focus attention, like on their internal state or for empathy on the state of another person or family member or yourself — "Here's what I'm feeling right now" — you're stimulating neuronal activation. You don't have to be a neurosurgeon to help create an integrated, structurally strong brain in your child. You have to have a relationship that inspires them to rewire their brain toward integration.

The mindspace surrounding us does not have to be the one drowning us; we can change the world around and we can change the world within.

The Kiss, by Penny Hardy www.pennyhardysculpture.com

The Community:

June Jordan School for Equity (San Francisco, California)

I've yet to meet a grown-up who, at some point, hasn't felt a bit like a hamster in the wheel — spinning mindlessly towards some opaque goal, and for some abstract, poorly understood reason.

Life just feels that way sometimes.

So you can imagine my surprise when, while visiting a small public high school in the Excelsior neighborhood of San Francisco, I encountered a group of boys working on an indeterminate project out of plywood and a handsaw.

"What are you guys doing?"

"We're building a human-sized hamster wheel."

Of course they were.

That's because they were students at the June Jordan School for Equity (JJSE), where the goal of every adult is to help every young person see the world for what it is — and what it needs to become.

To do that work well, a school must help children make sense of the world they inhabit. "This school was explicitly founded to be a force for social justice," explained the school's former co-director, Jessica Huang, "and to do so for the kids in our city with the greatest need for it. We're a college prep school, but our primary concern is not getting kids into college; it's putting them in a position to have good options, and helping them see both the oppressive aspects of our society, and the ways to make it better.

"The only way to get off the wheel," she added, "is to realize you're on it."

Since its founding by a group of local parents and families in 2004, JJSE has resided in the same single-story building at the Southern edge of San Francisco, in a neighborhood that doesn't even make it on to the tourist map.

For Excelsior's longtime residents, anonymity has been a good thing. Since its inception in the mid-19th century, Excelsior (which means "ever upward" in Latin) has been a refuge for working class families. Yet as median home prices continue to soar in San Francisco — and space remains finite — Excelsior is gentrifying, and the community is feeling the effects.

"We've lost several of our strongest teachers in the past few years because they just couldn't afford to stay in the city," said Giulio Sorro, himself a longtime teacher at the school. "With more middle-class white parents moving in, we're starting to hear new voices that see our black and brown kids not as assets but as deficits to their own kids. That's going to change things It's already changing things."

It may seem like the gentrification of a San Francisco neighborhood is a storyline that runs parallel to the lifeblood of a school that

is trying to help its students become the first in their families to go to college, but at June Jordan, those sorts of incongruities are in fact the river running through the center of the school's entire approach to learning.

The first hint of this occurs the moment you arrive at the school, which shares space with a larger charter school and is surrounded by a ring of trees and greenspaces. Hillsides littered with houses, like favelas, poke up in the distance.

You must enter through a parking lot in the back, which is lined by a procession of graffiti. A particularly striking one near the school's front doors, in colorful purple and a highly stylized script, quotes Martin Luther King to reinforce the spirit of the place:

Peace is not the absence of conflict, but the presence of justice.

At first blush, the inside of the school feels familiar: wide hallways lined with lockers, low ceilings, and hastily-tacked up posters for next week's afterschool meeting or upcoming dance. Yet one thing, for a high school at least — let alone a high school serving young people whose lives have been disproportionately clouded by trauma and adversity — feels decidedly unfamiliar: the ubiquity of laughter and levity.

I asked Sorro about that, just before the start of his 9th grade Health class. "We have to redefine education," he said while his students filed in around us. "What are we here for? Is it to compete with China and India? Is it to get into college? I don't think it should be about those things.

"I believe good teaching is good teaching anywhere, but there's a whole other mind-state here. Young people of color, coming from oppressed communities in America, it is set up for these kids not to make it — you can see it."

In response, June Jordan's diverse team of founders crafted a mission for the school that was designed to help young people of color "make it" in three key ways: as *Community Members* who live with respect, integrity, courage and humility; as *Social Justice Warriors* who stand against oppression and work to create positive change in themselves and their communities; and as *Independent Thinkers* who possess the intellectual skills they need to succeed.

There are other essential design principles:

June Jordan is a small school — just 250 students.

Students are assessed not by taking standardized tests, but by presenting detailed portfolios of their work.

Teachers teach subjects, but their most important job is to integrate the school's six habits of mind (perspective, relevance, original research, precision, evidence, and logical reasoning) into the curriculum.

Every student has a personal advisor for all four years.

And every member of the community — from students to parents to staff — has a meaningful, accountable voice that shapes the overall health and wellbeing of the school.

"Too often," explained Matt Alexander, who, like Ms. Huang, was a teacher at the school before becoming its co-director, "everyone in schools is driven by the spirit of compliance, or the idea that there is someone external to the school who needs to come in and turn it around. It's the mindset of your job being to fix something, or to do something *to* people instead of building capacity or doing the work *with* people.

"But if you really believe in democracy, and you really believe that everyone has equal dignity and worth, then you have to build everyone's capacity and let everyone be their best selves.

The accountability has to go that way, too — our primary accountability is to *one another*, not to the state or to test scores. Our main job is to build that capacity and to recognize that everyone comes with strengths and abilities. But you have to create the space for people to develop that — and it's really hard."

I asked Alexander and Huang how the school went about doing that.

They talked about schema theory.

"We know from the research," Huang began, "that your brain builds *schemas*, or organized patterns of thinking, in order to understand your environment. We're hard-wired to look for patterns; it's what kept us alive thousands of years ago. So everyone is doing this, all the time, and when it comes to education, we have an eerily consistent set of schemas we have all called on for generations. So the bulk of what we do is construct a new counter-narrative that helps kids see the invisible layer of schema that has held us all unnaturally in place for so long — from institutionalized racism, to inherited feelings about what a math class can and cannot be, to internalized notions of inferiority. This helps them start to figure out how to disrupt those patterns, and

imagine a different set of possibilities."

To make this more actionable, the school has developed a pedagogy that encodes what teachers like Sorro are setting out to do. Indeed, over years of work retreats, trial and error, and sustained, challenging, collegial revisions, June Jordan's faculty and staff have articulated an approach that is, in their words, "expressly designed to help our students understand the forces of marginalization they have experienced growing up, and begin the process of freeing themselves from oppression, especially the internalized oppression which we see preventing so many students from meeting their potential."

The physical manifestations of this are ubiquitous at the school — from a clear set of preferred teacher behaviors to the classrooms themselves, which feel like bursts of color and texture and collage, and in which probing academic and personal work is always in some vital stage of unfolding.

In one class, for example, students were using the facts from a real case to play out a scenario about sexual harassment and the creation of a hostile work environment. In another, a group was strategizing how best to show their support for students at another school that had recently experienced a widely publicized racist incident. And in Sorro's classroom, each person was asked to briefly share one thing they did over Spring Break that had benefited their health — and one thing that hadn't.

"I went to Pismo Beach to drive ATVs," said one young man, innocently enough.

"And why was that good for your health?" Sorro asked.

"I have a lot of anxiety," he explained, "and I have a real rage in me; sometimes going really fast is the only thing that can make me feel better."

Later, after several other intense and highly personal recollections from the previous week, Sorro asked the group, "Is it always good spending time with family?"

"Family can be poison sometimes," said one student. Sorro nodded calmly.

Throughout the class, his demeanor stayed constant; he did not over-react to the highly charged stories, or under-react to the quotidian ones. "In my teaching I try to go to the depth and the heart of it all," he explained. "You have to put it all out there. I believe in going to the pain — and to the love."

That duality — the intellectual and the emotional, the pain and the love, the heavy and the light — is what makes June Jordan such a different place to go to school. "We try to create space for real collegial accountability," Huang explained towards the end of the day. "We have real honest conversations here about the things that matter to us. But that's taken years to build — *years* to build.

"What it means now is that if you have an idea, you understand that it's your land to work here. That's an Emiliano Zapata line: 'The land belongs to those who work it.' No one is going to do it for you."

I reflected on her words as I walked the hallways of the school, which were blanketed by quotes, murals, and personal reflections.

Written across an upraised fist above a doorway were the words of Shirley Chisholm:

"You don't make progress by standing on the sidelines, whimpering and complaining. You make progress by implementing ideas."

Down another hallway, just past a mural honoring two former students who were shot to death, I saw a sign telling me:

"Healing doesn't mean the damage never existed. It means the damage no longer controls our lives."

And then, just outside a classroom, I found the JJSE Secrets Wall, where all members of the community were invited to anonymously post a secret (no matter how silly or somber) — and, in so doing, perhaps feel less burdened by its weight.

I don't like myself.
I smoke weed.
I tried to kill myself.
Depression rules my life.
I feel like my parents won't be proud of me when I'm older.
I can't live without my Playstation!
I grew up around drugs, police, and losing family.

It felt jarring to see such naked admissions posted so publicly, and in such an otherwise-traditional looking place. But that is precisely what makes the June Jordan School for Equity so special. Spend time here, and you will feel the dialectical pull of the world as it *is*, awash in both beauty and heartbreak; and the world as it *ought to be* — empathetic and equitable, devoid of the mindless churn of the human-sized hamster wheel, and reoriented around a different sort of body in motion: the wheel of democracy, which, though it grinds slowly, propels us steadily toward justice, and the society we seek.

NOW WHAT?

Inquiry Seeds for Relationships

Relationships are not structures or things. They are intricate, expanding and contracting webs and networks of connections. It is the transparency of our communication and feedback loops, and the density and diversity of our relationships, that stimulate systemic growth and enable potentially disruptive information to enter the system, acquire more meaning, and become amplified and absorbed.

We can't actually "see" the feedback loops that serve as a system's neural network, but their existence ensures meaningful information continues to flow throughout the system — unless they are blocked or severed.

Vibrant networks freely promote collaboration and the spread of new ideas, and increase our system's capacity for experimentation, creativity and continuous learning.

The mission-driven and creative work of a living system cannot, therefore, be achieved by controlling information or micromanaging relationships. Trust is essential for any human system to thrive. And critical connections, not critical mass, are the source of a system's true vitality.

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ASK yourself: How do you define power and leadership? What do they look like within your work and the larger system in which you work? In what ways are your definitions congruent with your larger purpose? In what ways are they misaligned?

CONNECT AND REDIRECT. All parents experience times when their children say things and get upset about issues that don't seem to make sense. At moments like this, however, one of the least effective things we can do is jump in and argue with our child's faulty logic. Instead, we need to recognize that our children are experiencing a right-brain, nonrational, emotional flood, which guarantees that any sort of logical, literal left-brain response will only make the situation worse. Instead, try this: Connect with the right. Redirect with the left. When a child is upset, logic often won't work until we have responded to the right brain's emotional needs. After responding with the right, we can redirect with the left through logical explanation and planning. It won't always do the trick, and it doesn't mean rules about respect and behavior should be thrown out the window. But with a whole-brain approach, *Connecting and Redirecting* will almost always work better than Commanding and Demanding. (To learn more, read *The Whole-Brain Child: 12 Revolutionary Strategies to Nurture Your Child's Developing Mind.*)

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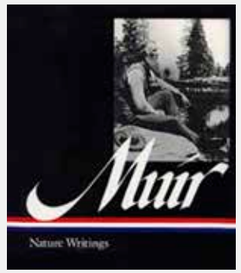
NAME and/or review your community's "agreements for belonging together," and for ensuring ownership and shared accountability for your collective purpose. If these don't yet exist, what do you want/need them to be? If they do exist, in what ways do they still feel appropriate and aligned to your community and its shared purpose?

IDENTIFY which community voices are missing from your conversations. What might you do to authentically invite them?

DRAW a Trust Map of your school, using solid lines to indicate the existence of strong and trusting relationships between individuals and/or departments; squiggly lines to indicate unsteady relationships; and dotted lines to indicate undeveloped relationships. Then, share the maps as a staff, and use the visualization of the community's assumptions and perceptions to have any and all follow-up conversations — in the spirit of building a more transparent, more trusting shared culture.

MAP your culture's formal and informal communication networks. What do you notice when you make these networks visual? How might you expand and deepen your system's overall learning capacity?

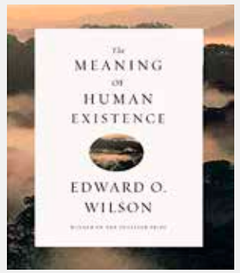
GO DEEPER



Nature Writings

John Muir

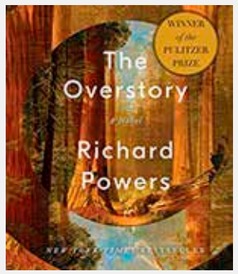
A crucial figure in the creation of our national parks system and a far-seeing prophet of environmental awareness who founded the Sierra Club in 1892, Muir was a master of natural description who evoked with unique power and intimacy the untrammeled landscapes of the American West.



The Meaning of Human Existence

E. O. Wilson

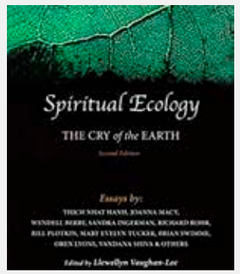
In *The Meaning of Human Existence*, his most philosophical work to date, Pulitzer Prize–winning biologist Edward O. Wilson grapples with these and other existential questions, examining what makes human beings supremely different from all other species.



The Overstory

Richard Powers

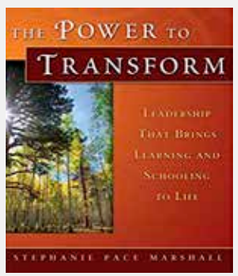
From the roots to the crown and back to the seeds, Richard Powers's twelfth novel unfolds in concentric rings of interlocking fables that range from antebellum New York to the late twentieth-century Timber Wars of the Pacific Northwest and beyond.



Spiritual Ecology: The Cry of the Earth

Llewellyn Vaughan-Lee

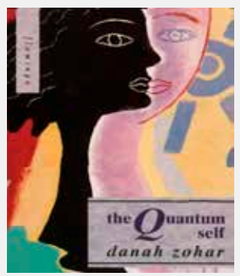
Bringing together voices from Buddhism, Sufism, Christianity, and Native American traditions, as well as from physics, deep psychology, and other environmental disciplines, this book calls on us to reassess our underlying attitudes and beliefs about the Earth and wake up to our spiritual as well as physical responsibilities toward the planet.



The Power to Transform: Leadership that Brings Learning & Schooling to Life

Stephanie Pace Marshall

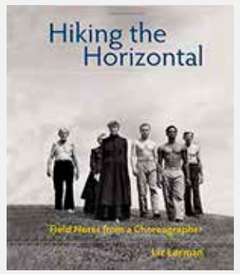
Stephanie Pace Marshall argues that by focusing on reforming the contents of schooling and not transforming the context and conditions of learning, we have created false proxies for learning and eroded the potentially vibrant intellectual life of our schools.



The Quantum Self

Danah Zohar

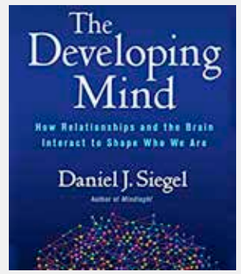
Danah Zohar argues that the insights of modern physics can illuminate our understanding of everyday life — our relationships to ourselves, to others, and to the world at large.



Hiking the Horizontal

Liz Lerman

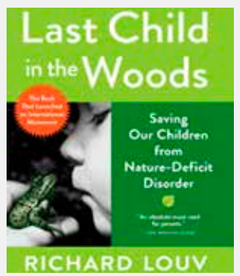
Offering readers a gentle manifesto describing methods that bring a horizontal focus to bear on a hierarchical world, this is the perfect book for anyone curious about the possible role for art in politics, science, community, motherhood, and the media.



The Developing Mind

Daniel Siegel

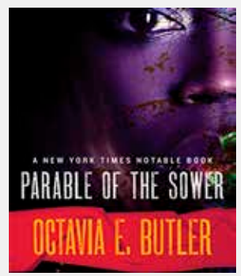
Daniel J. Siegel synthesizes cutting-edge research from multiple disciplines, revealing the ways in which neural processes are fundamentally shaped by interpersonal relationships throughout life.



Last Child in the Woods

Richard Louv

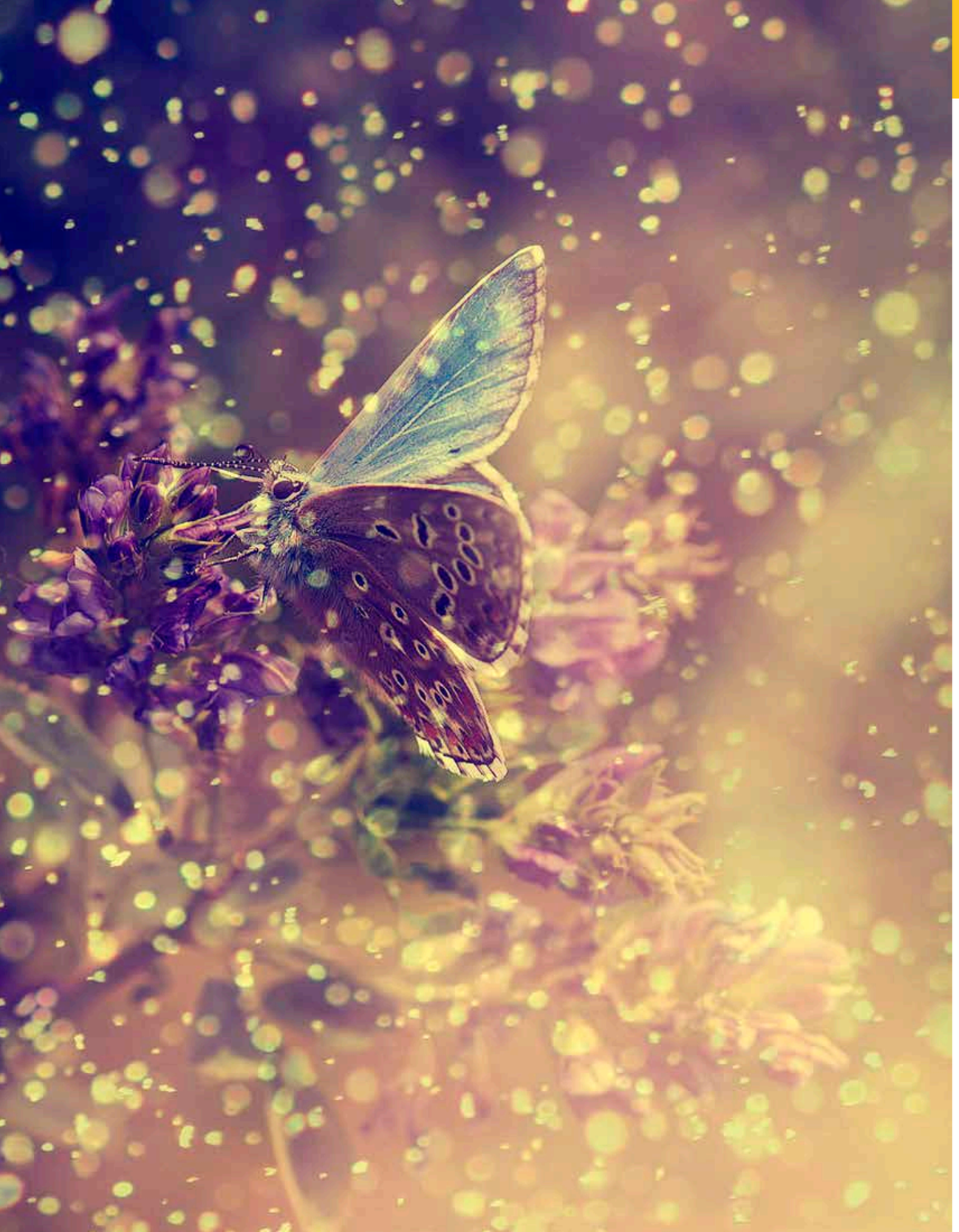
Louv shows us an alternative future, one in which parents help their kids experience the natural world more deeply—and find the joy of family connectedness in the process.



Parable of the Sower

Octavia Butler

When global climate change and economic crises lead to social chaos in the early 2020s, California becomes full of dangers, from pervasive water shortage to masses of vagabonds who will do anything to live to see another day. Fiftenn year old Lauren must make her voice heard in order to protect her loved ones from the imminent disasters her small community stubbornly ignores.

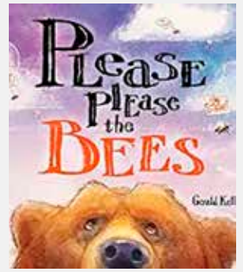


GO YOUNGER

Strictly No Elephants

Lisa Mantchev

Strictly No Elephants has been sold around the world and is heralded as a pitch-perfect book about inclusion. Imaginative and lyrical, this sweet story captures the magic of friendship and the joy of having a pet.



Please Please the Bees

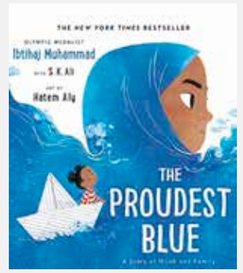
Gerald Kelley

Benedict has a pretty sweet life for a bear. Every morning the bees leave a jar of honey on his doorstep, and every day he has honey for breakfast and honey in his tea. It's an important part of his day. But all that changes when the bees go on strike. Now it's up to Benedict to listen to the bees, and he realizes there's a lot more he could be doing to help them.

Lost and Found

Oliver Jeffers

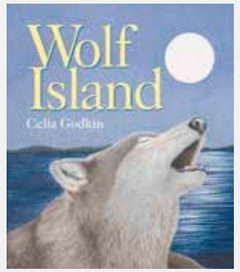
A poignant, funny, and child-friendly story about friendship lost ... and then found again.



The Proudest Blue: A Story of Hijab and Family

Ibtihaj Muhammad

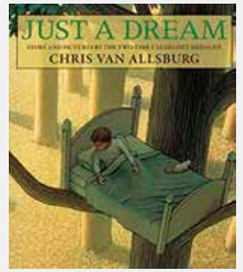
With her new backpack and light-up shoes, Faizah knows the first day of school is going to be special. It's the start of a brand new year and, best of all, it's her older sister Asiya's first day of hijab—a hijab of beautiful blue fabric, like the ocean waving to the sky. But not everyone sees hijab as beautiful, and in the face of hurtful, confusing words, Faizah will find new ways to be strong.



Wolf Island

Celia Godkin

Set on an island in Northern Ontario, *Wolf Island* chronicles what happens when the highest link in a food chain is removed after a family of wolves leave their island environment. Nature's delicately balanced ecosystem comes undone over a period of time, yet the accidental return of the wolf family to their home restores the island habitat to health.



Just a Dream

Chris Van Allsburg

A classic story of environmental responsibility. Walter does not appreciate the beauty of nature, or understand his role in keeping the planet healthy until a fantastic journey shows him the tragic fate that could befall Earth if humans like him are not more careful. Are Walter's actions really helping his planet along the road to destruction, or is it all just a dream?


What must our children fall in
love with so they will cherish
and not destroy it?

PART TWO
SEEDS FOR CHANGE

EMERGENCE

HOW (&WHY) WE CREATE

Knowing who's there, what's meaningful, and who's connected lets a system come to life.

Once alive, however, nothing is static. A living system is always becoming.

What, then, needs to emerge from a living network? And what is our role in that act of creation?

The Question: *What's Ready?*

Thought makes the world and then says, "I didn't do it."

—David Bohm

It's in our nature to gravitate toward the well-worn path. How do we also summon the courage to choose the road we can only make by walking?

On one level, this is the very definition of intelligence. The roots of the word, after all, mean to 'choose between.' And no organism can live without the capacity to choose — even an amoeba must choose between competing routes to potential food, or to avoid a toxin. Yet asking ourselves to choose the road not taken is also asking to go against certain aspects of our evolutionary design.

In part, we have made it this far by learning how to stay safe. As neuroscientist Beau Lotto puts it, "the brain does not search to live, but to not die." And part of what has kept us safe is making the world predictable.

Stay the course. Be seen and not heard. Go for what you know.

A different path is available, but it will require us to upend many of our most timeworn habits and assumptions:

The five-year strategic plan, upon closer inspection, is a fool's errand.

The four-year march to graduation is a choice we have made (and must reconsider).

And the imminence of the Technological Singularity has exposed the illogic of believing in a singular path.

In fact, as in life, there are many paths — and the relationship between path and person is more significant than we once assumed. Biologist Richard Lewontin puts it this way: "Just as there is no organism without an environment, there is no environment without an organism. Organisms do not experience environments. They create them. Cognition, then, operates at various levels, and as the sophistication of the organism grows, so does its sensorium for the environment, and so does the extent of co-emergence between organism and environment."

Emergence is not a word we hear or use often, yet it is the dynamic origin of development, learning and evolution, and we see evidence of its existence in everything from our cells to our cities. Better yet, we have all experienced the uplifting feeling of emergence throughout our lives — the moment of epiphany, the thrill of spontaneity, the sense of connection we feel between mood and place — just as we have experienced its capacity for devastation, from riots and revolutions to natural disasters.

In either case, the conditions for emergence flow from the reciprocal relationship that exists between any living form and its environment. A single ant, following the

chemical trail of its neighbors to carve out a vital, completely decentralized role in a teeming colony. An adaptive software system, seeking patterns in individual behavior that shape which banner ad you see. A human stem cell, self-organizing into increasingly more complicated structures based on the behavior of its neighbors. Or a solitary Tunisian fruit vendor, whose decision to set himself ablaze eventually sets the entire Arab world on fire.

As Steven Johnson writes in his book on the subject, the capacity for emergent systems to learn and grow "derives from their adherence to low-level rules. . . Emergent behaviors are all about living within the boundaries defined by rules, but also using that space to create something greater than the sum of its parts."

In that sense, the central features of emergent systems outline a set of rules from the natural world that are both timeless and timely:

Give and receive feedback.

Pay attention to your closest neighbors.

Seek order, not control.

And follow the meaning.

It's the songline of life itself — the deeply resonant story that flows through all living systems, including our own. And in a world that is becoming increasingly interwoven, and at a moment in history when the promise and peril of artificial intelligence are becoming more than just a sci-fi script, our ability to shift to a more emergent way of thinking may just be the difference between survival and extinction.

As Johnson puts it, "our ability to capture the power of emergence will be closer to the revolution unleashed when we figured out how to distribute electricity a century ago. Almost every region of our cultural life was transformed by the power grid; the power of self-organization — coupled with the connective technology of the Internet — will usher in a revolution every bit as significant."

Where, then, do we start, and from whom can we learn?

As you'll see in the voices and stories that follow, developing the potential for emergence does not mean refuting all we have previously established.

There is still and will always be a role for an established literary canon.

There is still and will always be a role for pre-determined goals and shared outcomes.

Content still matters, and our ability to share a common foundation of knowledge will continue to give shape to our common public world.

And yet the nature of open systems, whether they're multicellular or multicultural, is to develop and evolve, regardless of how much we might want things to just stay the same. Life constantly reaches out into novelty. The whole is always more than the sum of its parts. And the extent to which we develop the ability to become more adaptive and relational will directly impact our capacity to embody the more just and liberated world(s) we long to co-create.

Like the natural systems that surround us, the human systems we inhabit are in a state of continuous dynamic balance. These systems are not done to us — we are the ones who create and perpetuate them, despite our protestations of innocence. As the cognitive theorist David Bohm once put it, "Thought makes the world and then says, 'I didn't do it.'"

And so we cannot underestimate our individual and collective power to consciously create the conditions that make our system's transformation in the direction we desire more likely.

It is literally that simple — and that complicated.

Change in living systems occurs from the inside out. And everything alive is free to choose.

Applying these principles to the way we organize ourselves will change the way we feel and act. It may even change the way we dream. "My dream is a movement with such deep trust that we move as a murmuration," says author and activist adrienne maree brown. "The way groups of starlings billow, dive, spin, and dance collectively through the air. Each creature tuned in to its neighbors. There is a right relationship, a right distance between them — too close and they crash, too far away and they can't feel the micro-adaptations of the other bodies. Each creature is shifting direction, speed and proximity based on the information of the other creatures' bodies. Imagine our movements cultivating this type of trust and depth with each other, having strategic flocking in our playbooks."

We can imagine — if we are willing to take the road less traveled by.

It will make all the difference.

Trusting relationships are our system's heart lines.

The Science: A Murmuration

What words can do justice to the magic of a million birds, flying and weaving as one? Improvisatory choreography? Elegant chaos? Symphonic cacophony?

There is no familiar way to make sense of this natural phenomenon — both what starlings do and how they make us feel when we see them. Yet the flocking behavior of the birds the ancient Romans believed foretold the will of the Gods — indeed, the word *auspicious* comes from the Latin *auspicium*, or "divination by observing the flight of birds" —

is a natural manifestation of a set of principles for organizing complex behavior, and an observable phenomenon that runs counter to the way we human beings have made sense of the world for as long as anyone can remember.

Starlings are native to several continents, although North America is not one of them. Back in 1890, however, a Shakespeare enthusiast decided that all birds mentioned in Shakespeare's plays should be brought to North America (the starling makes its star turn in *Henry IV, Part 1*).

His idea worked — a little too well. From an initial group of 100 birds, the starling population in North America now tops 200 million. And it is the behavior of each bird in those massive, undulating flocks that makes the starling so notable — and, for some, so magical.

Almost a century ago, the British ornithologist Edmund Selous asserted that these “handsome, lively, vivacious birds” were telepathic. Today, the biologist Rupert Sheldrake suggests that starling behavior is an example of his hypothesis of *morphic resonance*, or the notion that the laws of nature are “more like habits, ones in which each individual inherits a collective memory from past members of the species, and also contributes to the collective memory, affecting other members of the species in the future.” And yet beyond these appreciations and speculations, we have lacked the ability to concretely explain how a murmuration works — how so many individual creatures can dart and soar in self-organizing synchrony . . . until now.

Thanks to the work of two separate studies from 2013, we know that individual starlings all obey the same few flight rules: Watch your seven nearest neighbors. Fly toward each other, but don’t crowd. And if any of your neighbors turn, turn with them.

Why do they do this? According to one of the studies,

“when uncertainty in sensing is present, interacting with six or seven neighbors optimizes the balance between group cohesiveness and individual effort.”

By following this rule of seven, the birds become part of a dynamic system in which each individual part combines to make a whole with emergent properties. This collective behavior allows the birds to gather information on their surroundings and self-organize toward an ideal density, one in which optimal patterns of light and dark are produced that can deliver information to the entire flock (and protect them from predators). The closer each bird pays attention, the safer — and more cohesive — the entire flock becomes.

Of course, this sort of swarming behavior is not unique to starlings. Many different animals, from birds and insects to fish and mammals, have been observed in their own form of a swarm.

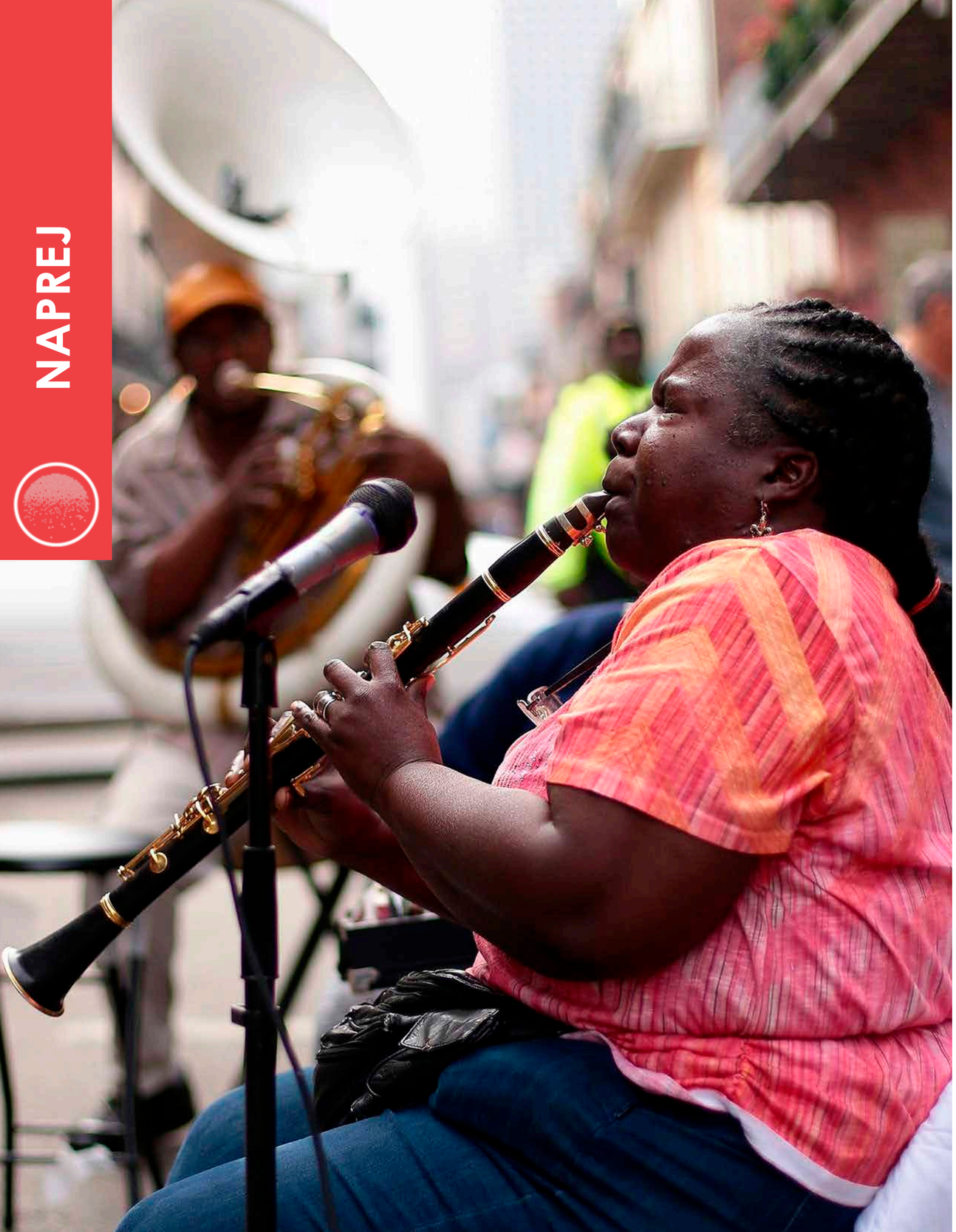
So what can this behavior teach us about ourselves, our organizations, and our ability to change the story of the way we work and learn?

According to Andreas Weber, author of *The Biology of Wonder*, “the spirit of poetic ecology is the spirit of swarms. To understand the individual, we need to understand its environment, and each through the other. We have to think of beings always as interbeings.

“We are a swarm ourselves,” Weber writes, “and we form swarms. A swarm does not have intelligence; it *is* intelligence. In this respect, a swarm (or a murmuration) is an intensified counterpart of ourselves. It is what we are and what we try to imagine with our conscious thinking. Swarms are solidified feeling. The swarm *is* — and in its being living dynamics and their expression are welded together in one single gesture.”

In other words, a murmuration is more than just a pretty metaphor for thinking differently about organizational behavior; it’s a reminder, in physical form, that our own bodies, cultures and classrooms are governed by the same rules. As Weber puts it, “we see gestalts of the living that behave according to simple organic laws mirroring the great constellation that every living being has to cope with: to persist, to be close to the other, but not so close as to collide with him.

These are the principles of poetic forms that are so thorough we can even teach them to a computer. They are the primary shapes of a poetics of living things.”



The Art: Jazz

“When they study our civilization two thousand years from now, there will only be three things that Americans will be known for: the Constitution, baseball, and jazz.”

— Gerald Early

Imagine a country: imperfect, divided, diverse, contradictory, inchoate, in search of a more perfect union.

Now give that country a sound, a feeling, and a form.

Jazz is the soundtrack of American life. It is a prism through which we can see and make sense of our own history.

Jazz peels back the layers of American identity. It takes our national character and gives it shape.

It was born in the Crescent City of New Orleans — established by the French in 1718, briefly ruled by Spain, a waystation for the ships and crews of the world, a part of America since 1803, and home to an unprecedented mixture of the world’s people, languages, cultures, and styles of music.

Its roots can be traced to the early 19th century and to the public, legal gathering of slaves in Congo Square, who brought a uniquely African form of music — polyrhythmic, antiphonal, and unabashedly expressive — into public view.

It is a music of movement — marching bands and swing dances and waltzes and mazurkas. It contains within its DNA the genes of ragtime, the blues, and the sacred music of the Baptist church — but also klezmer, calypso, and zydeco.

Jazz is a dialectic. It rewards individual expression and demands selfless collaboration. It is organized chaos. It emerges through feeling. It is the recipe of a thousand chefs.

To its detractors, jazz is an abomination — a “bolshevistic smashing of the rules and tenets of decorous music. A “willful ugliness.” A “deliberate vulgarity.”

But to its devotees, jazz is a barometer of freedom itself — a music Duke Ellington said “is the only unhampered, unhindered expression of complete freedom yet produced in this country.”

Jazz is more style than composition. One moment it was unknown — “a low noise in a low dive.” A moment later it was the center of everything, “the diversion of princes and millionaires,” an art form that could match a new tempo to the world and to American public life, “a restorative for the national nerve complaint, the great American noise.”

Its feeling, Wynton Marsalis says, is like the feeling you get going into your favorite grandmother's house. You know there's all kinds of things in there that you might not recognize, but it's accumulated wisdom. Jazz is freedom of expression with a groove.

Jazz objectifies us. It's an art form that helps us understand ourselves. It's the art of negotiation. It's the argument we keep having.

Jazz is a chance to decide how to let one's personality emerge against the tapestry of a whole stage full of musicians doing the same thing, at the same time.

Jazz is like democracy itself. It's a process that will not always go your way. It will force you to adjust.

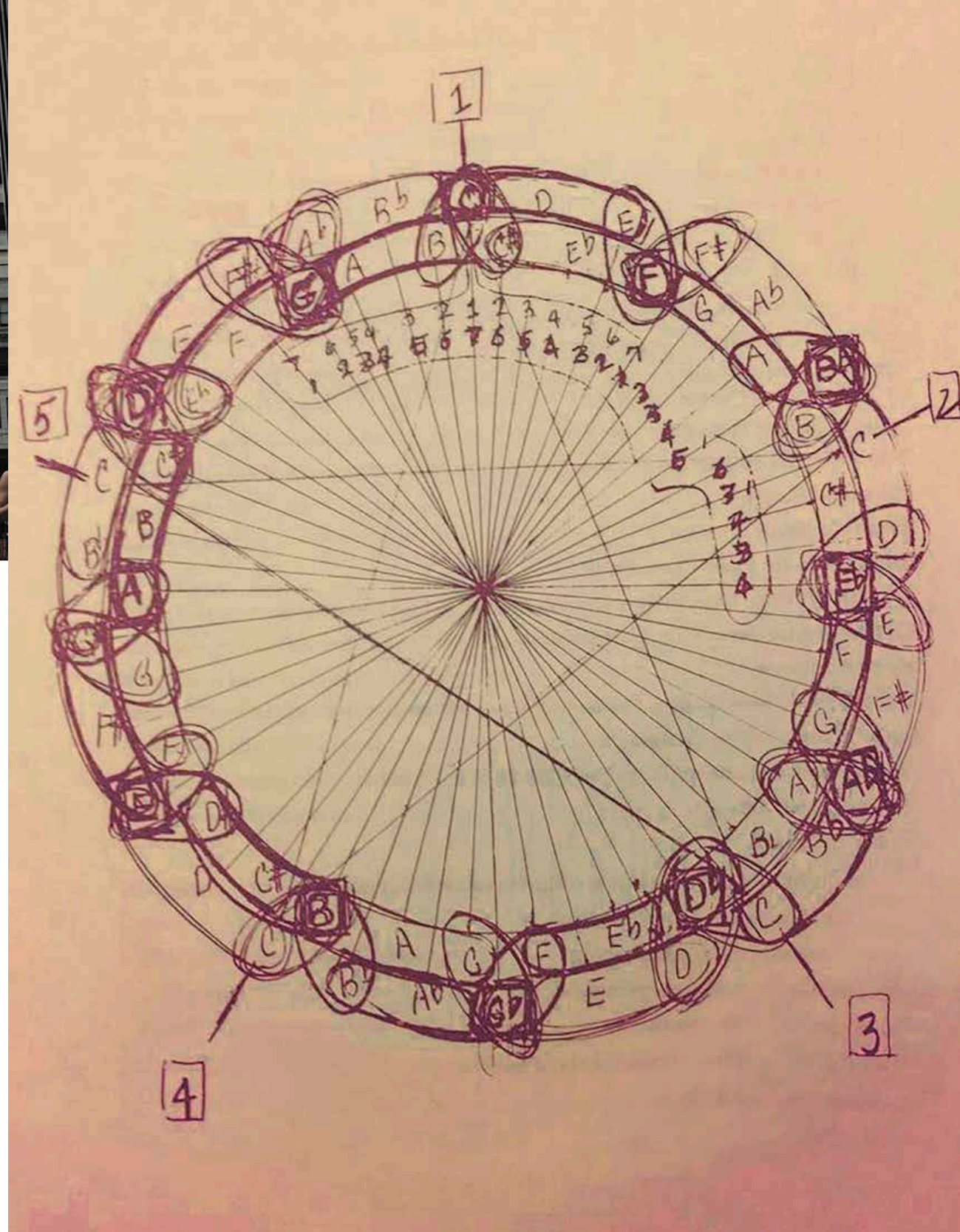
Jazz is a way of wrestling with what it means to be human.

"What comes out of your horn is what you understand about life, the texture of it, the absurdity of it, and the beauty of it."

Jazz is all of it — the interweaving, the dueling, the calling and responding, the alternating, the texturing, the dominating and submitting, the euphoria and the sadness, moving, challenging, celebrating and reshaping.

Jazz is not the notes you play; it's the notes you leave out.

Listen.



The Practitioner: adrienne maree brown

adrienne maree brown is a writer, social justice facilitator, pleasure activist, healer and doula living in Detroit. Her first book, Emergent Strategy: Shaping Change, Changing Worlds was released in 2017 to critical acclaim, and was described as "luminous in its imagining the future of climate change, making different worlds through direct action and social movement building, and creating transformative change through visionary speculative fiction...In her movement-building work, brown emphasizes the importance of intersecting social justice struggles."

(The following responses are excerpted from ms. brown's 2018 interview on longreads.com.)

Q: What led you to this work?

A: I was the first child born to my dad, who is a black man, and my mom, who is a white woman. We all ended up experiencing racism directly, in different ways, at different ages. So this is how I ended up doing the kind of work that I do.

All of my organizing has come from two things, really. First, I started to ask, what do I know to be true about humanity? Then, I asked, what is being institutionalized? I asked these two questions because what I was experiencing then at the hands of the cops in my community went counter to what I knew about humanity. And so, a good portion of my work has revolved around the question, how do I, in my lifetime, do my part to help return the species to itself?

If you're trying to do social and environmental justice work in the world, then you need to be in right relationship with each other and the planet. In aligning our relationships, I found that there were some guidelines from the natural world that could teach us a lot about how we can be in better collaboration and be in better relationship with each other.

Q: What do you think we can learn from the natural world?

A: When we look at the natural world, the systems that are the most resilient and the systems that last are those that are the most biodiverse. They are literally the systems where you [have] the most kinds of living things in right relationships with each other, and not trying to be each other.

The main question for me with emergent strategy is how do we improve relationships with each other, as well as improve how we are in relationship to the planet. If we can do these two things, we may stand a chance of earning our place on the planet. We live in a super interconnected world.This means that anything we do that improves how we are being with each other is of benefit to the entire planet.

What I see in practice is that people still default to punishing each other — as soon as there is a break in communication, as soon as there is a misunderstanding, as soon as there is a difference in political opinion, there's this attitude of, you know, we cancel this person, we're throwing them away. And so I pay attention to people's beliefs and

their practices and I try to question people and call people into thinking about, what are you practicing? It takes discipline and rigor and a true commitment to a new world to actually get into some other practices. And emergent strategy is primarily about getting into other practices. It's asking people to get very intentional.

Q: What are you observing in the people around you these days, and in yourself?

A: I find that I meet activists on a regular basis who will tell me, I'm so tired. I think that sometimes we're working so much because we know that if we slow down, we'll have to look at how heartbroken we are about the conditions that we're in right now, and we'll have to look at how heartbroken we are about the conditions our children are in right now.

This is why the work that I do is much more about how do we make that turn, and look directly at what is, and make our best offer against reality. How do we, right now, give people the tools they need in order to tell their story? in order to speak the truth to each other and to get to see new truths?

We're not gonna be able to go out and create change if we are unwilling to be changed ourselves in the service of the work, if we're unwilling to keep learning. I think there's a posture right now that can happen in movement spaces, which is sort of like, I've got my analysis right, now I know everything, and I'm woke, or whatever. We get very intolerant of information, and we get very intolerant of even asking questions and reconsidering things. And just like any group in the species, we can get caught in groupthink where it's like, well, someone told us this is the way that we're going to respond to this and so that's what we're gonna do. I think that happens everywhere.

So, a big part of my work is to ask, how are you willing to let yourself be changed? How are you willing to continue to ask questions from a place of not knowing?

How are you willing to be in an experimental phase instead of a permanent phase?

[That's why] you'll hear me say I'm not really a big believer in strategic planning, because a lot of times it's like trying to look ahead and create some rigidity for the future. I'm much more interested in how we create strategic intention, a strategic sense of vision in what it is we're trying to move towards, and a strategic sense of principles about how we want to be with each other.

Q: How would you describe the shift we need to go through?

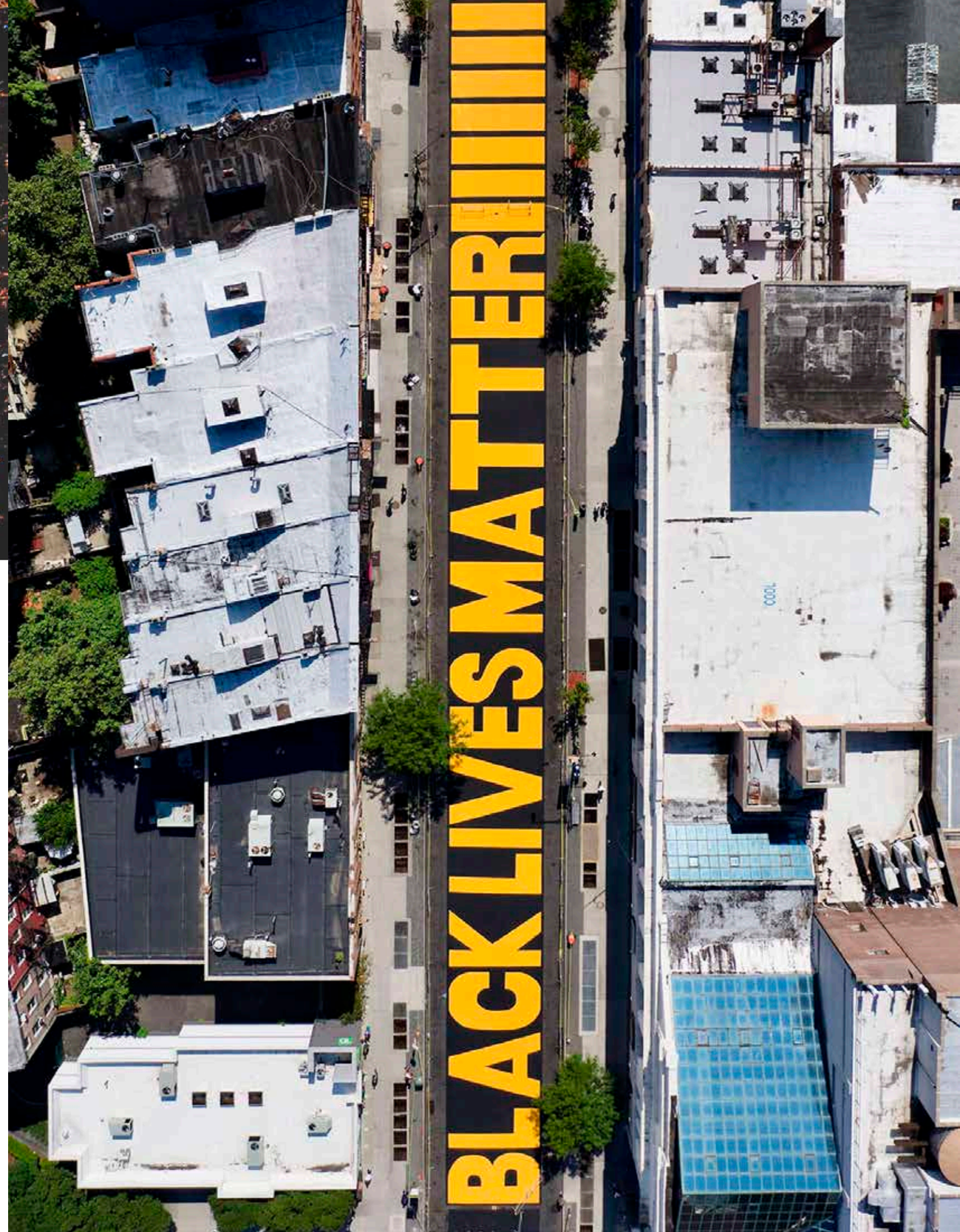
A: The shift that we need to go through now as human beings is to grow our souls as big as that shift from agrarian to technological was. We have to be willing to operate in a way that says, yes, I'm willing to be interconnected and interdependent, and I'm willing to be in right relationship and see myself as part of a whole, and recognize that I'm not some individual who can operate and survive [alone]. We really need to start to understand that there's times when revolution is like, oh, people are armed and they're in the streets, and all this is going down, [but there are] also other kinds of revolution; and [that] right now we're in a revolution of being, in an existential sense.

No church is gonna give it to us. No school is gonna give it to us. Our family structure's not gonna give it to us. It's actually gonna be at a societal level that we start to have this shift happen.

Our humanity connects us, and it's from that place that we're gonna make a stand for our right to be a species on this planet.

And I really do think that that's where we are right now.

I think Earth is like, I'm tired of you all. I'm gonna hurricane you all the fuck out of here. You're just not doing your part. And I think she's in the right to say that.

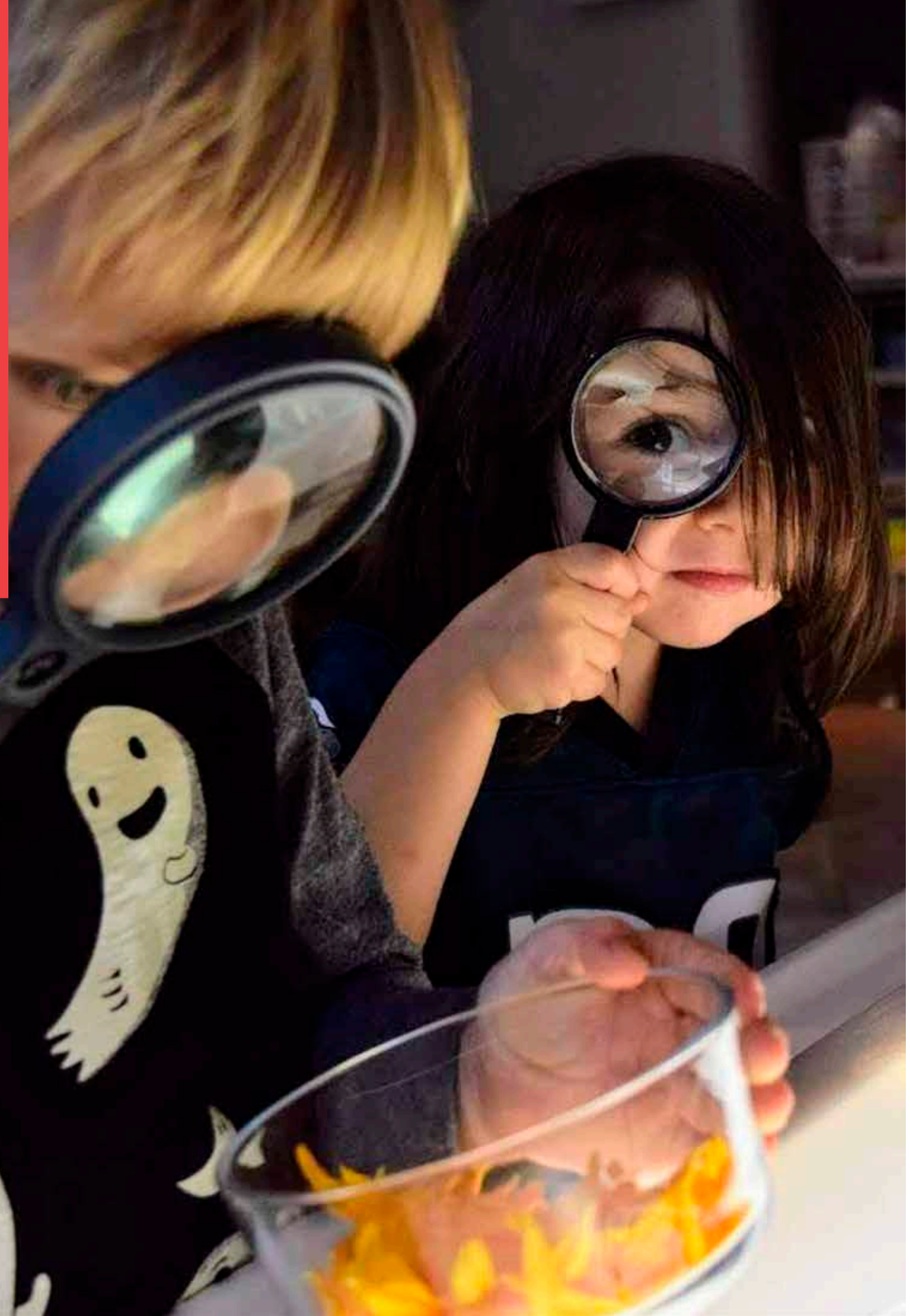


Q: So what are the boundaries we need to set? How do we structure ourselves into thinking and acting more emergently?

A: We must learn to set and hold boundaries within community, on this planet we share. We must learn what is worth our attention, and how powerful our attention is. We must get more passionate about healing than we are about punishing. We are so deeply socialized into punitive systems that it feels impossible to us to consider that when someone has caused harm, harming them might not be the move. I think we need accountability so badly, we know we deserve it, and we think we can make something right about the past. But we can't.

This is what you learn from flocking — how do we stay the right distance apart and the right distance in touch with each other in order to actually move together as a unit and stay alive and make it as far as we can?

You look up in the sky and there it is — there's birds in a murmuration pattern. And you're like, what are they doing? Are they avoiding predation? Are they migrating? We do those things too! We have to avoid predation, we have to migrate; how can we do these things more effectively? If you look at the natural world in any way, you've already had these thoughts and awarenesses. I think that if you work with other people, you [also] have these awarenesses. It's like we suddenly realize that, oh, competing with all my co-workers for the approval of our boss in a highly socialized situation does not produce the best work! It only produces this kind of cutthroat, ever-shifting hierarchy; a hierarchy that doesn't actually serve our brilliance!



The Community: Blue School (New York, New York)

Gina Farrar is not your typical New York City school leader.

For starters, she's from the deep South — although any remnants of a Southern twang have long since disappeared. She's also quiet and friendly — the sort of person who likes going to restaurants in the middle of the afternoon, or smiling at kids on the train.

Then there's her formal education: a double major in Dance and Mathematics, followed by a PhD in Psychology. Although this is where, if you follow the pattern, Gina Farrar's career path starts to make sense. "What attracted me to math and dance is that each is a puzzle," she explained. "The ways that math is a puzzle are obvious, but ballet is a puzzle, too — how your body fits together, how the steps fit together. And there's a lot of technique involved, but it's only when you master the technique that you can soar."

The same can be said for Blue School, a decade-old independent school in lower Manhattan that Gina leads, and which was created by the founders of Blue Man Group, the global theatrical phenomenon that was designed to inspire creativity in both audience and performer.

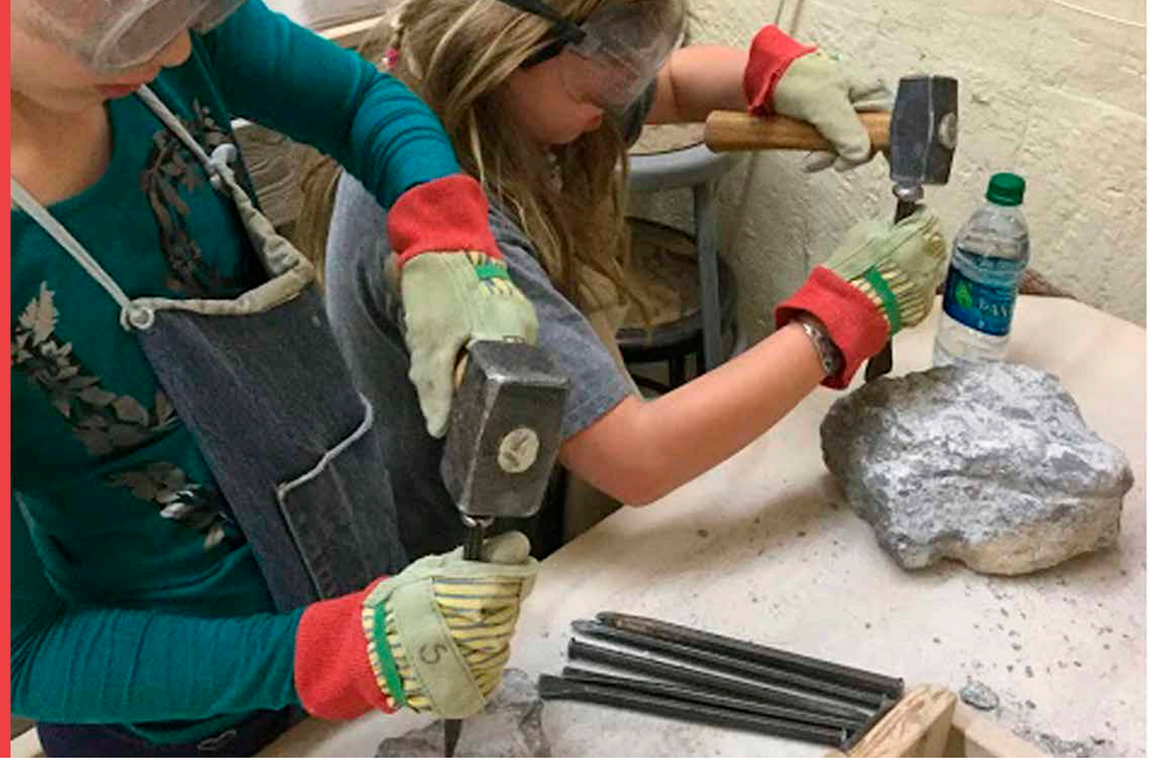
To many of us, that riddle — how to inspire creativity — is the Holy Grail of organizational redesign. Back in 2006, however, it was little more than a nugget of an idea that turned into a small parent playgroup in lower Manhattan. Soon thereafter, it grew into a full-blown school — albeit one whose theories about teaching and learning were both intriguing and unproven. And now, Blue School has evolved into the rarest of entities —

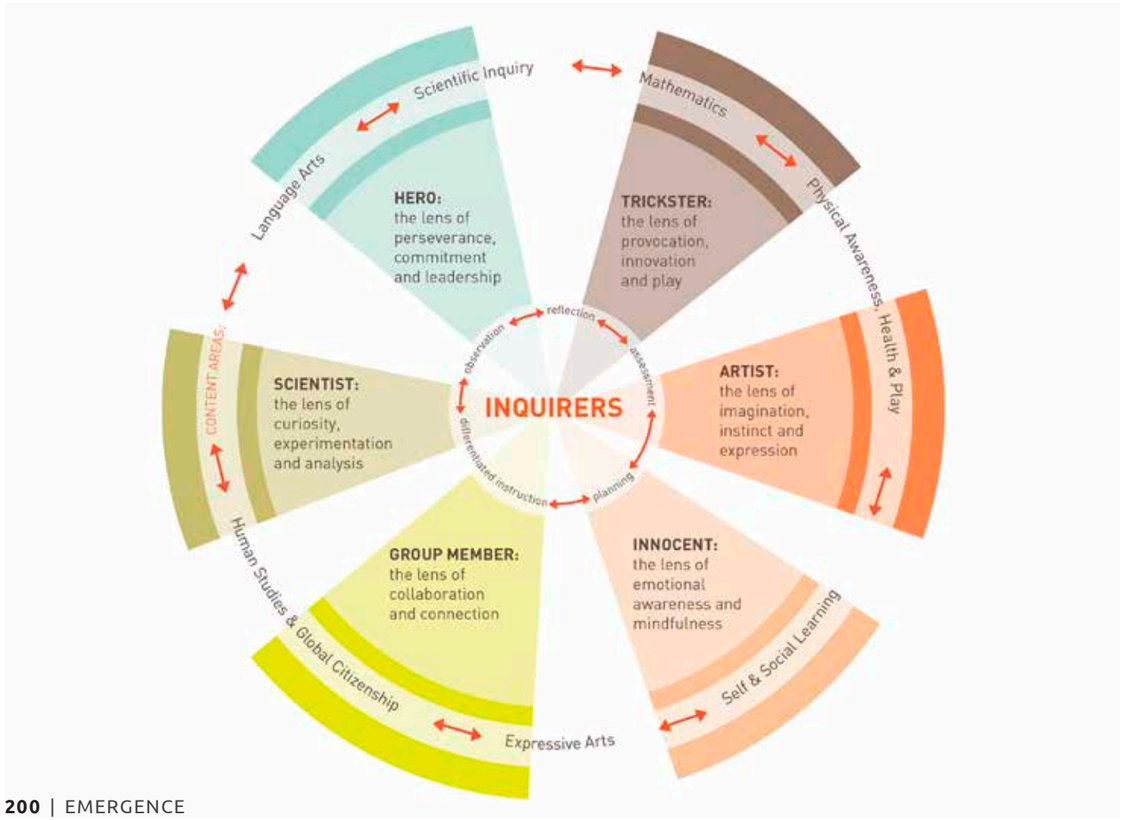
a school community that is, both literally and figuratively, a living organism,

and a theory of learning that has, over a decade of strict scrutiny, constant tinkering, and loving care, developed a full-blown pedagogy as worthy of replication as its more famous single-name forebears:

Montessori. Reggio. Waldorf. Steiner.

Blue?





To understand how it happened, you need to begin with the idea that anchors both the Group and the School: a colorful wheel of archetypal lenses for how human beings see and make sense of the world.

As Blue Man Group and Blue School co-founder Matt Goldman puts it, these lenses evolved as the founding Blue Men designed their characters. Each pair of lenses, which are positioned opposite one another on the wheel, represent polar ways in which we are likely to see ourselves (and be seen by others). Our culture is rife with examples of the archetypal Hero, for example, yet almost barren when it comes to equivalent celebrations of the Innocent.

We are more likely to value the mindset of the Scientist over that of the Artist.

And despite our country's revolutionary origins, you're still more likely to gain points in your local community as a Group Member than a Trickster.

This is why the Blue Men, over the course of a two-hour show, spend time inhabiting all six lenses, and modeling for people what it looks like when you check All of the Above in the multiple choice question of

What Does It Mean to be a Human Being.

As Goldman puts it, "We wanted to speak up to the intelligence of our audience members while reaching in to their childlike innocence. We wanted to create a place where people continually learn and grow and treat each other with just a little more consideration than is usually evident out in the real world. We wanted to recombine influences to create something new. And we wanted to have a good time doing it."

That sensibility is also at the center of Blue School, which is equal parts ritualistic, research-y, and rebellious. At weekly community meetings, for example, kids and adults take time to celebrate these different ways of being, as a way to reinforce the extent to which all six are equally valued. "I saw the Trickster in Dana yesterday," said one young student on a brisk September morning, "when we walked to the park and she asked us if we had heard of any mysterious mishaps in the area." Moments later a teacher added that he "saw the Innocent and the Artist in Mati when she was working really intently and precisely to draw negative space."

Beyond culture-building rituals, Blue School also works proactively to translate the latest research on cognitive science and child development into all classroom practices and professional development courses.

Its teachers are deeply experienced practitioners. And its initial emphasis on archetypal lenses, playful mischief, and joyful learning has since grown into what Blue School calls the Balance Model — a richly visual comprehensive learning framework that is equal parts Academic Mastery, Self & Social Intelligence, and

Creative Thinking; that proclaims the school's determination to cultivate Adaptable Thinkers, Collaborative Problem-Solvers, and Irrepressible Innovators; and that outlines Blue School's intention to cultivate a specific set of habits of mind in its students, from Openness and Empathy to Literacy and Self-Expression.

"There are so many ingredients that have gone into making this school work," said Farrar. "And now we find ourselves in a position where we're able to provide all these different conditions in which different kids can flourish.

That's the thing about schools — they don't hold a static amount of energy; the energy is exponential.

And when you're feeling creative and relaxed socially, and when there's real clarity of expectations, that's when it becomes magical."

One day after school, just a few weeks into the 2018-2019 school year, Blue School's three divisional directors — Laura Sedlock (Pre-Primary), Pat Lynch (Primary School), and Laurie Kardos (Middle School) — discussed exactly how these different pieces had come together to wield such a place. After all, it's one thing to know an expensive private school in New York City has found a way to be magical.

The real question is, to what extent is that magic transferable — to all schools, and all types of communities?

"All the things that look un-magical are what creates the space for the magical things to happen — here or anywhere else," said Sedlock, a New York native with nearly two decades of experience in early childhood education. "And almost everything flows from our ability to answer two questions: What does it mean to *really* observe children? And how do we document each child's learning more meaningfully?"

As an example, Sedlock pointed to an essential element of Blue School's Pre-Primary program when she first arrived: "Big Study," in which the children go deep on a particular subject over an extended period. Many schools have something similar, and usually, the subject of study is set in stone: the 5th grade will study ancient Egypt, the 2nd grade will study Ants, and so on. "So the first thing I said when I heard that is, 'We don't want to think that way.' If we're serious about listening deeply to children, we can't project out that far. We have to remain nimble and go where they take us. *It's the children's excitement* that will lead to the big study, not a predetermined topic by the adults. But that requires a different skill-set than we're used to as teachers."

Pat Lynch agreed.

"Our teachers have worked to become highly skilled at knowing that the best instructional fodder is right in front of them, and it's unfolding in real time.

Our role as leaders is to protect the space that allows our teachers to do that work. It's very emergent."

Emergent is a word you hear often at Blue School, and it's illustrative of what makes the Blue School Pedagogy distinct. Spend a day there, and at all levels you'll see students and teachers working on established courses of study — and wandering off in spontaneous directions. It's an intellectual high-wire act — more jazz than classical — and it's likely to make any visitor wonder what Blue School's teachers have done to build the confidence that is required to teach this way.

"I think a real danger is to think that the solution is simply not to plan or have goals or to just give yourself over to the whims of whatever the kids want to do at any given moment," said 4th grade teacher Ashley Semrick. "It's the opposite, actually: it won't work unless you have really clear goals for both individual kids and the larger group.

The ability to be emergent as an individual flows from our ability as a group to have clear schoolwide intentions.

We all know that a part of our job is to read what's happening on any given day, and then to flexibly adjust as needed.

"I remember back in grad school someone told me that when things get rough as a teacher, you'll just revert back to the educational standard you experienced as a student — even if that standard didn't serve you well. Well, I can safely say that a decade into teaching, I am only now escaping that truth. It's taken me that long to *really* trust that my kids always have something meaningful to say. That has made all the difference."

"It's taken several years for us to reach that point collectively as well," added Laurie Kardos, who leads the school's brand new Middle school division. "This is the first year I've felt like we aren't in start-up mode.

I don't think there's any way around that as an organization — you need to struggle with it — but I will say that for us, the work was in picking the things we wanted to align around, and then using each other to work on those things. What we've created is a space with the right balance of flexibility, choice, theatricality, precision, trust, compassion and autonomy. And with our experience has come a deeper ability to be emergent and plan for the unexpected, not just for kids to learn something new but to become more effective at building off what they already know — and then to assess what they know not just at the end of the year but at every moment. That's what gives this place its life."

It's true — Blue School is *alive*, both literally and figuratively, a statement even the scientists would agree with. "We have discovered that the material world is a network of inseparable patterns of relationships," writes physicist and systems theorist Fritjof Capra, "and that the planet as a whole is a living, self-regulating system.

Life, then, is an emergent property. It cannot be reduced to the properties of its components.

Social networks exhibit the same general principles as biological networks. What is valid for cellular life can be considered valid for any form of life. And the essence of life is integration.

"Organisms do not experience environments. They *create* them."

As a result of these insights, Capra and many others — from a wide range of scientific fields — have concluded that "cognition operates on many levels, and as the sophistication of the organism grows, so does its sensorium for the environment, and so does the extent of co-emergence between organism and environment."

OK, but what does this have to do with a school that has made magic, and whether it can share its recipe with other schools?

If you ask the educators of Blue School, they'd say any recipe is a result of the sophistication of the learning culture they have steadily grown over time — the gradual mastery of technique, perhaps, that has allowed them to soar. They'd say it's the intentional creation of a physical environment that is meant to reflect the values of the community that inhabits it. And they'd say it's their paradoxical willingness to be both highly structured and completely free — to ground the learning in a discrete set of lenses, to craft a Balance Model — and at the same time to protect the space and autonomy of the teachers to go wherever the children lead them at any given moment. Consequently, to visit Blue School is to experience it as not just as a school, but as an actual living organism — an ecosystem unto itself, one that is emergent and dynamic, self-organizing and self-aware.

Which leads to the most radical, and replicable, observation of all.

"In a nutshell," Capra says, "nature sustains life by creating and nurturing communities. This is the profound lesson we need to learn from nature.

"The way to sustain life is to build and nurture community" — no matter where those communities may be.

NOW WHAT?

Inquiry Seeds for Emergence

Emergence is one of the most complex properties of self-organizing systems. It's also one of the most challenging to wrap our minds around.

Where does it come from and what causes its manifestation? We see its transformative effects, but we don’t usually see them coming. And although we know it’s not predictable, it's also clear that it doesn’t “just happen.”

It may seem mysterious, serendipitous or even coincidental, but emergence is not an accident. We simply failed to notice the invisible patterns of dynamics and relationships that were relentlessly and seamlessly moving through the system.

Emergence manifests, therefore, as a result of robust interdependence and repeated patterns of interactions between the system’s identity, information and relationships.

How might we use these simple relational rules to inform our individual and collective behavior and decision-making?

me

ASK yourself: What are our community’s daily routines? What are our community’s rituals? When am I likeliest to experience divergences from these fixed patterns? When those divergences happen, what might I see people doing? What might I hear them saying?

we

STORYBOARD your community’s emerging story using a framework inspired by Pixar. Ground your story in observable behaviors by drawing pictures and words. Don’t worry about the quality of the art, but DO make sure you can see what people are doing and hear what they are saying, because behaviors are the atomic units of emergence in living systems.

You’ll need two copies of the framework: one to illustrate the story of how your community got to now ("Once upon a time, there was a community founded to X," "Every day, they did Y," etc), and one to illustrate the future version of your community that is emerging. We recommend you print these on 48” x 36” poster board.

On the first poster, describe across six visual panels how your community got to where it is now. Panel 1 should describe your founding. Panel 6 should describe where you are today. Next, describe your emerging future, in which panel 1 should describe the current reality, and panel 6 should describe what you would expect to see people doing and hear people saying in your ideal future.

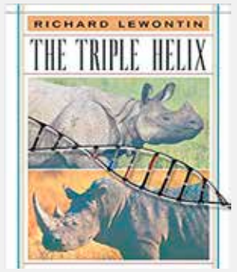
Now, reflect as a group on both drawings. What do you notice? What do you need to hold onto? What do you need to let go of? And what might you need to make room for — and why?

GO DEEPER

Emergence: The Connected Lives of Ants, Brains, Cities & Software

Steven Johnson

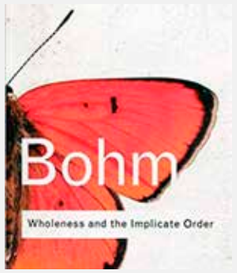
Emergence looks at the cities we inhabit, the media frenzies we suffer and the games we play, showing how individual actions without central planning often create a wonderfully adaptive communal intelligence.



The Triple Helix: Gene, Organism, & Environment

Richard Lewontin

Rejecting the notion that genes determine the organism, which then adapts to the environment, Lewontin explains that organisms, influenced in their development by their circumstances, in turn create, modify, and choose the environment in which they live.



Wholeness and the Implicate Order

David Bohm

In this classic work, David Bohm develops a theory of quantum physics which treats the totality of existence as an unbroken whole. Writing clearly and without technical jargon, he makes complex ideas accessible to anyone interested in the nature of reality.

Emergent Strategy: Shaping Change, Changing Worlds

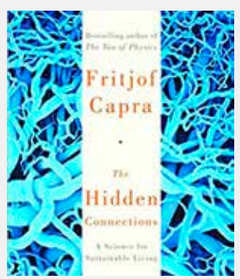
adrienne maree brown

Inspired by Octavia Butler's explorations of our human relationship to change, Emergent Strategy is radical self-help, society-help, and planet-help designed to shape the futures we want to live.

Jazz: A History of America's Music

Geoffrey C. Ward and Ken Burns

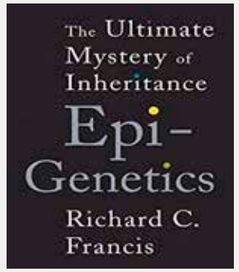
Geoffrey C. Ward and Ken Burns vividly bring to life the story of the quintessential American music—jazz. Born in the black community of turn-of-the-century New Orleans but played from the beginning by musicians of every color, jazz celebrates all Americans at their best.



The Hidden Connections: Integrating the Biological, Cognitive, & Social Dimensions of Life Into a Science of Sustainability

Fritjof Capra

Fritjof Capra explores another frontier in the human significance of scientific ideas—applying complexity theory to large-scale social interaction.



Epigenetics: The Ultimate Mystery of Inheritance

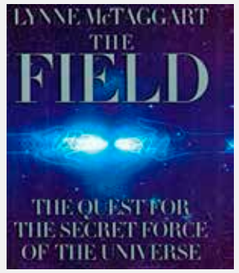
Richard Francis

Epigenetic means "on the gene," and the term refers to the recent discovery that stress in the environment can impact an individual's physiology so deeply that those biological scars are actually inherited by the next several generations. The first book for general readers on this fascinating and important topic.

Other People's Children

Lisa Delpit

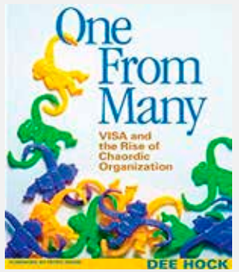
In a radical analysis of contemporary classrooms, MacArthur Award–winning author Lisa Delpit develops ideas about ways teachers can be better "cultural transmitters" in the classroom, where prejudice, stereotypes, and cultural assumptions breed ineffective education.



The Field: The Quest for the Secret Force of the Universe

Lynne McTaggart

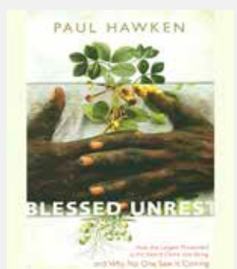
The Field establishes a new biological paradigm: it proves that our body extends electromagnetically beyond ourselves and our physical body. It is within this field that we can find a remarkable new way of looking at health, sickness, memory, will, creativity, intuition, the soul, consciousness, and spirituality.



One From Many: VISA and the Rise of Chaordic Organization

Dee Hock

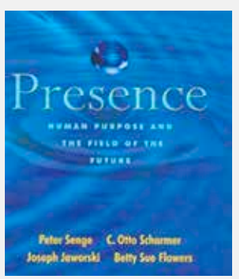
Dee Hock chronicles the emergence of a new form of organization that blends chaos and order, which may be critical to a livable future, and shows how it is emerging in such effective organizations as VISA, the Internet, World Weather Watch, and Alcoholics Anonymous.



Blessed Unrest

Paul Hawken

Paul Hawken has spent more than a decade researching organizations dedicated to restoring the environment and fostering social justice. These groups collectively comprise the largest movement on earth. *Blessed Unrest* explores the diversity of the movement, its brilliant ideas, innovative strategies, and centuries of hidden history.

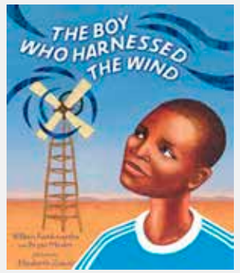


Presence: Human Purpose and the Field of the Future

Peter Senge, C. Otto Scharmer, Joseph Jaworski, and Betty Sue Flowers

Radical and hopeful, *Presence* synthesizes leading-edge thinking, first-hand knowledge, and ancient wisdom to explore the living fields that connect us to one another, to life more broadly, and, potentially, to what is "seeking to emerge."

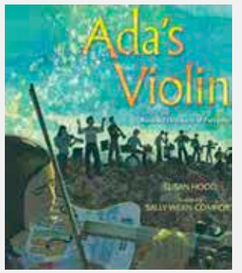
GO YOUNGER



The Boy Who Harnessed the Wind

William Kamkwamba

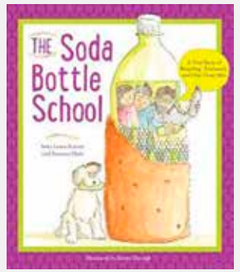
When fourteen-year-old William's Malawi village was hit by a drought, everyone's crops began to fail. Without enough money for food or school, William spent his days in the library and figured out how to bring electricity to his village. Persevering against the odds, William built a functioning windmill out of junkyard scraps, and became the local hero who harnessed the wind.



Ada's Violin

Susan Hood

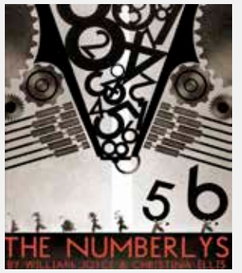
Ada Rios grew up in a small town built on a landfill. She dreamed of playing the violin, but with little money it was never an option, until a music teacher named Favio Chavez arrived. Wanting to give the children of Cateura something special, he made them instruments out of materials found in the trash — an idea that would leave her town forever changed.



The Soda Bottle School

Laura Kutner

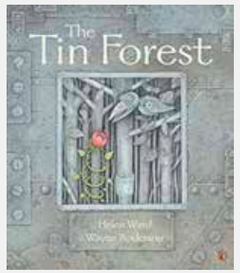
Guatemalan villagers tried to expand their tiny schoolhouse, but the money ran out before the project was finished. No money meant no wall materials, and that meant no more room for the students. Until they got a crazy idea: Why not use soda bottles, which were scattered all around, to form the cores of the walls?



The Numberlys

William Joyce

Life was fine. Orderly. Dull as gray paint. But five jaunty heroes weren't willing to accept that this was all there could be. By breaking out of tradition, using creativity, imagination and collaboration, a colorful new story begins to emerge. Something truly wondrous begins to happen to those who knew there was more to life than just shades of black and gray!



The Tin Forest

Helen Ward

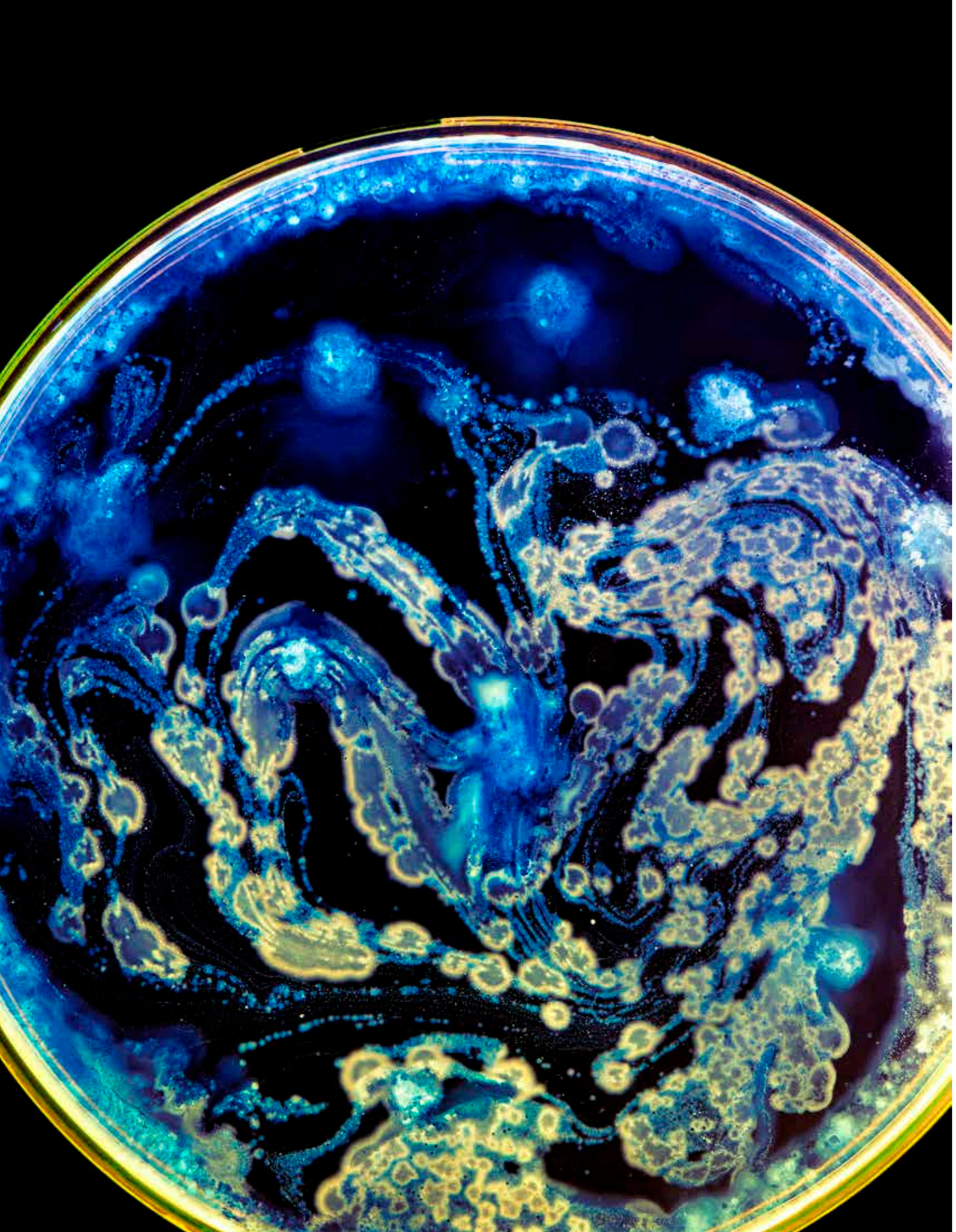
In the middle of a dark, lonely wasteland filled with old scrap metal lives an old man. Every night he dreams of a lively forest, full of sunshine, plants, birds, and animals. Every morning he wakes to gloom and bad weather. Then one day, he comes up with an idea to change things. The rich, detailed illustrations and lyrical text carry an important message of imagination and hope.

The Hundred Dresses

Eleanor Estes

Wanda Petronski is a Polish girl in a Connecticut school who is ridiculed by her classmates for wearing the same faded blue dress every day. Wanda claims she has one hundred dresses at home, but everyone knows she doesn't and bullies her mercilessly. One of Wanda's classmates ultimately decides that she is "never going to stand by and say nothing again."

Within connected diversity lies a hidden unity.



PART THREE
SEEDS FOR REGENERATION

PATTERNS

WHAT (&WHY) WE BECOME

A living system is a network. Its dynamics and energy flows are palpable. Its shape can be mapped.

The patterns a living system creates are the “air” it breathes.

What, then, are the patterns we should be looking for? What is the shape of what we seek?

The Question: *What's Occurring?*

"You don't see something until you have the right metaphor to let you perceive it."

— Robert Shaw

Everyone knows the world is changing. But sometimes it's hard to make sense of just how far, and how fast.

Consider this: in 1,000 B.C., the entire human population was just 1 million. By 1,000 A.D., it was *300* million. And since then, we've been making babies at a rate one scholar described as "more bacterial than primate."

Over the centuries, we've been just as bacterial in our making of *stuff*. Whereas in 1500, for example, we produced goods and services worth about $250 billion in today's dollars, it's now $60 *trillion*.

Meanwhile — and as a direct result of all of the above — one-third of the Earth's land is severely degraded. There are half as many animals in the world today as there were in 1970. And we've used more energy and resources in the past thirty-five years than in the previous 200,000 — the total amount of time that *homo sapiens* have been on Earth.

Cultural anthropologist Wade Davis says these are the patterns of human behavior that expose the fallacy that it was ever possible to achieve infinite growth on a finite planet. It is, he warns, "a form of slow collective suicide.

To deny or exclude from the calculus of governance and economy the costs of violating the biological support systems of life is the logic of delusion."

Yet we see evidence of our delusional logic in every direction.

In smoke-clogged Chinese cities, giant LED screens now show daily videos of the sun rising.

In American schools and classrooms, it has become commonplace to have "active shooter" drills.

And people touch, swipe and caress their phones almost 3,000 times a day.

Against these odds, it's easy — inevitable, really — to feel hopeless. And yet just as past behavior patterns have laid bare the extent of the damage we have done to the natural world (and ourselves), so, too, can our propensity as pattern recognizers lead us to course-correct in the service of a different story, and a different way of being.

As climate activist Bill McKibben puts it, “the great advantage of the twenty-first century should be that we can learn from having lived through the failures of the twentieth. We’re able, as people were not a hundred years ago, to scratch some ideas off the list.”

In fact, part of being human *requires* scratching things off the list. “Uncertainty is *the* problem that our brains evolved to solve,”

explains neuroscientist Beau Lotto. “Humans live according to the ideas that arise from their ecology, from their interaction with the environment. These ideas are what we see, think and do. Overcoming uncertainty and predicting usefully from seemingly useless data is arguably the fundamental task that the human brain, as well as all other brains, evolved to solve.”

“Our brains are naturally pattern seeking and sense making,”

adds educator Stephanie Pace Marshall. “The ability to recognize and formulate patterns is essential to deep understanding because patterns are essential to meaning construction.”

Today, however, our evolution is attached to even greater stakes — no longer merely about individual survival, but the survival of entire social structures, and perhaps even the species itself. “Until we can expand our scope beyond self-centered and purely human concerns to hold in mind the trillion worlds alive on this earth at any moment,” argues Susan Murphy, “we are living in a kind of madness — which is to say, not living in reality.

The great question of our time is whether or not we will prove able to wake into full awareness of the earth, and the geophysical changes now in play, in time to avert full-blown catastrophe.”

Journalist Joshua Cooper Ramo agrees. Whereas for centuries we all lived under the same systemic trappings of modern life (from capitalism to communism), today the spread of networks and network power is creating a new kind of order, and a new source of strength.

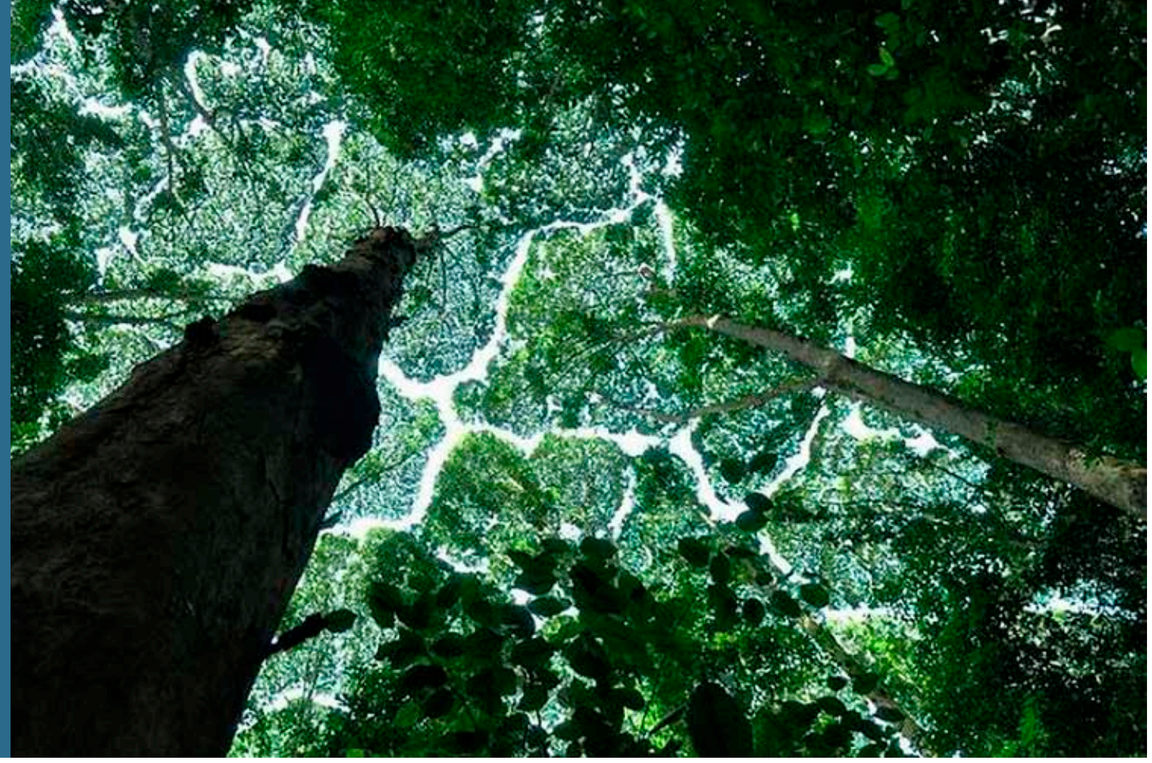
“Anything not built for a network age — our politics, our economics, our national security, our education — is going to crack apart under its pressures,” Ramo suggests.

“Our era is one of connected crises. Relationships now matter as much as any single object. And puzzles such as the future of United States-China relations or income inequality or artificial intelligence or terrorism are all network problems, unsolvable with traditional thinking.”

As a result, a wide range of scholars have begun to suggest, as Dan Pink has, that “the future belongs to a very different kind of person with a very different kind of mind — creators and empathizers, pattern recognizers, and meaning makers. We are moving from an economy and a society built on the logical, linear, computerlike capabilities of the Information Age to an economy and a society built on the inventive, empathic, big-picture capabilities of what’s rising in its place.”

As this shift occurs, our ability to discern new patterns of life and social organization amidst the daily deluge of bits and bytes will determine how much longer *homo sapiens* get to stick around. “The emerging new scientific conception of life can be seen as part of a broader paradigm shift from a mechanistic to a holistic and ecological worldview,” writes Fritjof Capra. “At its very core we find a shift of metaphors that is now becoming ever more apparent — a change from seeing the world as a machine to understanding it as a network.”

Stephanie Pace Marshall is even more to the point. “Reconnecting to the deepest patterns of life reinforces the simple truth that in an interdependent world, it is relationships, not things, that create more life. Change the patterns — the configurations of learning, teaching, communicating, and problem-solving — within a system, and you change the system itself: its culture and its structures.”



What, then, are the patterns we should be looking for?

And what is the shape of the change we seek?

As you've read thus far, a healthy living system depends on the interplay of three interrelated characteristics as its seeds for growth: the clarity of both individual and shared *identity*; the circulation of relevant *information;* and the strength of reciprocal *relationships*. These conditions are what allow living systems to begin planting seeds of change, through the property of *emergence*.

Over time, however, living systems depend on three additional design principles, which serve as seeds for regeneration: *patterns* — or the things that we notice; *processes* — or the ways that we work; and *structures* — or the things that we build.

"To understand and work with the system," says organizational theorist Margaret Wheatley, "we need to be able to observe it *as a system*, in its wholeness. Wholeness is revealed only as shapes, not facts. Systems reveal themselves as patterns, not as isolated incidents or data points.

> And in groups, organizations, and larger systems it is the structure of the relationship among individuals that — when changed — gives rise to different behavior patterns."

Conservationist Eleanor O'Hanlon has seen this theory in action repeatedly through her work. "The patterns of living relationships are always in motion as the animals test and are tested by the terrain, the weather and each other," she explains. "Through the generations, they refine their capacity to innovate, adapt, and thrive together as one community, interdependent and whole.

> "To be what they truly are, to live ardently and fully, each one requires the other."

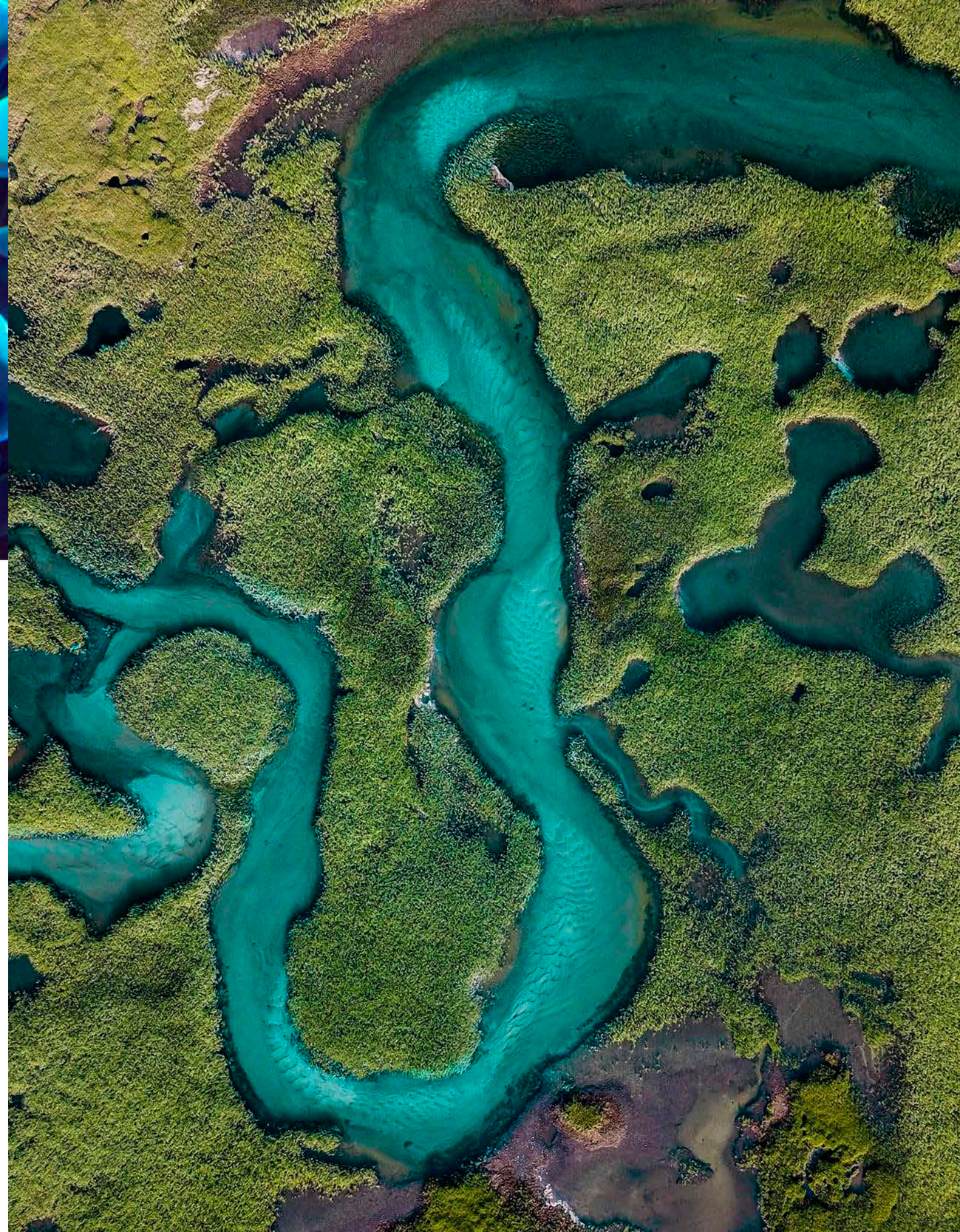
This is what's required of us as well — a willingness to observe the patterns of relationship that give shape to the systems we inhabit and perpetuate, alongside the courage to adjust our behavior accordingly in ways that will benefit the whole.

It's what we see in the science of spirals, which map out "nature's secret code" and provide a form and function at both the cosmological and the sub-atomical scale.

It's what we can trace in the art of *Humans of New York*, a sprawling, vibrant set of human portraits that reveal the myriad ways in which we all seek to be what we truly are.

It's what we hear in the words of Jitu Brown, a Chicago-based community organizer whose understanding of American identity and grassroots activism has been shaped and informed by the recursive racialized patterns of human behavior.

And it's what the students in Mr. Margon's Food Systems class learn about each year through a transdisciplinary search for meaning and patternicity that is designed to help them explain everything from basic nutrition to systemic inequality.



It is, in other words, a fundamental part of being a well-functioning person.

“Starting even before we are born,” writes David Brooks, “we inherit a great river of knowledge, a great flow of patterns coming from many ages and many sources.

The information that comes from deep in the evolutionary past, we call genetics. The information revealed thousands of years ago, we call religion. The information passed along from hundreds of years ago, we call culture. The information passed along from decades ago, we call family, and the information offered years, months, days, or hours ago, we call education and advice.”

And so ours is the search for new sources of education and advice.

“Pattern born amid formlessness: that is biology’s basic beauty and its basic mystery,” James Gleick offers.

To which Nietzche would add a caution. “The more abstract the truth you wish to teach,” he once wrote, “the more you must allure the sense to it.”

Schooling must never be a vehicle for identity theft.

The Science: Spirals

A Nautilus shell and a Chameleon tail.

The Milky Way and the Double Helix.

A hurricane and a human finger.

The Parthenon and the Pyramids.

Or the dive path of a peregrine falcon and the propulsive power of the human heart.

All are naturally occurring designs, from the macrocosm to the microcosm. And all are based on the same universal form and formula — the ratio of 1.618 — that has been called everything from the Golden Section to Nature's Secret Code to the language of God itself.

This is the pattern of the spiral — equal parts science and spirituality, and a reminder of the inherent numinosity of the natural world.

Our awareness of the spiral goes back as far as human history can record, from its ubiquity in Stone Age art to its place in Shiva's hand as a symbol of the instrument of creation. It is the emblem of geomancy, and the path by which we describe either upward or downward growth.

The word itself is a reminder of its deep roots in our collective memory. In Latin, the word *volute,* or "spiral movement," lives on in current words we use to describe the change process itself, from *evolution* to r*evolution*. In ancient Greek, the word *spirare* means "to breathe." And in Sanskrit, the word for spiral is also the name of a form of yoga that relies on breath to harness the upward, circular path of tantric energy through the body and towards a higher state of consciousness: *kundalini.*

Despite its mystical origins, however (not to mention its ubiquitous recurrence in nature), the spiral's spiritual significance has become somewhat lost in our modern world. But it was not lost to past generations — and if the Swiss psychiatrist Carl Jung is to be believed, its

symbolism still swirls through our collective unconscious.

The rules for a spiral's universal design are simple enough: divide a line into two parts, with one of the two parts longer than the other, such that the ratio of the whole line to the longer section is the same as the ratio between the two sections — a number that is almost two-thirds, but not quite.

1.618.

Also known as *φ,* this number was integral to the geometry of antiquity. It was used as a basis for the construction of the world's most sacred buildings. It provided Leonardo da Vinci with the symmetrical structure of the *Mona Lisa* and *The Last Supper,* and inspired Vincent Van Gogh's brushstroke patterns in *Starry Night.*

Da Vinci also saw in the spiral's form and function an unmatched design for the transmission of energy, as demonstrated in his hydraulic devices and Archimedean screws.

And after learning from ancient Sanskrit texts about a different form for its expression — one in which the last two integers of a sequence are added together to make the next number, such that the ratio of each term to the previous one gradually converges to a limit of . . . you guessed it . . . 1.618 — the Italian mathematician Leonardo Fibonacci helped it achieve a wider application.

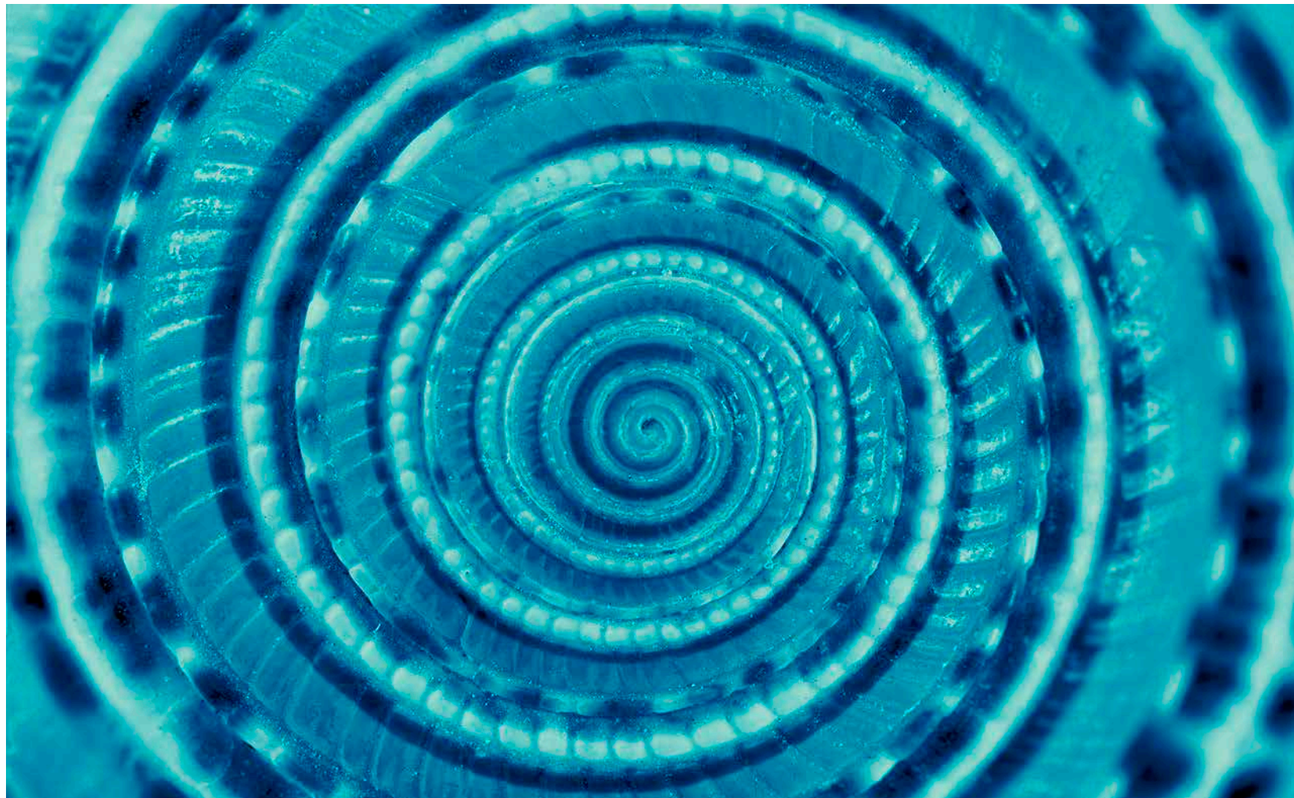
Indeed, plants, animals, human beings, and the galaxies of the universe all possess dimensional properties that adhere to the ratio of *φ* to 1.

Why?

Its beauty and mystery comes from the fact that no one can say for sure. But close observers feel its upward circular path maps a traceable pattern of movement that helps govern the one universal constant: change.

As American astronomer Lloyd Motz put it, "The stellar constellations themselves, and the almost mathematical symmetry of the spiral nebulae, are examples of forms and structures that recur time after time throughout the universe, as though there were identical moulds through space into which the matter of the universe has been poured."

Journalist Arthur Koestler agreed. "There are many turns of the spiral," he wrote, "from the slime-mould upwards, but at each turn we are confronted with the same polarity, the same Janus-faced holons, one face of which says I am the centre of the world, the other, I am a part in search of the whole."



The Art: Humans of New York

Fulfillment. Loneliness. Longing. Belonging.

These are the patterns of personhood.

We want and worry, hope and harangue.

We feel powerful and invisible, alive and unmoored.

And we wonder — a lot — if anyone else feels the same.

In 2010, a new arrival to New York City, a recently-fired day trader named Brandon Stanton, wondered, too. So he began wandering the five boroughs of his sprawling new home with a camera, along with a quixotic goal of photographing 10,000 people on the street in order to create "an exhaustive catalogue of the city's inhabitants."

A decade later, that work has yielded a much larger tapestry than he could have imagined: a virtual map of not just New Yorkers, but *homo sapiens* in all our dialectical beauty and madness and patterned psychological swirl.

This is the art of *Humans of New York*.

"I always say that if I'd waited until I had the idea for *Humans of New York*, I'd never have begun *Humans of New York*," Stanton explains. "But somewhere along the way, I began to interview my subjects in addition to photographing them. And alongside their portraits, I'd include quotes and short stories from their lives."

In his conversations with strangers, Stanton started to detect deeper patterns in what makes us all members of the same family. "I think the process has been an education to the receptivity of people in having an interaction with other people," he said. "It seemed like a stupid idea, just taking pictures of people on the street. But there's a comfort, an affirmation, a validation in being exposed to people with similar problems. The best interviews, the ones I feel the best about are the ones where at the end we're profusely thanking each other. Me thanking them for telling me this amazing story about their lives. And them thanking me for listening."

At the same time, Stanton is wary of anyone reading *too* much into such patterns. "I think people try to put it into a box of showing the commonality of humanity. My purpose is not to tell the story of humanity, it's to tell the story of the person right in front of me."

And yet.

Through all the individual faces and stories of the people Stanton has recorded, there is, as Brain Pickings' Maria Popova has written, “a magnificent mosaic of lives.

These portraits — poignant, poetic, playful, heartbreaking, heartening — dance across the entire spectrum of the human condition not with the mockingly complacent lens of a freak-show gawker but with the affectionate admiration and profound respect that one human holds for another.

“In the age of the aesthetic consumerism of visual culture online, *Humans of New York* stands as a warm beacon of humanity, gently reminding us that every image is not a disposable artifact to be used as social currency but a heart that beat in the blink of the shutter, one that will continue to beat with its private turbulence of daily triumphs and tribulations even as we move away from the screen or the page to resume our own lives.”

The Practitioner: Jitu Brown

Jitu Brown is the national director for the Journey for Justice Alliance (J4J), a national network of community-based activist organizations, led predominantly by people of color, in 25 cities.

He was born on Chicago's south side and is a product of Chicago's public school system. He has organized in the Kenwood Oakland neighborhood for nearly two decades, participated in a hunger strike, signed a record contract, and driven through the night to protest the nomination of President Trump's nominee for education secretary.

Jitu also teaches African-American history at St. Leonard's Adult High School, the only accredited high school in that nation that exclusively serves people who have been formerly incarcerated.

Q: Why does the conversation about the future of learning feel like such a fight? How would you characterize the main opponents, and what's required to bring them together in service of a more collective mission?

A: Here's the big divide: According to the United Nations, among O.E.C.D. countries — the most developed countries in the world — the U.S. ranks 19th in education. But when you take out poverty, we're number 2.

What that says to me is that we know how to educate, but we don't have the desire to educate certain populations.

This is about access to resources and opportunity — and yet here we are, sixty years after *Brown v. Board of Education*, and we still have school districts that are woefully inequitable.

In Chicago, there's one neighborhood school I know with maybe 30-40% white enrollment, and an upper middle class constituency. At this school, every teacher has a teacher's aide. Children can learn Spanish, Mandarin Chinese and Arabic. They have a fully stocked library, and two fully stocked computer labs. They have an afterschool program that rivals any Boys & Girls club. And I know this because for a period my son was enrolled at this school.

And so I got appalled, because just as the children in this community deserve great schools, so do other children in other communities across the city.

But if you go to the South Side of Chicago, you'll find schools with 52 kindergartners in one class. You'll find schools where children have no World Language and no working library.

And here's the thing: to the left and the right, this inequity is acceptable. Because the people who suffer from this inequity overwhelmingly are Black and Brown folks.

That's the disease — that's racism that allows that, that tolerates it and says 'We're working on it.' You don't have to work on it; you have to fix it! It should be intolerable to you, and since it's not, instead of fighting for equity and making sure that children have the types of schools that inspire, what we do is we bring in private operators, who care less about our input than traditional public schools because there are no structures that say that they have to listen.

So what happens? Well, here's what we know — and we know this from research, this is not just Jitu's statistics here. We know that a lot of the schools that are held up as examples of these school turnarounds have selective enrollment strategies and pushout strategies for the kids who prove too troublesome for them to prove their theories of change.

They're barely batting .200 overall. So you tell me — what baseball player can stay in the major leagues, what quarterback can complete one out of five passes and keep their job?

When schools close across the country in Black and Brown communities, it connects directly to gentrification, and to the removal of working and low-income families from communities that they struggled in for decades, as opposed to creating the infrastructure in those communities to eliminate poverty.

So here's what we believe is the solution — and there's no negotiation on this: it's either this, or, you know, knuckle up:

The solution is unity rooted in self-determination.

I do not have the right to tell you what school should look like in your community. And you don't have the right to tell me what schools should look like in my community. What we both have is the right to self-determination.

What has happened to public education in the United States is that racism has blinded our perspective. What we have to understand is that the failure or the struggles of public education have nothing to do with the people, and everything

to do with how people are seen by the systems that choose to serve or underserve particular communities.

We understand that as the truth.

The way to bring people together, then, is to back up and let us determine our own children's education.

Q: But doesn't it feel like the school choice genie is out of the bottle? And if that's true, what is the best way forward?

A: The genie is out of the bottle. But it's also true that most Americans would rather see their schools fixed than closed. If they're going to take my tax money, I need a quality K-12 public education system in my community. And if we don't, that's not my fault, and it's not my child's fault, it's the system that for whatever reason does not value my child.

Organizing is all about people power vs. money power, and we have the most people. So a challenge has been convincing our people that we can win. Particularly in communities of color, but also more generally throughout society, everything we see teaches us we can't change things.

What the organizer must do is create that independent space and then structure those little victories so that we can train ourselves to believe we can win.

The only reason I'm crazy enough to believe we can win is because I've been involved in some victories and I've seen regular people push powerful political interests to the ends of the earth. I've seen it, and I've lived it.

As that crescendo grows, it will be like being in an apartment with smoke in it. Privatizers won't be able to breathe if we have accountability to the public, if the demand to stop closing schools increases, and if a vision of what education should look like in the 21st century can take root.

The history on this is clear: When cities organize themselves, privatizers run.

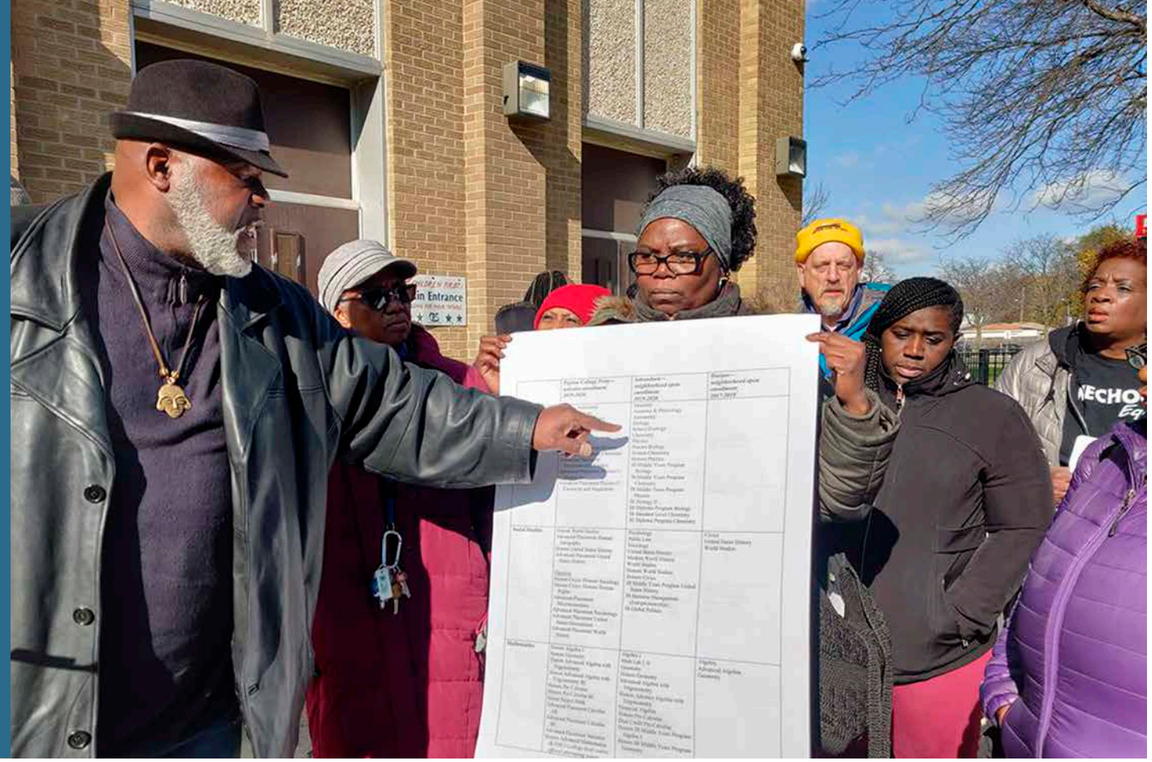
Q: Tell us about your home city, Chicago — and about how it has changed, for better and for worse, since the time you were growing up to today.

A: I'm 50 years old. I'm a native of the South Side. I grew up in a working class community when you had everybody from the folks who didn't have a pot to pee in or a window to throw it out of to folks like my father, who was a steelworker.

In the Chicago I grew up in, I went to a great neighborhood school down the street from my house. I had World Language in elementary school, I had Algebra in 6th grade, I was in the school band, I wrote for the school newspaper. My elementary school education gave me a foundation I could take anywhere. We had a stable business community then, so I knew what it was like to go to an ice cream parlor and see that the owner was a Black man. I knew what it was like to go to the White Hen Pantry and see that it was owned by a Black man. It was not foreign. But there has been consistent municipal pressure here since the surprise mayoral election of Harold Washington in 1983 — an election that was made possible by a broad multiracial coalition and that beat the most powerful political juggernaut in the United States at that time: the Daley machine.

So when Richard Daley the Second came into office, he was very intentional about either providing resources to bring those organizations under his fold, or to destroy those groups. The sense of organization we had, the sense of community organizing — it all disappeared, for the most part. And since we had a diminished capacity to organize, we began to experience an all-out assault on our very existence in the city of Chicago, and that assault continues today.

The way you build a community is you invest in that community's basic quality of life institutions.



The way you destroy a community is you divest in those basic institutions.

The reality is that we don't have the same amount of control that most Americans have over the institutions that exist in their communities. So I'm going through all of that to say that that lack of control — that lack of self-determination in our communities — has resulted so that those institutions no longer reflect who we are at all. They reflect mainstream society's view of us. So even though it's six decades after *Brown v. Board*, there has been a complete loss of hope in Chicago.

We have communities here where the unemployment rate of young black males is nearly 50%. So the infrastructure that most Americans enjoy and don't think about, from a community development perspective, brother, it has been taken from us — it has been denied us. And that's not asking for a handout. That's not playing the race card. That's just the truth.

I served this country in the army. My daddy was a veteran of the Korean War. Whose blood fertilized the soil of this country more than ours? Who has forgiven more than us? And so, even in the face of us as a people showing amazing grace and forgiveness and trying just to be a part of the dream that is America — trusting that America would love us back — that trust has been betrayed. And nowhere is it more evident than public education.

Q: So when you think about the future, what makes you most fearful, and what makes you most hopeful?

A: What makes me most fearful is that this country has almost a psychopathic blind spot to its own racism. Since there's no acknowledgment of the current ills that exist, there's been no accountability. And since there's been no accountability, there's been no transformation. So that makes me fearful because the things that happened to Eric Garner and Tamir Rice — we will continue to demonize the victim like we did when black people were lynched, and people sold tickets to lynchings and brought their children, and took pictures, and cut off our body parts and put them on their china cabinet. And somehow said, 'That nigger deserved it.'

In my mind, we haven't changed as a country. So the fear is that we are not willing to face our evil and change it.

What makes me hopeful is the multiracial coalition that we are building with millions of people in this country. Because there are White people that don't want to live in a racist society. There are White people who want a world where our children can play together. That want a world where we can benefit from each other's brilliance, each other's cultures. So we say there's more of us than there are of those that hate us.

To get there, though, we need to acknowledge the racism on the left *and* the right. And on the left, we're very arrogant.

I got into it with a guy once. I don't know if this guy will ever speak to me again, but he thought he was so "progressive," and he was as racist as the day is long. He kept talking about being tolerant of other cultures. And I told him, "I'm being tolerant of you right now. I don't want you to tolerate me. I don't need you to tolerate me. I'm not a bump on your arm. I'm not a wart. But listen to yourself.

Don't look at racism like a thought. Look at it like a virus that every American is infected with. You must live your life trying to eradicate that virus from your body. Every day, consciously.

That's how we have to approach it.

The Community:

Mr. Margon's Food Systems Class (New York, New York)

On a recent June morning in New York City, on the day before state Regents exams, fifteen-year-old America stirs a caramel sauce on a portable cooktop in a science lab on the fourth floor of her public high school.

She's there for Food Systems, an elective that's taught by a member of her school's English department, Andrew Margon. Tomorrow is the culminating event of the class, something Margon calls the Mindful Meal, a three-course menu designed and prepared entirely by the students to embody what they have learned about food systems, monoculture, and the patterns of global power that get manifested in the food we eat.

That means today is about final meal prep — and America is on sauce duty.

"How much butter did you put in this?" Mr. Margon asks while she stirs.

"I can't really tell, Mister, because of all this foam," she says, a pair of headphones dangling from her ears.

"It's OK, I think," he replies. "It's going to cook down, so keep stirring."

All around the room, while cooktops sizzle on tables that were not designed for their current task, the students navigate around the unavoidable leftovers of the American public school system: Earth Science textbooks, old hall passes, hole punchers, and piles upon piles of paper — rubrics, quizzes, permission slips, scrap.

Nearby, Mr. Margon has turned a former darkroom crowded with larger anachronisms into a makeshift storage closet. Alongside decades-old TVs, VCRs, and microscopes, there are now buckets of onions. Olive oil. Vinegar and rubber gloves. Cookware and a box of egg timers. Some Costco-sized cinnamon. A rotting lime.

While one student searches through the closet's contents for a table pan, others grate cheese, chop apples, or crack open eggs.

Two boys discover a surprise in one of them: a fertilized embryo

"We killed a bird, bro."

Mr. Margon stops briefly to appreciate the rarity of what has just happened, and then resumes surfing between the groups, offering advice, encouragement, or a gentle rebuke.

"Cindy! Stop eating the ingredients!"

"Guys! Easy on the cheese!"

As he speaks, Mr. Margon extends the full length of his tall, slim frame to periscope his head around the room like a prairie dog — alert and aware As he does, sunlight filters through the iron bars on the room's tall vertical windows, while voices mix with the steady whir of the building's aged air conditioning.

Meanwhile, America's sauce has gotten chunky.

"You used too much sugar and not enough water," he explains. "Take some on the spoon, like this, and then use it to work the sugar that's hardening off the sides of the pan."

As he moves on, America confesses that this class is her favorite. "I can't think of anything more practical," she says. "Like, yeah I messed up just now. But it's fixable. And anyway you can't go around eating fast food for the rest of your life."

Moments later the bell rings, and America and her classmates rush off and out. As they do, Mr. Margon picks up a spoon and resumes the effort to recapture the right balance of her sauce.

The halls his students travel through would be familiar to almost any American, from any era, and any part of the country. They are wide and dark — horizontal stacks of concrete cinder block as far as the eye can see, with hardly any windows and the occasional promotional poster. All the bathrooms are locked, and the labels on some of the doorways feel like flashbacks to a bygone era — Electrical Room. Compressor Room. Book Room.

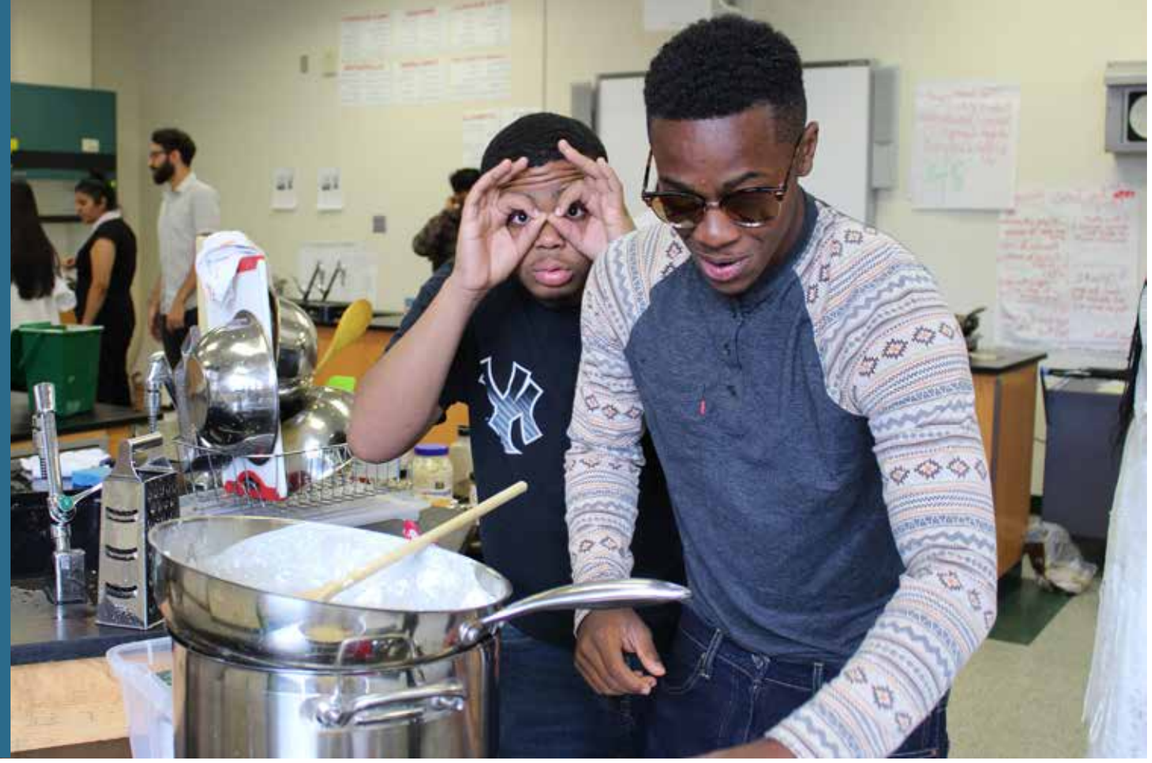
The language of our industrial past.

During passing periods, despite the width of the hallways, they are still overcrowded enough to force the students into two long lines that shuffle along in opposite directions — two human ant trails, beating divergent paths.

Although it's his ninth year teaching, this is Mr. Margon's fourth school. His career began at a No Excuses charter school in the Bedford Stuyvesant section of Brooklyn. "There was a constant emphasis on socializing the kids to sit still, follow instructions, and pay attention," he explained as his next class of students filed in. "I came to feel pretty shitty about it as a teacher, but I also saw that a lot of my students' parents loved it."

Next came a K-8 neighborhood school in Brownsville. "I arrived thinking I would be the teacher who would set up the school garden, and work in a greater appreciation for the nearby public parks. Then I started the job and felt so overwhelmed by the day-to-day instruction that it became about just basic survival."

In his time at the school, however — and due largely to a helpful colleague who had taught at that school (and lived in that community) for decades — Margon came to understand something fundamental about American public education.



“That school taught me about the pervasiveness of structural racism in America; systemic inequality was the main reason that school was so challenging.

Every school needs a plethora of counselors, and every kid needs adult support that is highly *skilled*. Yet here I was, an inexperienced teacher, teaching in a setting where the most experienced teachers needed to be. And even if I had been more experienced, there are just a lot of kids in this city that need more support than any one teacher can provide.”

From there, Margon, a Brooklyn native, went to teach at a brand new school in the Bronx. It was, on paper at least, precisely the sort of innovative environment he’d been searching for. To prioritize the social and emotional needs of the students, the schedule allowed for 90 minutes of advisory time every day. By the time the students reached 11th grade, they would all have yearlong internships. And there was a deep and integrated focus on the arts. “We wanted to attract students who were passionate about self-expression and creativity,” he explained. “The goal was to help them channel those skills into meaningful adult lives. And the first year was amazing, even though it was also challenging. You had all this unstructured time with teenagers who were all bringing with them a lot of unexamined trauma. But we were clear that the center of our school would be based on those meaningful relationships, and that we would build on those to do everything else.”

For a while, it worked — until the school’s two-year exemption from being held accountable to standardized reading and math scores expired. “Once our scores started up, everything fell apart. We were right to prioritize relationships the way we did. But we couldn’t overcome how far behind our kids were in basic skills when they arrived, or the lack of experience in our leadership. In the end, we were missing a lot of vital structures and processes, and it’s hard enough to make the ideal real even if you *do* have everything in place. We just weren’t up to the challenge.”

At his current school, however, Mr. Margon’s accrued experience and perspective had led to an increased role and responsibility. In addition to his regular teaching duties, Margon was his school’s Sustainability Coordinator — which allowed him to try and tee up for the larger community a series of essential questions.

“What *does* it mean to be more sustainable as a school? What *is* our civic duty? And what *are* the patterns of power that shape our common public world?

Those are the questions I want to help our students ask and answer — just as Maurice helped me.”

“Maurice” is Maurice Small, a food systems activist who lived and worked in Cleveland at a time when Margon was an Oberlin undergraduate completing a capstone seminar class for his American Studies major. A freelance farmer with a deep understanding of biological systems — from the personal to the pastoral — Maurice was connecting rural farmers with urban markets, and creating space for struggling youth to become a part of the journey.

For Margon, it was a life-changing experience. “Through Maurice, I learned how to connect to the earth for the first time, which I now see was a spiritual awakening as well. When I went back for my ten-year college reunion, I wept in my wife’s arms for forty minutes straight, out of gratitude. I knew I would be such a different person if I hadn’t had that experience.

“That’s what I’m trying to pass on.”

The next morning, Mr. Margon leaves his one-bedroom apartment in Harlem for the short subway ride downtown to his school. It’s sunny and brisk, and while he reviews his final notes for the day, the commuters around him all stare silently downward at their phones.

By the time he arrives at his first class, an English course with a high number of English Language learners, three kids are already outside the classroom, waiting to finish an exam they had started the previous day.

When the bell rings, just seven students are in their seats — it *is* the last day of instruction, after all. By 8:30, the number is up to sixteen, and by 8:45, it tops out at twenty-one. “These are not kids who cause trouble or become their own worst enemy,” Mr. Margon explains after the period’s dismissal bell rings.

“These are kids who are on a path to change the trajecto-ries of their lives and their families’ lives.”

One such student is Minna, a 10th grader from Macedonia who moved with her family to the States five years ago. “My home country is not that great,” she offers. “There’s a lot of poverty and pollution — and there’s nothing really to do there. My father is the manager of a restaurant now, and he’s planning to open his own soon. That’s why we’re here. That’s why I’m here.”

Minna’s story is illustrative of the types of students that fill the seats in Mr. Margon’s classes. Many of them are first-generation Americans; almost all of them are trailblazers in their families for one reason or another — the embodiment of hope in a different familial pattern of possibilities. And for Margon, this is precisely why a class like Food Systems is so important.

“Traditionally, we don’t think a lot about what we eat — it’s invisible to us. But the story of our food is actually the story of a much larger pattern of how our modern world has evolved, so I want my kids to wrestle with some fundamental questions:

How does food reflect identity and culture? How does it maintain culture? How has modern agriculture impacted our relationship to the earth? Who holds the power in our modern food system? And how can the food we eat be its own form of cultural resistance?”

To help students wrestle with those questions, Margon partnered with the Stone Barns Center for Food & Agriculture, an upstate New York-based non-profit that aspires to bring about a more “ecological-based food culture.” In part, his class is based on Stone Barn’s *Food Ed.* curriculum, a semester-length exploration of “food’s relationships to culture, the environment, and power.”

“What I see myself doing,” he told me, “is using food as a vehicle to learn about ourselves and where we come from, to connect to people around us, and to understand how we are connected to the earth.

In that sense, food is the ultimate teaching tool, because it’s the ultimate instrument of health. Many of my students live in ‘food deserts’ — areas of the city in which it is difficult to buy affordable or good-quality fresh food. So it’s vital that they understand the three central characteristics of a food system: the modern monoculture in farming, our increased dependence on chemicals, and our ongoing reliance on Concentrated Animal Feeding Operations, or CAFOs. Any of these things, by itself, would be bad. But taken together, what they represent is a food system that not only impacts the health of the natural environment, but also the health of the farm workers and the consumers — us.”

Michael Pollan makes the same point in his best-selling book about the food system, *The Omnivore’s Dilemma.* “A food chain is a system for passing calories on to species that lack the plant’s unique ability to synthesize them from sunlight. One of the themes of this book is that the industrial revolution of the food chain, dating to the close of World War II, has actually changed the fundamental rules of the game.

Industrial agriculture has supplanted a complete reliance on the sun for our calories with something new under the sun: a food chain that draws much of its energy from fossil fuels instead.

“There exists a fundamental tension between the logic of nature and the logic of human industry,” Pollan explains. “A great many of the health and environmental problems created by our food system owe to our attempts to oversimplify nature’s complexities, at both the growing and the eating ends of our food chain. At either end of any food chain you find a biological system — a patch of soil, a human body — and the health of one is connected — literally — to the health of the other.”

As America and her classmates return to the fourth floor to cook, however, any larger questions of food systems must take a backseat to the logistical questions of the meal itself.

“Alright, everyone. Let’s start washing hands and cutting strawberries!”

Nearby, massive pots of water begin to boil. One student begins to make whipped cream, while another searches for spices that can go into the pasta sauce.

“Yo, it’s good, right?” asks one confident sauceman, rhetorically. “I’m about to chef it up, bro. Y’all talking about my sauce, but I’m over here *finessing* it.”

As mealtime nears, a new wave of bodies arrives — both teachers bearing the joyful expression of having just completed their last class of the year, and students following either a friend’s invitation or the olfactory alert that is now wafting all through the halls.

Minutes later, the students of Mr. Margon’s Food Systems class line the front of the room, and address the assembly.

“Hi guys,” America begins. “So basically we made fettuccine with broccoli and pastelitos with chicken, cheese and peppers all mixed up. We chose chicken because of what we learned about cows and CAFOs, and the crazy process of getting our beef. And we chose organic chicken, which is a much better way to go, and a much healthier environment for the chickens who aren’t passing on their health consequences to us.

It’s kind of crazy and ironic that people say food brings people together, but we *did* all grow together and, to be honest, even though we did a lot of the work it really rooted from Mr. Margon.”

As the room erupts in applause, Mr. Margon smiles modestly from the side, his hands in his pockets. It’s just one day, and as I watch his reaction I’m reminded how impossible it is to know which aspects of any class will truly stick, and which, like the piles of paper around the room or the rusting microscopes in the storage closet, will merely get discarded and forgotten.

But as the teachers and students line up to serve themselves a plate of food at this mindful meal, with Nas’s *If I Ruled the World* playing over an ancient boombox (“We’ll walk right up to the su-un, hand in hand”), it’s clear that what Mr. Margon has done is all that any of us can do — intentionally craft a space that invites others to be more aware, present, connected, and informed.

Different ideas and experiences will always land to different degrees with different people, whether it’s a poem, a math problem, or a recipe for fettuccine alfredo.

The work is to orient people to the patterns that make up their lives and circumstances, knowing that what we all must ultimately gain access to is a clearer grasp of our own elusive and ever-changing sense of self, and where and how we fit, and what and why the world is what it is.

So we can make it better.

With urgent patience.

One day — and one person — at a time.

NOW WHAT?

Inquiry Seeds for Patterns

Living systems are attracted to wholeness and order, and their pattern of organization is a self-generating network. Consequently, coherent system patterns emerge over time through repeated configurations of relationships between all the elements of the system. This is what gives the system its shape, form, and unique culture and characteristics.

Over time, embedded and reinforced patterns of behavior create the system's norms, which are very difficult to change. And although a system's patterns are not visible, they are discernable and can be mapped — in ways that reveal to us what we have either intentionally or unintentionally created as a living system (and a living school).

me

ASK: What language do you use to describe yourself — both who and how you are? To what extent are these words aligned with the way you wish to show up in the world? To what extent are they misaligned?

we

PLAY the metaphor game, borrowed from our friends at Leadership+Design.

Step 1: Each participant draws a picture representing your learning community in symbolic form (e.g., "Our school is like an all-you-can-eat buffet… where you can also order in delivery," "Our school is like a rotary phone," etc.).

Step 2: Each person shares her metaphor and explains its deeper meaning. For example, the artist might start by saying, "Our community is like an all-you-can-eat buffet… where you can also order in delivery, because we try to be everything to everyone and we never say no to families, no matter what the cost."

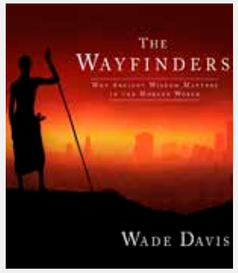
Step 3: The rest of the group further unpacks the metaphor with a "Yes, and…" statement. For example, "Yes, and we don't have a standard way of counting the calories or other nutritional values of the foods in the buffet."

Step 4: After everyone has shared their metaphor, create a list of the patterns that have emerged. What has become clear to you? What implications does it have for your work going forward?

VISIT another school. Gaining outside perspective on someone else's organization always helps us see our own through fresh eyes. Find a day when you can be a silent observer in someone else's workspace. What patterns do you notice about the ways people work, or move, or interact, or collaborate? How are these patterns similar or different from your own? In what ways are they preferable or not preferable? And what implications do your observations have for your own work going forward?

CREATE an observation questionnaire that would enable participants to name the patterns, and gather the insights, about how your living system works in practice; give them permission to go wherever they choose and to speak with whomever they choose. What language did the external observers use to describe your culture and ways of working and being together that they saw? What did you learn and what might you want to change? Why?

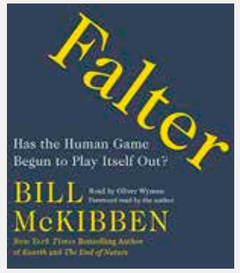
GO DEEPER



The Wayfinders: Why Ancient Wisdom Matters in the Modern World

Wade Davis

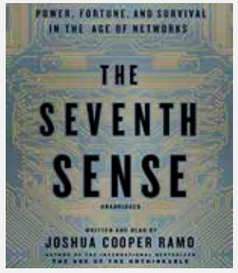
Every culture is a unique answer to a fundamental question: What does it mean to be human and alive? Anthropologist and National Geographic Explorer-in-Residence Wade Davis leads us on a thrilling journey to celebrate the wisdom of the world's indigenous cultures.



Falter: Has the Human Game Begun to Play Itself Out?

Bill McKibben

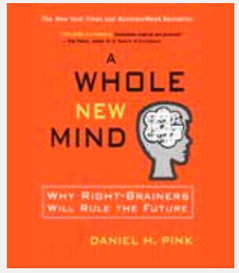
Thirty years ago, Bill McKibben wrote *The End of Nature,* the first book that alerted us to the dangers of climate change. *Falter* is a new call to arms, to save not only our planet but our very souls as well.



The Seventh Sense: Power, Fortune and Survival in the Age of Networks

Joshua Cooper Ramo

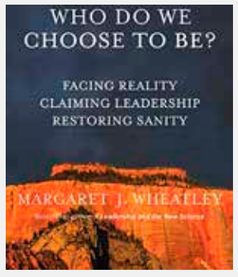
The Seventh Sense is the story of what all of today's successful figures see and feel: the forces that are invisible to most of us but explain everything from explosive technological change to uneasy political ripples. The secret to power now is understanding our new age of networks.



A Whole New Mind: Why Right-Brainers Will Rule the Future

Daniel Pink

Drawing on research from around the advanced world, Daniel Pink outlines six fundamentally human abilities that are essential for professional success and personal fulfillment — and reveals how to master them.



Who Do We Choose to Be? Facing Reality, Claiming Leadership, Restoring Sanity

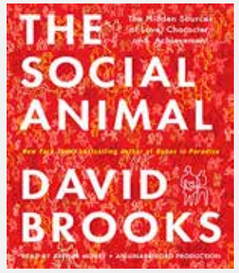
Margaret Wheatley

Who Do We Choose to Be? is a book that offers a path for leaders to engage wisely with the destructive dynamics of this time that manifest at every level, from individual to organizational to global. We enter the path by facing reality, wanting to see with clarity and discernment where we are and how we got here.

Humans of New York

Brandon Stanton

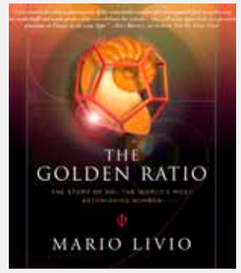
Humans of New York is the book inspired by the blog. With four hundred color photos, including exclusive portraits and all-new stories, Humans of New York is a stunning collection of images that showcases the outsized personalities of New York.



The Social Animal: The Hidden Sources of Love, Character and Achievement

David Brooks

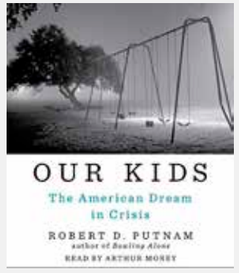
This is the story of how success happens, told through the lives of one composite American couple, Harold and Erica—how they grow, push forward, are pulled back, fail, and succeed. Distilling a vast array of information into these two vividly realized characters, Brooks illustrates a fundamental new understanding of human nature.



The Golden Ratio: The Story of Phi, the World's Most Astonishing Number

Mario Livio

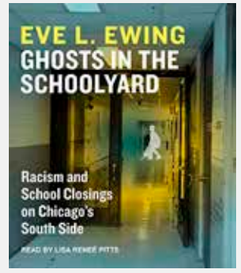
A captivating journey through art & architecture, botany & biology, physics & mathematics. It tells the human story of numerous phi-fixated individuals, including the followers of Pythagoras who believed that this proportion revealed the hand of God, and such masters of the modern world as Goethe, Cezanne, Bartok, and physicist Roger Penrose.



Our Kids: The American Dream in Crisis

Robert Putnam

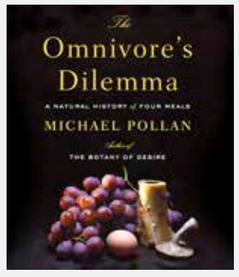
It's the American dream: get a good education, work hard, buy a house, and achieve prosperity and success. Now this central tenet of the American dream seems no longer true or, at the least, much less true than it was. Robert Putnam offers a personal but also authoritative look at this new American crisis.



Ghosts in the Schoolyard: Racism & School Closings on Chicago's South Side

Eve Ewing

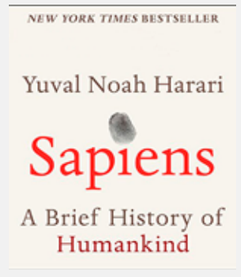
Eve L. Ewing knows Chicago Public Schools from the inside: as a student, then a teacher, and now a scholar who studies them. And that perspective has shown her that public schools are not buildings full of failures — they're an integral part of their neighborhoods, at the heart of their communities, storehouses of history and memory that bring people together.



The Omnivore's Dilemma: A Natural History of Four Meals

Michael Pollan

We are indeed what we eat, and what we eat remakes the world. A society of voracious and increasingly confused omnivores, we are just beginning to recognize the profound consequences of the simplest everyday food choices, both for ourselves and for the natural world.

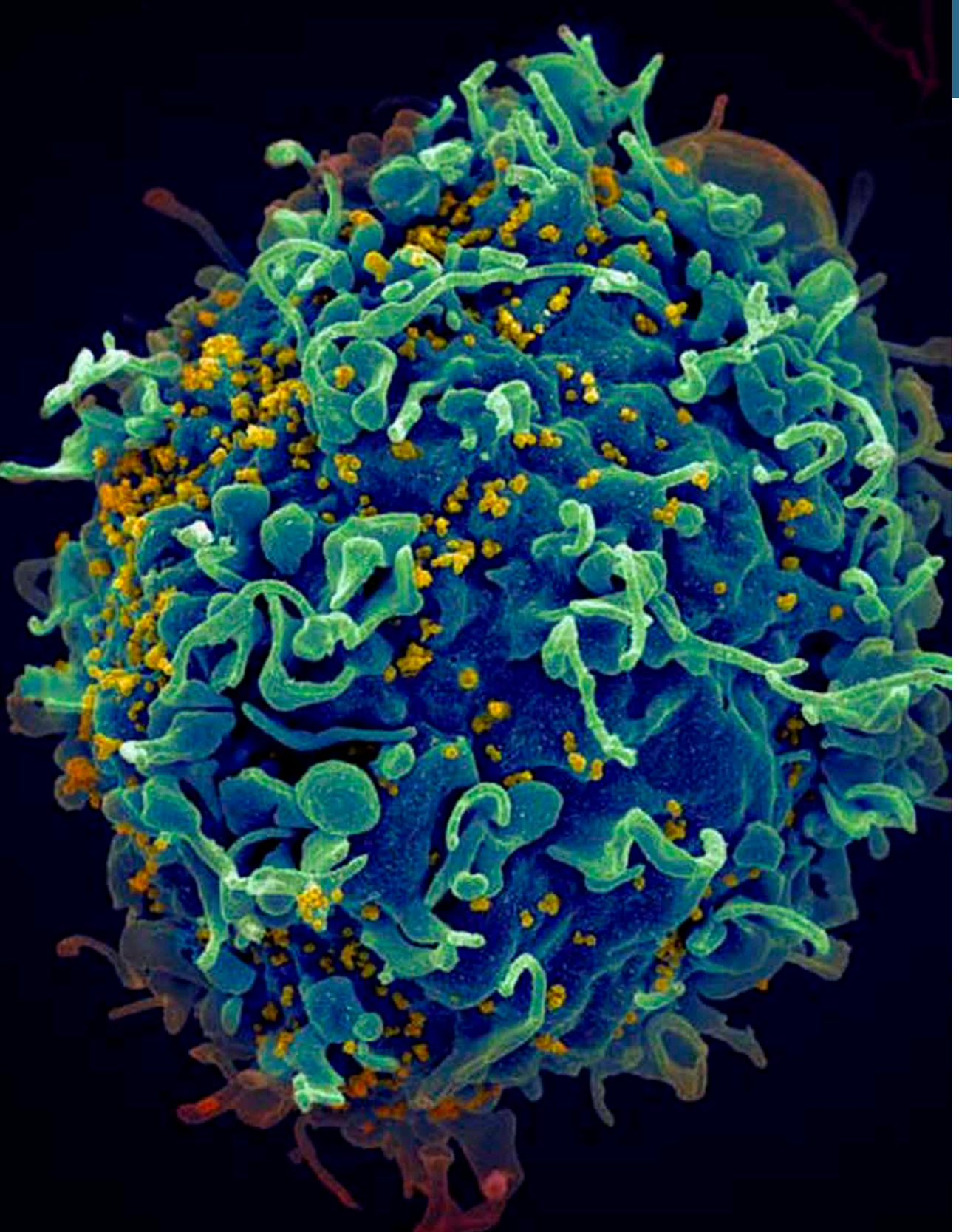


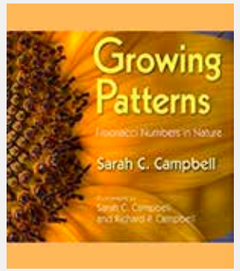
Sapiens: A Brief History of Humankind

Yuval Harari

One hundred thousand years ago, at least six different species of humans inhabited Earth. Yet today there is only one - Homo sapiens. What happened to the others? And what may happen to us?

GO YOUNGER

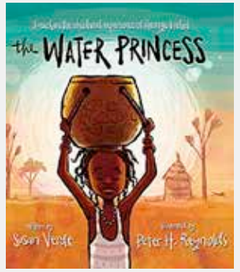




Growing Patterns: Fibonacci Numbers in Nature

Sarah C. Campbell

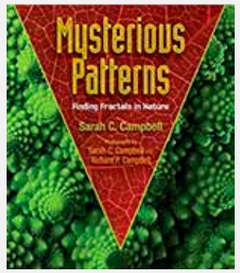
Sarah C. and Richard P. Campbell introduce the Fibonacci sequence through a series of stunning photographs in this ALA Notable Children's Book. Young readers will soon be seeing nature through new eyes, looking for Fibonacci numbers in daisies, pinecones, leaf patterns, seashells, and more.



The Water Princess

Susan Verde

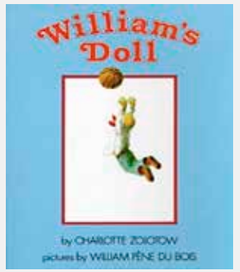
As a child in Burkina Faso, Africa, Georgie Badiel and the other girls in her village had to walk for miles each day to collect water. This vibrant, engaging picture book sheds light on this struggle that continues all over the world today, instilling hope for a future when all children will have access to clean drinking water.



Mysterious Patterns

Sarah C. Campbell

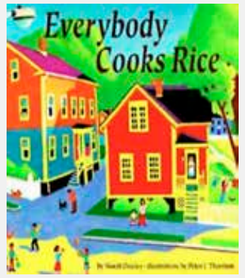
Nature's repeating patterns, better known as fractals, are beautiful, universal, and explain much about how things grow. Fractals can also be quantified mathematically. Here is an elegant introduction to fractals through examples that can be seen in parks, rivers, and our very own backyards.



William's Doll

Charlotte Zolotow

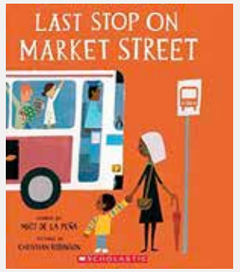
William's Doll has been welcomed as a springboard for discussion about gender roles and intolerance. A boy named William wants the forbidden — a doll. Everyone calls him names and tries to get him to play sports. Then one day someone really understands William's wish. A surprising ending shares an important lesson for us all.



Everybody Cooks Rice

Norah Dooley

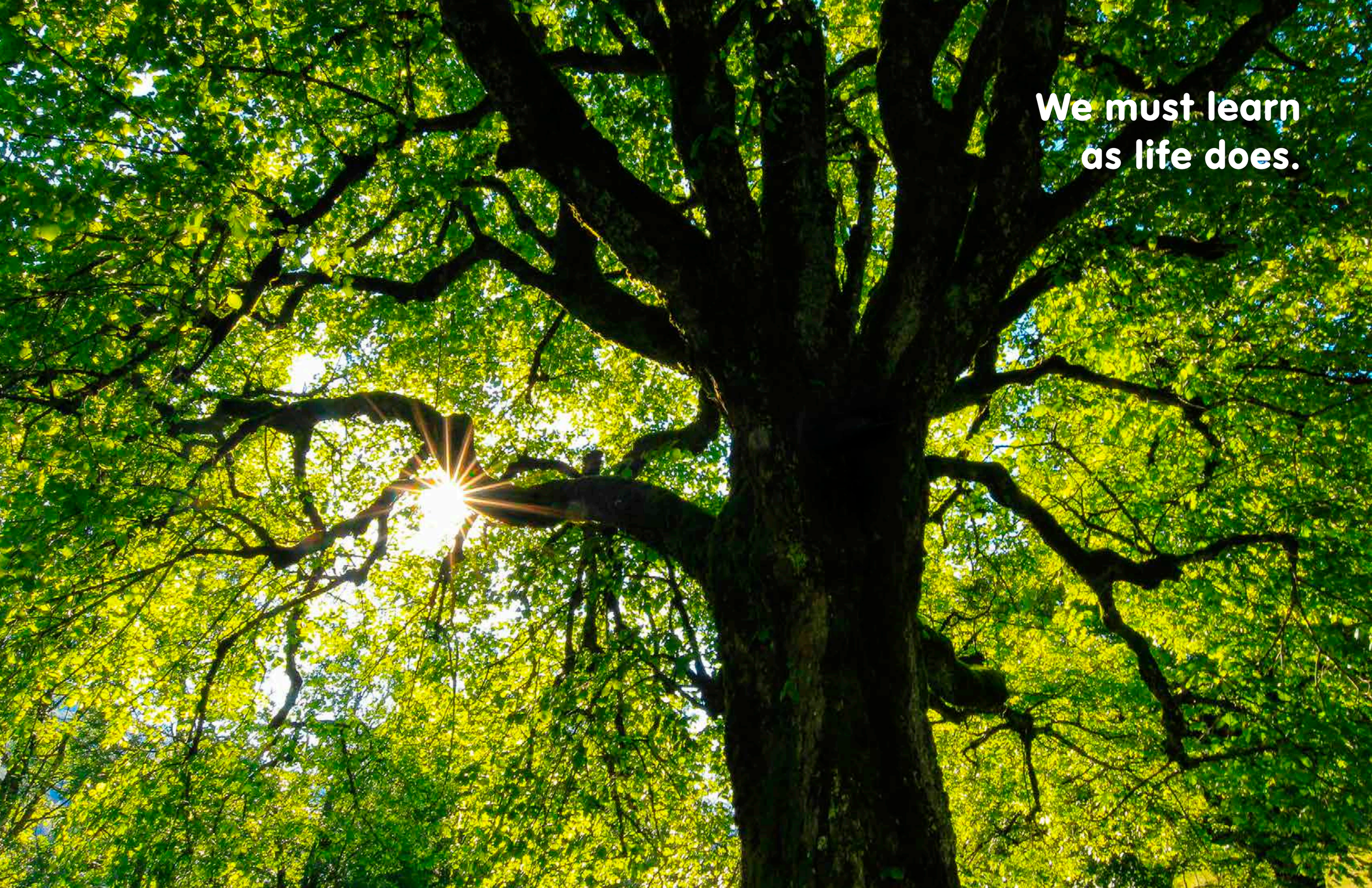
In this multicultural picture book, Carrie goes from one neighbor's house to the next looking for her brother, who is late for dinner. She discovers that although each family is from a different country, everyone makes a rice dish at dinnertime. Readers will enjoy trying the simple recipes that correspond to each family's unique rice dish.



Last Stop on Market Street

Matt de la Peña

Every Sunday after church, CJ and his grandma ride the bus across town. But today, CJ wonders why they don't own a car like his friend Colby, or have an iPod like the boys on the bus? How come they always have to get off in the dirty part of town? Each question is met with an encouraging answer from grandma, who helps him see the beauty in their routine and the world around them.


We must learn
as life does.

PROCESSES

HOW (&WHY) WE WORK

Cognition is the fundamental process of life.

Every living system is a learning system. How a living system works must be congruent with who it is and what it does.

In what ways, then, do we want our living systems to work — and how will we know when they're working?

The Question: *What's Working?*

As far as conundrums go, there aren't many more complex than the one that was facing South Africa back in 1991.

A year earlier, South African president F.W. de Klerk had ended Nelson Mandela's twenty-seven year prison sentence; begun legalizing every political party that opposed him; and set out in search of a way to negotiate a peaceful transfer from a racist past to a racially just future.

To help navigate such a landscape, de Klerk turned to an unlikely guide: Royal Dutch Shell, which for years had used the process of scenario planning — in which a set of carefully constructed, plausible stories are used to demonstrate different ways the future might unfold — to guide its own internal thinking.

Could the same process help a deeply divided nation envision its own possible futures, and contribute to creating a new reality in the land of apartheid?

As a member of the core facilitation team, Adam Kahane had his doubts. "Problems are tough because they are complex in three ways," he says. "They are *dynamically complex*, which means that cause and effect are far apart in space and time, and so are hard to grasp from firsthand experience. They are *generatively complex*, which means that they are unfolding in unfamiliar and unpredictable ways. And they are *socially complex*, which means that the people involved see things very differently, and so the problems become polarized and stuck."

The problem is that we can't solve complex problems unless we change the ways we talk and listen.

"Our most common way of talking is telling. And our most common way of listening is not listening: listening only to our own talking, not to others. But a complex problem can only be solved peacefully if the people who are part of the problem work together creatively to understand their situation and to improve it."

And so, over the better part of a year, Kahane and his team worked with a diverse and representative group of twenty-two South Africans. They "breathed in" — observing the world as broadly and carefully as they could, and looking for

patterns across what they saw and heard. They "breathed out" — debating with one another what they were noticing, and what it augured. They talked about all the things that *might* happen, as opposed merely to what they each wanted to see. And then, eventually, they shared these observations with their fellow countrymen and women in the form of four simple stories — one of which, *Flight of the Flamingos*, imagined a future in which the conditions were created to allow everyone, White and Black, to rise slowly and together.

In a pre-Internet age, the team relied on analog means to share the stories, from inserting a 25-page booklet into South Africa's national newspaper to conducting more than 100 workshops across the country.

But because the stories were simple, compelling, and illustrative of the country's possible paths, they provided a common language for the shared aspirations of a deeply divided people.

And, despite its myriad problems since, South Africa's transition of power was indeed peaceful, hopeful, and galvanizing.

"The way we talk and listen expresses our relationship with the world," Kahane explained. Consequently, the essence of the scenario process in South Africa was "that a small group of deeply committed leaders, representing a cross-section of a society that the whole world considered irretrievably stuck, had sat down together to talk broadly and profoundly about what was going on and what should be done. More than that, they had not talked about what other people should do to advance some parochial agenda, but what they and their colleagues and their fellow citizens had to do in order to create a better future for everybody.

They saw themselves as part of — not apart from — the problem they were trying to solve.

They believed they could actively shape their future. And they understood that one reason the future cannot be predicted is because it can be influenced.

"If we want to change the systems we are a part of," Kahane concluded, "we must first see and change ourselves."

This, too, is the lesson of the natural world.

"There is an inherent exuberance and flow to the processes by which living systems continuously recreate and sustain themselves," explains Stephanie Pace Marshall, who modeled the Illinois Math & Sciences Academy on the seven principles of living systems. "They are neither linear nor formulaic. Life is simply free to be and become. Processes are both the creative

(novelty-generating) and self-regulatory (order-creating) ways our systems explore possibilities, measure and monitor achievement, generate and transmit information, and get their work done. They are the known and observable behaviors, observations and rules by which a system achieves and advances its learning purpose and objectives."

Biologist Merlin Sheldrake agrees. "All life forms are in fact processes, not things. The 'you' of five years ago was made from different stuff than the 'you' of today. Nature is an event that never stops."

For this reason, researchers like Sheldrake use the word holobiont (from the Greek word holos, which means 'whole') to refer to an assemblage of different organisms that behaves as a unit. And the search for new words like this is not a trivial one, Sheldrake argues, because "if we only have words that describe neatly bounded autonomous individuals, it is easy to think they actually exist."

Margaret Wheatley puts it another way. "*Who* the organization is (its identity) is inextricably connected to *how* it is (its processes of learning and change)."

How, then, should we want our living systems to work — and how will we know when they are?

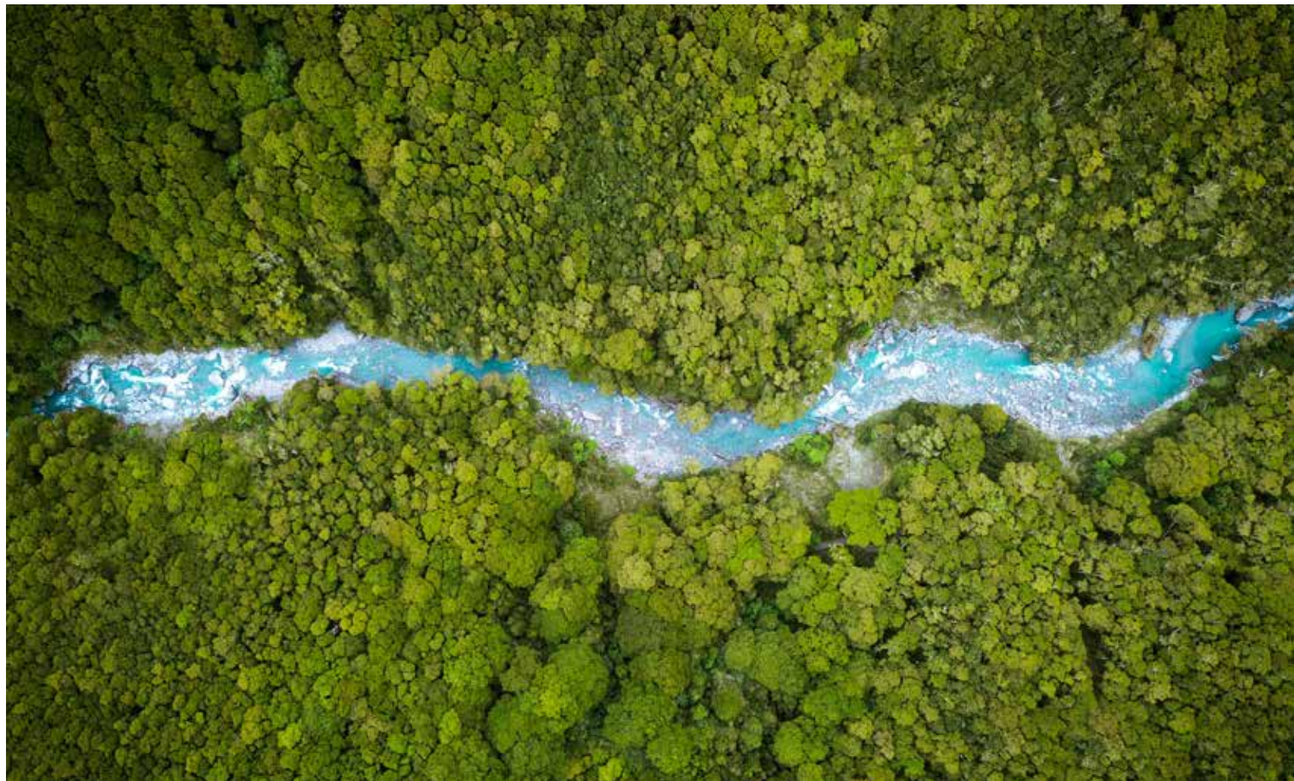
By this point, we hope it has become clear that the work to create a living system must always begin with three fundamental seeds of growth: establishing a clear sense of individual and collective *identity*; facilitating an open exchange of any and all relevant *information;* and supporting a deep investment in *relationships*. These conditions are what allow us to begin planting seeds of change, through the property of *emergence*.

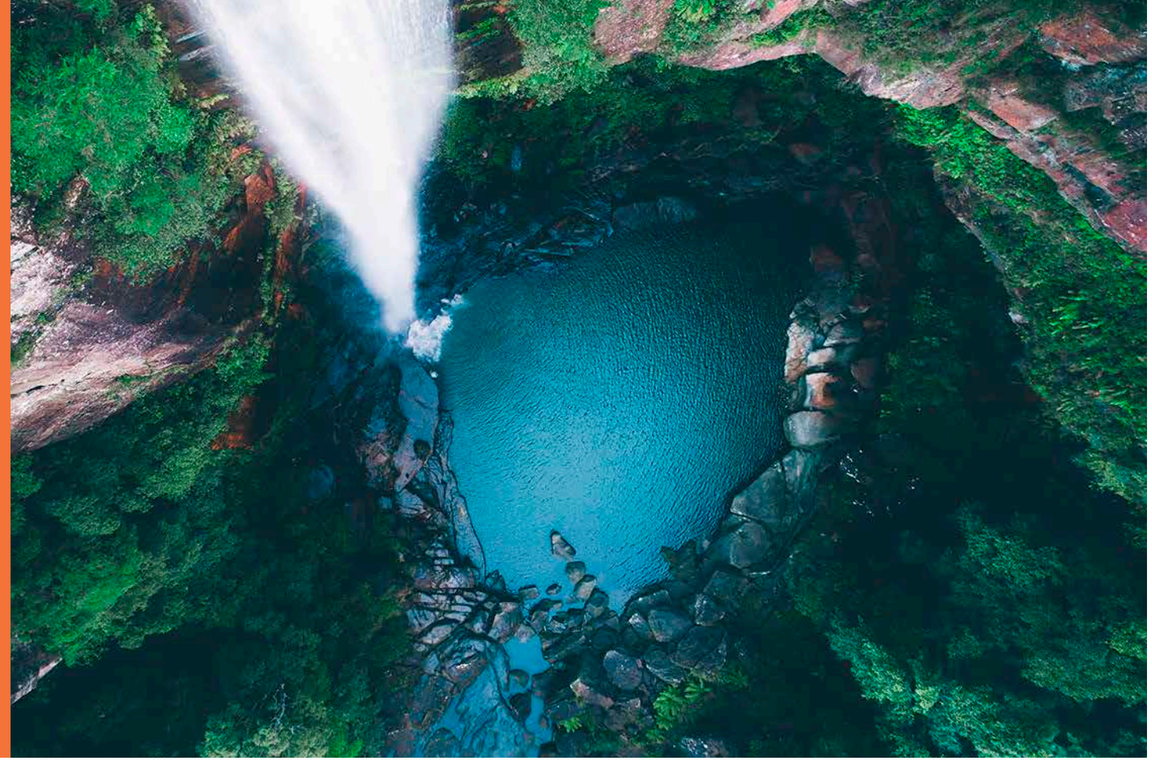
To remain vital and alive, however, a living system must also design its own seeds for regeneration: it must notice the *patterns* that emerge over time; it must implement its own *processes* for creation; and it must erect its own *structures* for operation — although not in the way we typically think about such things.

In a living system, for example — as opposed to a traditional hierarchy— structures are the *last* thing you add, instead of the first. Order, not control, is what marks systemwide health. And the relationship between the *processes* in a system and the *purpose* that animates it is so interwoven that, in the words of legendary activist Saul Alinsky, "it is impossible to mark where one leaves off and the other begins, or which is which. Process is really purpose."

In this sense, the central design challenge of anyone who hopes to build a living organization is the same as the one faced by Mother Nature: treating change as an essential source of creativity — not something to be resisted or feared.

"One of the most important roles we can play individually and collectively is to create an opening, or to 'listen' to the implicate order unfolding, and then to create dreams, visions, and stories that we sense at our center want to happen," writes Joseph Jaworski, the man who led Shell's scenario planning in South Africa.





That's what the processes of a living system should be designed to facilitate.

When they are, as evolutionary biologist Elisabet Sahtouris explains, a spirit of interdependence takes root, which is the mark of a mature living system. "Young immature species are the ones that grab as much territory and resources as they can," she explains, "multiplying as fast as they can. But the process of negotiations with other species matures them, thus maturing entire ecosystems.

Rainforests that have evolved over millions of years are a good example. No species is in charge — the system's leadership is distributed among all species, all knowing their part in the dance, all cooperating in mutual consistency."

Indeed, as you'll see in the stories that follow, adopting processes that are both emergent and egalitarian is what helps form a truly *ecological* culture.

In the science of slime mold, we see one of Nature's most remarkable adaptive processes: a single-celled organism and soil-dwelling amoeba that, when food is scarce, literally combines forces with its neighbors to become a multicellular, moving mass.

In the art of Andy Goldsworthy, we see sculptures that are always designed to be ephemeral as a reminder of the inevitability of decay, and the temporariness of all that is truly alive.

In the words of climate activist Greta Thunberg, we hear an urgent plea for a different set of processes that can guide life on earth and restore a balance between us and our fellow inhabitants.

And in the work of Crosstown High in Memphis, we see what it looks and feels like when that thing we call "school," and the processes by which we learn, are meant to occur as much outside the building as inside any classroom.

In each instance, what we find is evidence of the creative energy that gets unleashed when process and purpose are aligned. As psychology professor Mihaly Csikszentmihalyi explains in his classic book, *Flow*, "The optimal state of inner experience is one in which there is *order in consciousness*."

And yet, as Paolo Freire pointed out, our work to find the processes that can provide a sense of order — to the world, and in ourselves — is never done.

"I think that one of the best ways for us to work as human beings is not only to know that we are uncompleted beings but to *assume* the incompleteness.

"We have to become inserted in a permanent process of searching," Freire writes. "It means that keeping curiosity is absolutely indispensable for us to continue to be or to become."

The Science: Slime Mold

What are the processes by which we humans shape the flow of life on earth?

Is there a better way — and if so, who (or what) can be our teacher?

In a surprising 2012 study, a computer scientist from Queens University demonstrated there *is* something valuable we can learn — and that our best teacher may reside not in an Ivory Tower, but on the forest floor. "We are always searching for the best way to connect people," Selim Akl explained. "Yet here is this lowly species that can do it."

This is the science of slime mold, a brainless, single-celled organism that can nonetheless solve complex problems — from navigating a maze to laying out a distribution network as efficient as the Tokyo railway system.

In fact, one particular strain of slime mold — there are more than 900 — was recently appointed as Hampshire College's first "nonhuman resident scholar," complete with its own office and faculty webpage, so that it could "use the problem-solving skills it acquired over a billion years of evolution to tackle policy problems."

Seriously.

So what makes slime molds worthy of not just serious scientific study, but also the most unusual university appointment in history?

For starters, it has to do with their ability to literally *break apart and come together.*

Most of the time, slime mold is a singular, single-celled organism. When two or more molds meet, however — and/or when food is scarce — they can fuse together into a collective body, which is called a *plasmodium.*

Starving amoebas work in tandem, signaling to each other to join together and form what biology professor Frederick Spiegel calls a "moving sausage." They then spread out in a fractal pattern to search for something beneficial. If they find it, they'll

reinforce the pathway. If they don't, they'll search for a new path.

As Brian Resnick reported in a 2018 article for Vox, when scientists model metropolitan areas in this manner, with the food representing centers of dense populations, slime mold can recreate in just a few hours a complex system that human engineers would need years to map.

But the slime molds aren't just good at designing mass transit. "Put them in a maze and they'll trace the shortest possible map to the exit," Resnick wrote. They also know how to teach one another, such that if you take a piece of slime mold that has solved a maze and add it to another that hasn't, the second slime mold will finish the maze faster. "And remember," Resnick reminds us," they do this all without a brain, without a single neuron. Whatever mechanism allows slime mold to solve these problems, it's evolved in a manner different from us. And since slime mold has been on Earth for approximately a billion years (compared to our paltry 200,000), it's a pretty useful form of intelligence and worthy of our respect, perhaps even our imitation."

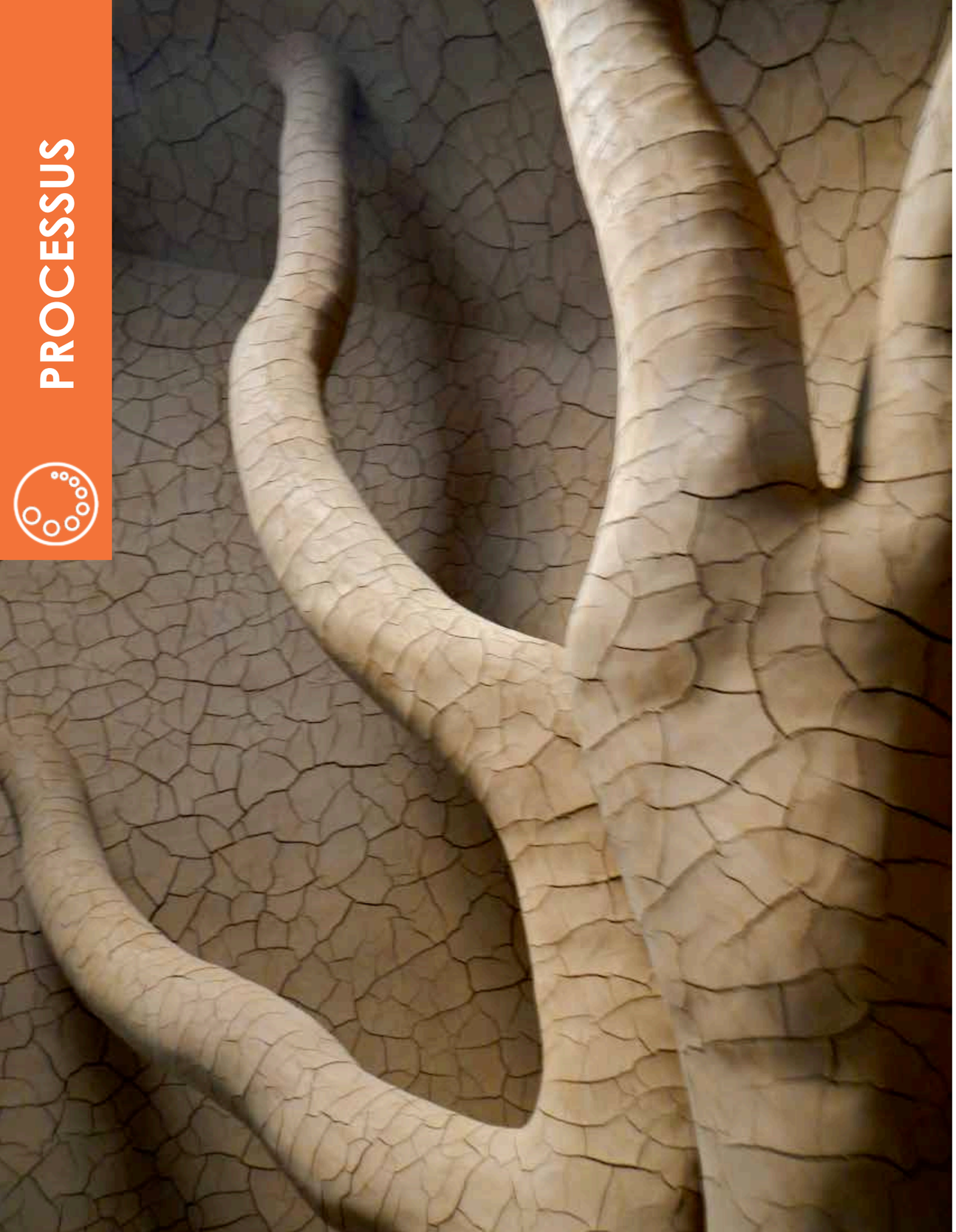
Herein lies the key to understanding the slime mold's effectiveness at problem-solving: Call it the wisdom of the multicellular crowd.

"Like the slime mold," says Megan Dobro, a molecular biologist at Hampshire, "we assess our environment and make decisions. Slime mold doesn't have [human] bias. It doesn't have politics. it's just choosing what's good for the whole. So we're not special then; it's just a little bit more complicated for us."

Some neuroscientists worry that this sort of talk will devalue the specialness we attribute to the processes of our own brains. But biologist Michael Levin is not convinced.

"Brains are great," he says, "but we have to remember where they came from. Neurons evolved from non-neural cells, they did not magically appear."

"It's not about what you're made of, it's about how you compute."



The Art: Andy Goldsworthy

What lives here? Who *lived* here? And how am I connected to this place?

For Andy Goldsworthy, a British sculptor whose works are always made with nature's available materials — a bright line of sheep's wool running along the top of an old stone fence; a streak of yellow leaves winding down a city stairwell; a spiral of branches that stretch across a running stream —

these are the questions art is meant to invite us to (re) consider, for the purpose of reminding us of the inherent wisdom of *place,* and of the relentless cycle of change — our world's only constant.

"I am not talking about sculpture as some kind of adventure playground or saying that the works even need to be touched," he explains. "Rather it's about a more profound and deeper relationship that I hope people can form within the works, without which, some would become dormant.

"By and large, my projects do not result in fixed, self-contained objects made for posterity. They embrace the unknown. By its very nature, the future can be precarious, and like anything alive, projects need to be nurtured to have a good life."

Indeed, even the life of a "permanent" Goldsworthy sculpture is, by design, ephemeral.

All that is living is bound to decay.

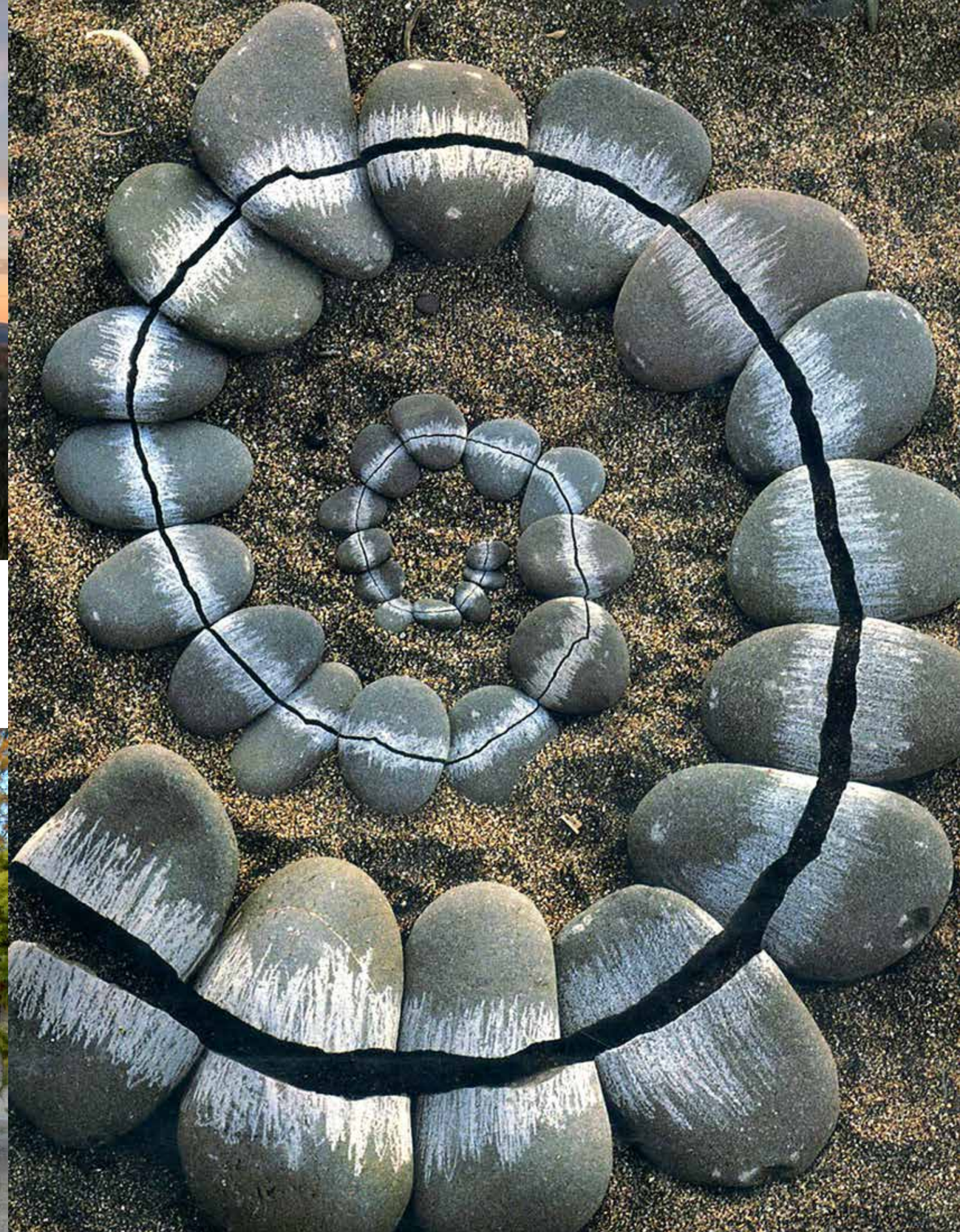
The tide will reclaim whatever stands in its path.

The earth erodes, recycles, and reconfigures.

“I hope that the parallel between trees and people growing up will be appreciated and that children today will remember standing at the base of the Spire as an open space when they perhaps return in seventy years and find it otherwise,” he says.

“The experience of it engenders feelings about change. Art has an amazing ability to open your eyes to what’s around you.

“Maybe that’s what art is. It just takes you somewhere you’ve never thought of going, whether it’s in the mind or the world."



The Practitioner: Greta Thunberg

In 2014, as an eleven-year-old, Greta Thunberg watched a video in her elementary school class about the effects of the climate crisis — and fell into a deep and long depression. "I couldn't understand how that could exist, that existential threat, and yet we didn't prioritize it," she says. "I was maybe in a bit of denial, like, 'That can't be happening, because if that were happening, then the politicians would be taking care of it.'"

In 2018, she took her concerns to the politicians directly by staging a solitary protest in front of the Swedish Parliament, armed with nothing more than a sign that read "School Strike for Climate."

By early September, enough people had joined Thunberg's climate strike in Stockholm that she announced she would continue protesting every Friday until Sweden aligned with the Paris Agreement, thus giving birth to the "Fridays for Future" movement.

By the end of 2018, tens of thousands of students across Europe began skipping school on Fridays to protest their own leaders' inaction. And a year later, she was known by millions, TIME's Person of the Year, and one of the many inspiring young activists whose fierce refusal to stand idly by has made them voices of our collective conscience — at a time of unconscionable inattention.

(The following is a partial transcript of the speech Ms. Thunberg gave to British MPs at the Houses of Parliament in April 2019.)

My name is Greta Thunberg. I am 16 years old. I come from Sweden. And I speak on behalf of future generations.

In the year 2030 I will be 26 years old. My little sister Beata will be 23. Just like many of your own children or grandchildren. That is a great age, we have been told. When you have all of your life ahead of you. But I am not so sure it will be that great for us.

I was fortunate to be born in a time and place where everyone told us to dream big; I could become whatever I wanted to. I could live wherever I wanted to. People like me had everything we needed and more. Things our grandparents could not even dream of. We had everything we could ever wish for and yet now we may have nothing.

Now we probably don't even have a future any more.

Because that future was sold so that a small number of people could make unimaginable amounts of money. It was stolen from us every time you said that the sky was the limit, and that you only live once.

Around the year 2030, we will be in a position where we set off an irreversible chain reaction beyond

human control, that will most likely lead to the end of our civilisation as we know it. That is unless in that time, permanent and unprecedented changes in all aspects of society have taken place, including a reduction of CO2 emissions by at least 50%.

We must also bear in mind that these are just calculations. Estimations. That means that these "points of no return" may occur a bit sooner or later than 2030. No one can know for sure. We can, however, be certain that they will occur approximately in these timeframes, because these calculations are not opinions or wild guesses.

These projections are backed up by scientific facts, concluded by all nations through the IPCC. Nearly every single major national scientific body around the world unreservedly supports the work and findings of the IPCC.

People always tell me and the other millions of school strikers that we should be proud of ourselves for what we have accomplished. But the only thing that we need to look at is the emission curve. And I'm sorry, but it's still rising. That curve is the only thing we should look at.

Every time we make a decision we should ask ourselves; how will this decision affect that curve? We should no longer measure our wealth and success in the graph that shows economic growth, but in the curve that shows the emissions of greenhouse gases.

We should no longer only ask: "Have we got enough money to go through with this?" but also: "Have we got enough of the carbon budget to spare to go through with this?" That should and must become the centre of our new currency.

Many people say that we don't have any solutions to the climate crisis. And they are right. Because how could we? How do you "solve" the greatest crisis that humanity has ever faced? How do you "solve" a war? How do you "solve" going to the moon for the first time? How do you "solve" inventing new inventions?

The climate crisis is both the easiest and the hardest issue we have ever faced. The easiest because we know what we must do. We must stop the emissions of greenhouse gases. The hardest because our current economics are still totally dependent on burning fossil fuels, and thereby destroying ecosystems in order to create everlasting economic growth.

"So, exactly how do we solve that?" you ask us — the schoolchildren striking for the climate.

And we say: "No one knows for sure. But we have to stop burning fossil fuels and restore nature and many other things that we may not have quite figured out yet."

Then you say: "That's not an answer!"

So we say: "We have to start treating the crisis like a crisis – and act even if we don't have all the solutions."

"That's still not an answer," you say.

Then we start talking about circular economy and rewilding nature and the need for a just transition. Then you don't understand what we are talking about.

We say that all those solutions needed are not known to anyone and therefore we must unite behind the science and find them together along the way. But you do not listen to that. Because those answers are for solving a crisis that most of you don't even fully understand. Or don't want to understand.

You don't listen to the science because you are only interested in solutions that will enable you to carry on like before. Like now. And those answers don't exist any more. Because you did not act in time.

Avoiding climate breakdown will require cathedral thinking. We must lay the foundation while

we may not know exactly how to build the ceiling.

Sometimes we just simply have to find a way. The moment we decide to fulfill something, we can do anything. And I'm sure that the moment we start behaving as if we were in an emergency, we can avoid climate and ecological catastrophe. Humans are very adaptable: we can still fix this. But the opportunity to do so will not last for long. We must start today. We have no more excuses.

We children are not sacrificing our education and our childhood for you to tell us what you consider is politically possible in the society that you have created.

We have not taken to the streets for you to take selfies with us, and tell us that you really admire what we do.

We children are doing this to wake the adults up.

We children are doing this for you to put your differences aside and start acting as you would in a crisis.

We children are doing this because we want our hopes and dreams back.

The Community: Crosstown High (Memphis, Tennessee)

For decades, before it became a blight on the city landscape, the massive Sears building in Memphis was a symbol of what the “Bluff City” might one day become.

Built during the Roaring Twenties, with a vivid art-deco exterior and more than one million square feet of space, the building was a monument to the Golden Era of retail — Amazon, before Amazon. It served as the parent company’s distribution center for the mid-South — a labyrinth of hoppers, runners, chutes and conveyor belts, and a beehive of activity in which trucks were loaded up on one side of the building, and trains on the other. But on weekends, it was the place Memphians would dress up to go shopping amid the din of a thousand footsteps, each floor a living museum of the things that filled the pages of their heavily dog-eared Sears catalogues — the “Dream Book” — in which Americans of all classes and colors imagined new lives and new possibilities.

Its scale and grandeur was a fitting development for a city that was becoming, through early musical pioneers like W.C. Handy, early recording studios like Sun, and early bacchanalian destinations like Beale Street, a cultural capital of the entire country.

And yet, over time, Memphis’s promise of a more desirable future gradually gave way to the weight of its undesirable past.

A century earlier, the Bluff City — so named for the land once known as the fourth Chickasaw Bluff, located on the Mississippi River at the edge of Tennessee’s southwestern tip — had been known as “the Charleston of the West” because of its dependence on cotton and slaves for economic growth. In the decades since, that legacy had extended across generations of Memphians via deeply entrenched citywide systems of race-based inequality.

When the United States Supreme Court tried to address the depth of the harm, in 1954, by ruling that segregated schools anywhere were an unconstitutional affront everywhere, the city of Memphis responded not by integrating, but by expanding east — towards its fleeing white residents, and away from its black ones. The result was a distended municipal footprint of more than three hundred square miles, larger than even New York City’s, yet with a total population more than twelve times smaller.

There were other efforts to course-correct. In 1972, a federal judge ordered citywide busing to help bring about more integrated schools, but that only sparked a second wave of white flight, and a doubling of private school enrollment. And then there was the global tragedy from four years earlier, in 1968, when the city’s mostly-black sanitation workers protested the death of two of their brethren, crushed to death by a malfunctioning truck, and the country’s preeminent civil rights activist, Dr. Martin Luther King Jr., came to show his support for their cause.

“We’ve got to give ourselves to this struggle until the end,” he told them the night before he was murdered on the balcony of the Lorraine Motel, setting off a chain reaction of nationwide conflagrations. “Nothing would be more tragic than to stop at this point in Memphis. We’ve got to see it through.”

How, though?

How do you provide integrated services to a segregated citizenry?

How do you confront past harms in ways that lead to actual healing?

And how do you set the conditions that can actually shrink the opportunity gaps between a city’s residents, and not widen them?

The short answer, in too many places, is that you can’t: privilege begets privilege. Poverty begets poverty. And the dollars will follow the (white) flight.

At least that‘s what happened in Memphis.

So when Sears decided to build a different flagship store, closer to the city’s relocated white center, the regal building at the intersection of Cleveland and Poplar Streets fell into disrepair.

Within ten years, the neighborhood had fallen off the map for most Memphians. And by the end of the twentieth century, the Sears building sagged like a soggy sarcophagus — too big to be imploded, and too blighted to spark anyone’s creative reimagining of what else it might become.

As any Memphian will tell you, this storyline is part of the city’s shared identity. “When things are good, my wife and I don’t talk about it much; they’re just good,” explained Todd Richardson, an art history professor and lifelong Memphian. “But when they’re bad, we talk about it a lot, and how to make things better. That’s like Memphis — we’ve been talking about how bad it is for so many years. We forget to talk about what’s good.”

That began to change in 2007, when a local artist and Richardson were asked by the derelict building’s new owners to offer their input on how it might be rehabilitated.

Richardson, a bespectacled dreamer with no development experience whatsoever, remembered feeling emboldened because of the impossibility of the request. “The building had become such an immovable symbol of what was wrong with Memphis,” he explained. “Because it was so big, no one could ever come up with an idea that could literally or figuratively fill the space. So we started having those ‘wouldn’t it be cool if …’ conversations that led to other things.

And what we started to realize is that we didn’t want to look at the building as a space to be filled, but as an opportunity to create a new neighborhood. And if that opportunity was to have a chance at succeeding, then the whole project had to use arts and culture as a catalyst for change.

“The biggest challenge was getting people to see beyond what they saw.”

So Richardson and his partners organized public concerts, sponsored fish frys, and staged poetry slams. They invited people to make art, wonder out loud, and wander the building’s abandoned hallways, again and again. And in time, a collective question emerged: What if the Sears building could become a city within the city, one in which the intersecting virtues of arts, education and wellness found equal footing?

And what if, at the center of that miniature city, there was that most familiar bedrock of any community’s shared destiny — a public school?

Much to the city's, and Richardson's, surprise, the idea started to take actual shape. Construction teams, intentionally and eclectically recruited so the project would both reflect and enlist Memphis's many communities, began saw-cutting through five miles of concrete, installing more than thirty miles of sprinkler piping, and repointing more than seven million bricks — enough to stretch all the way from Memphis to New Orleans. And students, parents, and educators from across the city began participating in community conversations of what a new school in an old building should actually look like, and be like, and do.

In time, after a total investment of $210 million, the building received the commitment of forty founding tenants — a mixture of arts, education and healthcare non-profits. And in 2017, a decade after the first 'what if's' were uttered, it re-opened as Crosstown Concourse, a "vertical urban village" in which 1,500 people would work, 400 would live, and an inaugural class of 150 freshmen would walk, bike, or ride their way to the city's newest public high school: Crosstown High. Home of the Explorers.

Ginger Spickler was there for Crosstown Concourse's opening day, just as she had been there for every step of Crosstown High's inaugural design. In fact, its arrival owed as much to her as any other Memphian — and its creation was a process that, for Spickler at least, had been years in the making.

Alert, intense, and astute, Spickler started paying close attention to the bevy of public and private school options in her county, nearly 400 in all, when her oldest son was still in diapers. Like many American cities, Memphis was awash in school choices, but what Spickler discovered, as she put it, was that

"if you wanted to choose another school than the one you were registered for, you had to know that system.

And up to this point in Memphis's history, that fact has overwhelmingly been to the benefit of the families who are well-informed."

So Spickler called school principals, visited school websites, and attended school open houses. What she learned confirmed her initial sense that her neighborhood school was the best fit for her family. She also learned how pervasively her city's unjust past was still shaping present-day conditions for its residents. "There are vast gaps in the educational experience kids in Memphis schools are getting," she explained, "sometimes even within single schools. One out of every three of our children is living in poverty, and we have a deep legacy, going back to past periods of white flight into either private schools or public 'optional' schools in which 'higher achieving' — read: more privileged — students receive better teachers, materials and opportunities, while our city's poorest children and families are all concentrated in the other schools, and in more traditional — read: less engaging and interesting — tracks.

It's like a storm cloud is stuck hovering over our heads and ensuring that the local weather pattern can never change."

To try and counter the information and opportunity gap, Spickler created Memphis School Guide, an online and in-print compendium of information to help parents navigate their school options. And yet as years passed, and her son and others like him neared middle- and high-school age, Spickler saw the dearth of high-quality options in those higher grades. “My biggest takeaway from all the work was that there was no real diversity in the type of learning happening at the different schools in Memphis. Different schools had different resources and different demographics, for sure, but everyone was basically doing the same old Stand and Deliver model of instruction. People were looking for something different that just didn't exist in our city.”

Then Spickler heard about what was happening in the old Sears building — and that the developers wanted the space to be anchored by a public school. So she reached out to other institutions in the city that were doing interesting work with young people, and began organizing meetings at which they could ask kids and families directly what they wanted to see more (and less) of in their ideal school. “Instead of starting with a predetermined vision that we were working towards,” she said, “our process was one of discovery.”

What they discovered was largely intuitive — and yet, largely absent in the city’s public and private schools.

We don’t just want to sit and listen, the students explained. We want to *do* stuff.

We don’t just want to learn alongside people who look and think like us, they said. We want our classrooms to be as diverse as our city.

And we want the work that we do to matter, *now*, in the world we all share.

When Richardson heard what Spickler was uncovering, he sensed a perfect match for the kind of culture he hoped would take root in the Concourse. “I had a lot of unconscious assumptions about what a school was supposed to look like,” Richardson confessed. “But the students were painting a picture of a place that was designed more like a basecamp than a container. They weren’t asking us to do the simple math of figuring out how many classrooms you need in order to evenly distribute young people across a fixed number of spaces; they were asking us to design a place that was agile, and emergent, and fluid.”

As more and more community members offered their input, the initial processes of Crosstown High became clear: *spatially*, a physical design that could make it easy for folks to be collaborative and interdisciplinary; *structurally*, a flexible school schedule that could foster sustained partnerships with fellow Concourse tenants, whose workplaces could provide rich and real-world learning opportunities for students; *culturally*, a commitment to recruit a student body that was fully reflective of the city; and *pedagogically*, an emphasis on mastering higher-order thinking skills via project-based and socially embedded assessments of student learning.

“What are the essentials for a thriving community?” Spickler asked.

“How do you repair a city fractured by injustice and inequality?

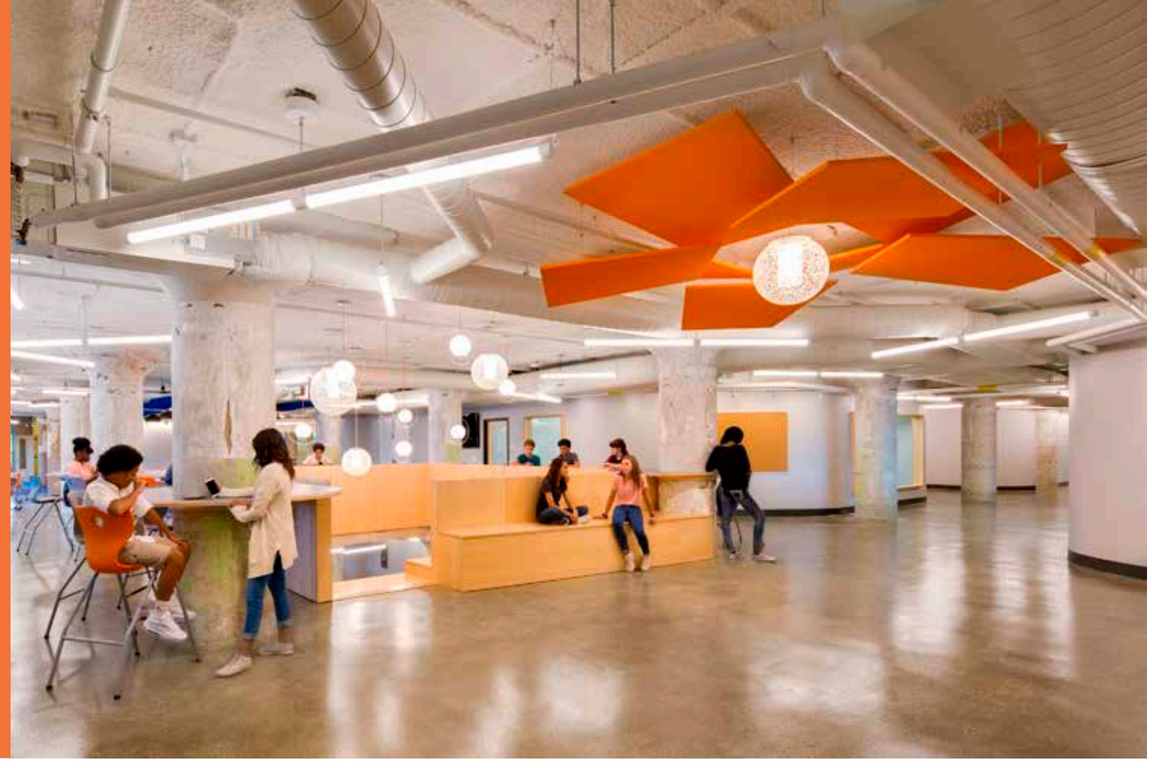
And what does it mean to reimagine education for a changing world? Those became the questions our school would try to answer.”

To get there, the school hired Chris Terrill as its founding executive director. A veteran educator with a salt and pepper goatee, close-cropped hair, and the self-awareness to not always put himself at the center of the work, Terrill knew that for Crosstown High to be successful, he’d need to recruit an inaugural faculty that was willing to rethink everything about teaching and learning.

“There are roughly 31,000 high schools in America,” Terrill told them at the first faculty meeting of the year. “99.5% of those schools are doing things very much the same way.

That works for some students — it worked for most of us — and now here we are as teachers.

“But times have changed. Things are different. We’ve asked you to do something



that hasn't been done in Memphis. We don't know everything — as a matter of fact we know very little about the scheme of how this whole thing will unfold over time. But the key to our success long term is going to be for each of us to be willing to say, 'I don't know.' Because we cannot, under any circumstance, revert to the norm, or revert to the comfortable. We can't go back to putting kids in rows and giving grades and doing it just like we did in the past."

To help his teachers resist reverting to the norm, Terrill structured a school day around team-taught interdisciplinary academic blocks and a 120-minute "X Period" during which students could dive more deeply into their project work or spend time building relationships with their advisory groups. He characterized the first week of school as "Dis-Orientation."

And he reserved the start of the year for an extended schoolwide exploration of core questions of identity: *Who am I? Where do I come from? And to what extent do my genetics or geography shape who I am?*

For Nikki Wallace, diversity and "dis-orientation" were precisely what she'd been looking for. A lifelong Memphian, molecular scientist, and mother of three boys, Wallace's own experiences as a researcher had confirmed the importance of integrated settings — and their relative absence. "In every lab I worked in," she explained "I kept running up against the same negativity and the same obstacles. 'Why are y'all making everything so difficult?' I wanted to ask. 'And where are all the other black folks?'"

Consequently, when Wallace first heard about the idea of redeveloping the old Sears building, and housing a new school within its walls, she was skeptical. "I assumed it would be another failed project in Memphis," she confessed. "That has been a real issue in this city. But the idea of redesigning high school really sparked my interest as a researcher. As a parent of three boys, I knew I wanted to help kids fall in love with science."

In time, Wallace became one of Terrill's inaugural hires. Looking back on the school's first two years, she recalls the unevenness of the process. "Overall I would say we didn't do a great job of creating a community in which everyone felt accepted and could thrive. It was a struggle to get adults aligned on such a radical reimagining of how learning was supposed to unfold. It takes a lot of intention to make an organization out of the mess. When you're doing something new, and trying to dismantle something that has always been the same, folks will fight back — but if you're really intentional about the vision, you can create something new."

Fellow teacher Bertram Williams agrees. As he puts it,

"This model says that you have to iterate, and iterate, and iterate. Easy answers don't leave room for perfection."

"Nothing that's worthwhile comes with an easy struggle," added another founding faculty member, Jonathan Dodo. "Think of what we're up against. We're up against years of systematic inequality. We're up against years of systemic racism. We're up against years of students being passed through a system as just another number. In a project-based setting, we're trying to work against all of that.

When you have students from different backgrounds coming together and working on a lot of the same things, you have the exchange of ideas, you have the exchange of thought patterns, you have the exchange of thought processes."

In fact, Crosstown's founding student body was intentionally recruited to reflect the fullest possible reflection of its city's diversity — thanks to Terrill's careful tracking of which neighborhoods were getting over- or under-represented in enrollment figures, and then adjusting the school's outreach efforts accordingly.

"We're diverse not only in the way we look visually," said a cheerful, earnest young girl named P.J., "but we're diverse in the way we contribute to our relationships — it's like you're a family. This is why we're here; this is what makes this school so unique.

"Just look at my lunch table," she offered. "There are black people like me, but also white people, a Jewish person, atheists, gay people, non-binary people — short hair, long

hair, dyed hair. This school did a good job. This is our place."

Of course, it's one thing to successfully recruit a diverse student body or outline a radically different school schedule. It's another to turn those features into a truly vibrant, healthy, and high-functioning learning culture — something Terrill sees as a constant process. "Thus far," he said as the school neared the end of its third year, "we've valued freedom over structure — but now we're starting to see which processes we need to function optimally. And all of that starts with our emphasis on identity."

For Nikki Wallace, this is where the real work must continue to be. "Our staff may be diverse, but after a few years, we started to see the same problems in Crosstown that we were seeing in Memphis. And if students see the white teachers grouping up, or the black teachers feeling undervalued, they're going to learn the wrong lessons.

"How *can* we be diverse in a way that all of us are going to get along?" she asked. "We're still not there, but it's clear to all of us that the work can't start until we are able to model for the students what doing the work looks like. It's been a difficult road. But now we know what has to be done; it's staring us in the face.

"*We* have to be integrated first if we ever want them to be."

To that end, among the school's most enduring processes are its opening week of "Dis-Orientation," and its extended exploration of core questions of both individual and shared identity.

How does generational memory work? How does culture pass down? What is the root of the indigenous wisdom in you? Which aspects of place are fixed, and which are fluid? And what makes Memphis *Memphis*?

In one of the first group activities of the 2019-2020 school year, students were asked to offer their thoughts on that last question, and to post them on a large wall with sticky notes.

What their answers revealed are that Memphis is, to differing degrees, about eating good BBQ, experiencing crime, or feeling unsafe. And not surprisingly, those clusters corresponded to where people lived.

To better understand why this was so, the students broke themselves down by zip code to produce their own neighborhood newspapers, and then looked for patterns in how their papers were similar or different. What followed was a schoolwide investigation of the ways inequality played out across Memphis in six areas: the economy, housing, health care, education, transportation, and criminal justice. Within those areas, students chose individual or group projects of interest to research.

P.J. chose to track the history of lynchings in Shelby County. "When you brush things under the rug for too long, you're going to start tripping," she explained. "And Memphis is tripping right now. We have gotten used to things we should never have gotten used to."

Her classmate, Britain, agreed. "We're a very soulful city that is laced with a lot of brokenness from our past," she explained. "In the past, I saw the inequality but I never really knew why. But my dad always said that Memphis is a place you can wrap your heart around. And now I feel like I have a better understanding of our beautiful and ugly history. We are all of those things, but we have the promise of hope and opportunity.

"We're starting to build an environment," P.J. added, "where everyone is always questioning — and no one is settling for what someone tells you.

"The world is so vast, in people and opinions and views — but high school's a great place to dip your foot in the water and see what the world is really like.

"You need to go there. You need to find the truth yourself."

NOW WHAT?

Inquiry Seeds for Processes

Processes are the creative, exploratory and self-organizing ways in which the work of a system gets done. To ensure a system's integrity, processes must be aligned and congruent with the system's identity.

It is the *processes* of living systems, not their structures, that give them coherence.

Change, in other words, happens from the inside out. Every living system is a learning system. And how the system learns and works must be congruent with who it is and what it does.

me

ASK yourself, what are my community's daily routines? What are our daily rituals? How much of a typical day's activity is already decided before it begins — and by whom? Who determines the routines, the rituals, and the decision-making?

FIND the fun. Young children learn through play. It's how their brain grows, how they develop relationships, and how they explore. You will never, ever be able to invite true cooperation without getting into your child's world first. Finding the fun might not come intuitively, but when you tap into your inner awesome personality to shine and connect, your little one will want to engage and cooperate. Find the games, pretend, and laugh. This is the hardest parenting tool because we are so freakishly exhausted, but dig deep and fake it until you make it. To learn more, visit besproutable.com.

DON'T praise, but DO notice. Thanks to researchers like Carol Dweck, Edward Deci and Richard Ryan, we now know that children are motivated not by praise or rewards, but by intentional language around effort, autonomy, competence and relatedness. While rewards can work short term in some cases, building critical thinking skills and teaching children to do the right thing when no one is looking takes much more than a sticker on a chart or a "good job." For young children, this means that they need to be seen, feel capable, and care about what they are doing. Encourage means to give courage. When they feel encouraged, their behavior shows it. To learn more, visit besproutable.com.

we

AUDIT your community's shared processes. How do you currently work together?What works well? What feels stuck? What might be getting ignored, not visible or not seen as a result.

CONSIDER: What geometric object: square, rectangle, circle, etc. best represents how you work together? Explain.

CONSIDER: What new process (aligned with how nature works) might you create to encourage and promote greater truth-telling, shared decision-making (by multiple and diverse constituents), innovation, experimentation, prototyping, and comfort with failure?

CHOOSE a curricular or assessment design decision that needs to be made, or a problem that needs to be solved, and map both the current and desired process for making the best possible decision. What do you notice? Are the two maps the same? If not, what do you need to change?

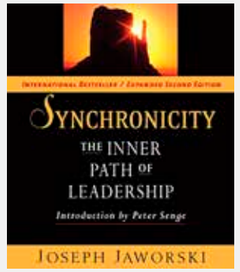
SHADOW x 4: Ask someone in your community (student, teacher, co-worker et al.) if you can shadow them for a day. Get a blank journal and write down every decision that you observe, whether by the person you're shadowing or those they interact with. Then buy your "shadowee" lunch and ask them to shed light on the decision-making processes you observed. What decisions were "algorithmically" produced? What decisions seemed to require prudential judgment? Which decisions appeared to rely on personality? Which judgments hewed to — or deviated from — official policy?

GO DEEPER

Solving Tough Problems: An Open Way of Talking, Listening and Creating New Realities

Adam Kahane

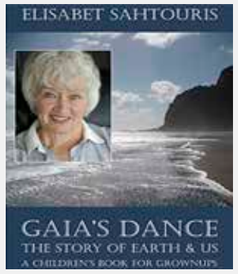
The book explores the connection between individual learning and institutional change, and how leaders can move beyond politeness and formal statements, beyond routine debate and defensiveness, toward deeper and more productive dialogue.



Synchronicity: The Inner Path of Leadership

Joseph Jaworski

Jaworski shares the story of his own escape from an inauthentic life and his journey to a deeper understanding of leadership. Leadership, he discovered, has more to do with our being—our total orientation of character and consciousness—than with what we do. He examines three fundamental shifts of mind that frees us to seek out the power of synchronicity.



Gaia's Dance: The Story of Earth & Us

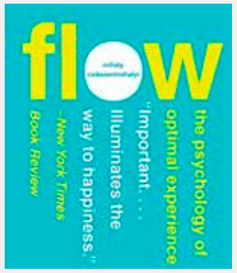
Elisabet Sahtouris

Elisabet Sahtouris takes us through the scientific story of evolution, showing parallels with the ancient story while unfolding it scientifically to reveal how our own amazing bodies trace their roots to ancient bacterial cooperatives, and how the essence of biological evolution is a repeating maturation process in which youthful competition gives way to mature cooperation.

We Make the Road by Walking

Paulo Freire and Myles Horton

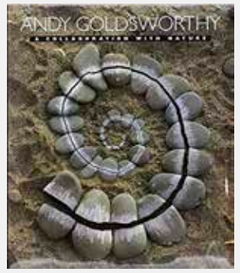
Throughout their highly personal conversations recorded here, Horton and Freire discuss the nature of social change and empowerment and their individual literacy campaigns.



Flow: The Psychology of Optimal Experience

Mihaly Csiksentmihalyi

During flow, people typically experience deep enjoyment, creativity, and a total involvement with life. In this new edition of his groundbreaking classic work, Csikszentmihalyi demonstrates the ways this positive state can be controlled, not just left to chance.



A Collaboration with Nature

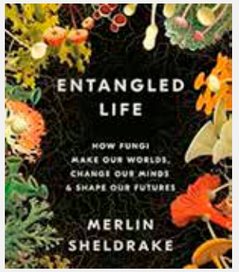
Andy Goldsworthy

Out of earth, rocks, leaves, ice, snow, rain, sunlight, and shadow Andy Goldsworthy creates works that exist briefly before they are altered and erased by natural processes.

No One is Too Small to Make a Difference

Greta Thunberg

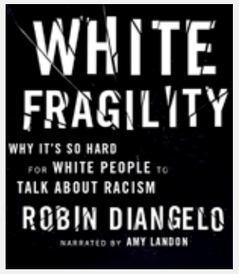
No One Is Too Small to Make a Difference brings you Greta in her own words, for the first time, through a collection of her speeches that have made history across the globe, from the United Nations to Capitol Hill and mass street protests.



Entangled Life: How Fungi Make Our Worlds, Change Our Minds & Shape Our Futures

Merlin Sheldrake

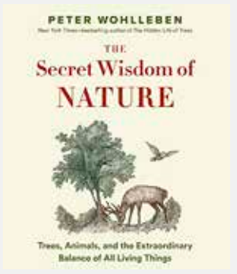
In *Entangled Life*, biologist Merlin Sheldrake shows us the world from a fungal point of view, providing an exhilarating change of perspective. By examining fungi on their own terms, Sheldrake reveals how these extraordinary organisms—and our relationships with them—are changing our understanding of how life works.



White Fragility: Why It's so Hard for White People to Talk About Racism

Robin DiAngelo

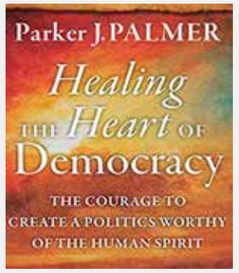
In this in-depth exploration, DiAngelo examines how white fragility develops, how it protects racial inequality, and what we can do to engage more constructively.



The Secret Wisdom of Nature: Trees, Animals and the Extraordinary Balance of All Living Things

Peter Wohlleben

In this tour of an almost unfathomable world, Wohlleben describes the fascinating interplay between animals & plants and answers such questions as: How do they influence each other? Do lifeforms communicate across species boundaries? And what happens when this finely tuned system gets out of sync?



Healing the Heart of Democracy

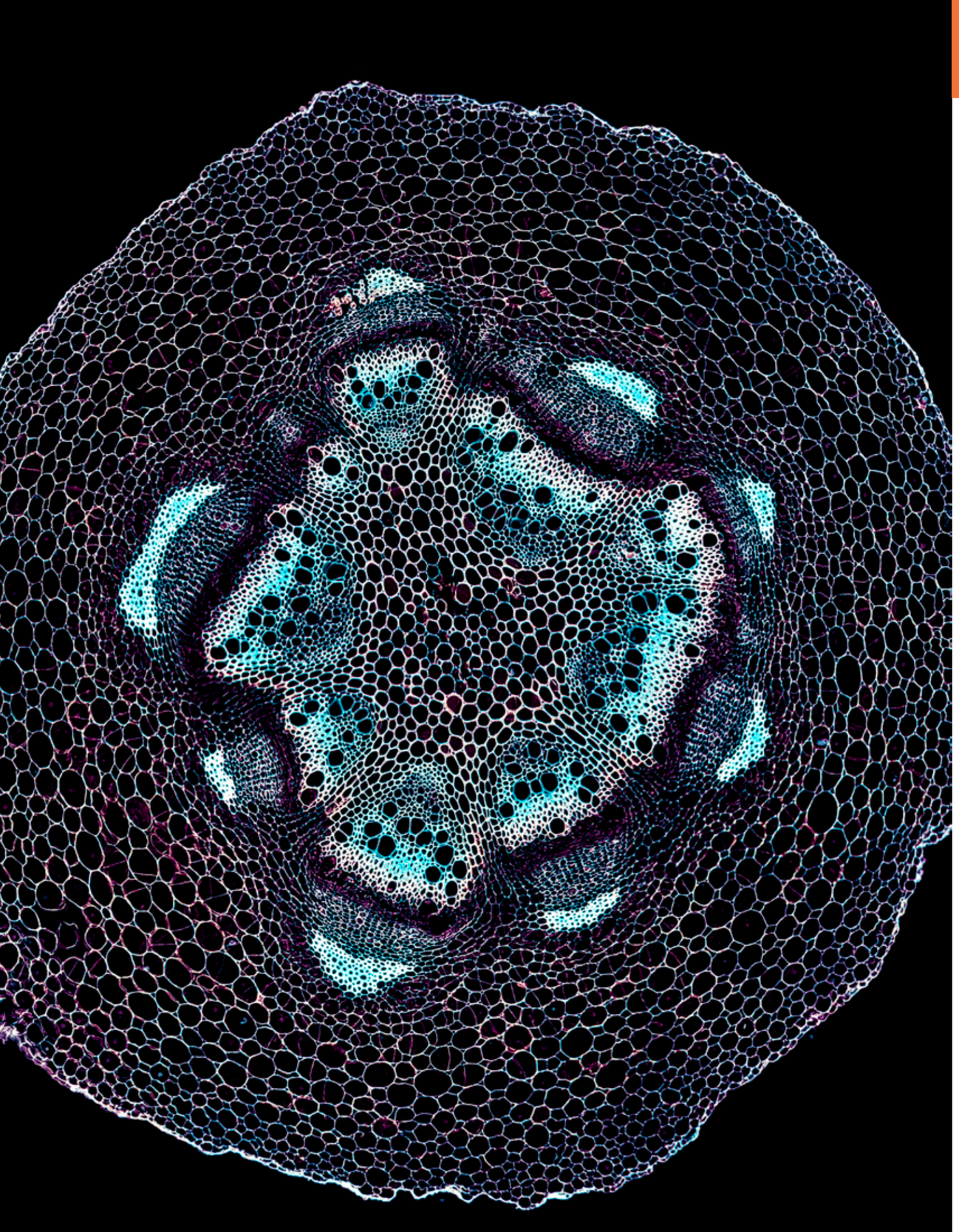
Parker Palmer

Palmer explores five "habits of the heart" that can help us restore democracy's foundations as we nurture them in ourselves and each other.

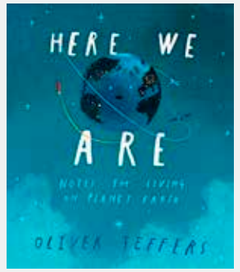
Creative Schools: The Grassroots Revolution That's Transforming Education

Sir Ken Robinson

At a time when standardized testing businesses are raking in huge profits and students and educators are suffering under the strain, Robinson argues for an end to our outmoded industrial educational system and proposes a highly personalized, organic approach that engages all students, and enables them to face the real challenges of the twenty-first century.



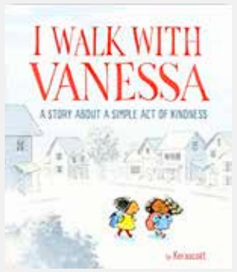
GO YOUNGER



Here We Are

Oliver Jeffers

Here is Oliver Jeffer's users guide to life on Earth. Be it a complex view of our planet's terrain (bumpy, sharp, wet), a deep look at our place in space (it’s big), or a guide to all of humanity (don’t be fooled, we are all people), Jeffers' signature wit and humor combine with a value system of kindness and tolerance to create a must-have book for parents.



I Walk With Vanessa

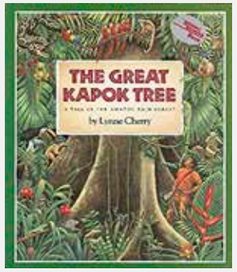
Kerascoet

This picturebook explores the feelings of helplessness and anger that arise in the wake of seeing a classmate treated badly, and shows how a single act of kindness can lead to an entire community joining in to help. With themes of acceptance, kindness, and strength in numbers, this timeless and profound feel-good story will resonate with readers young and old.

Leaf

Sandra Dieckmann

When a polar bear arrives unexpectedly in the woods, the animals fear and avoid him, suspecting him to be dangerous — and his habit of collecting leaves only adds to their distrust. Then one day, they watch as he attempts to fly over the water with wings made of colorful leaves, just trying to go home. Maybe he needs some help?



The Great Kapok Tree: A Tale of the Amazon Rainforest

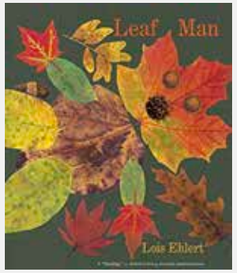
Lynne Cherry

Lynne Cherry journeyed deep into the rainforests of Brazil to write and illustrate her gorgeous picture book. One day, a man exhausts himself trying to chop down a giant kapok tree. While he sleeps, the forest’s residents, including a child from the Yanomamo tribe, whisper in his ear about the importance of trees and how "all living things depend on one another," and it works.

Imagine a World

Rob Gonsalves

Imagine a world where the sky becomes the Earth; where a waterfall freefalls to become dancing women; where you can cut mountains out of curtains, and ships sail into the sky. This amazing world is what Rob Gonsalves has created. His vision astounds and explores a world that is boundless and beautiful, inviting you to imagine a world of possibilities—to imagine this world.



Leaf Man

Lois Elhert

With illustrations made from actual fall leaves and die-cut pages on every spread that reveal gorgeous landscape vistas, here is a playful, whimsical, and evocative book that celebrates the natural world and the rich imaginative life of children. Fall has come, the wind is gusting, and Leaf Man is on the move.

What does it mean to live a flourishing existence?

What would it mean for you?

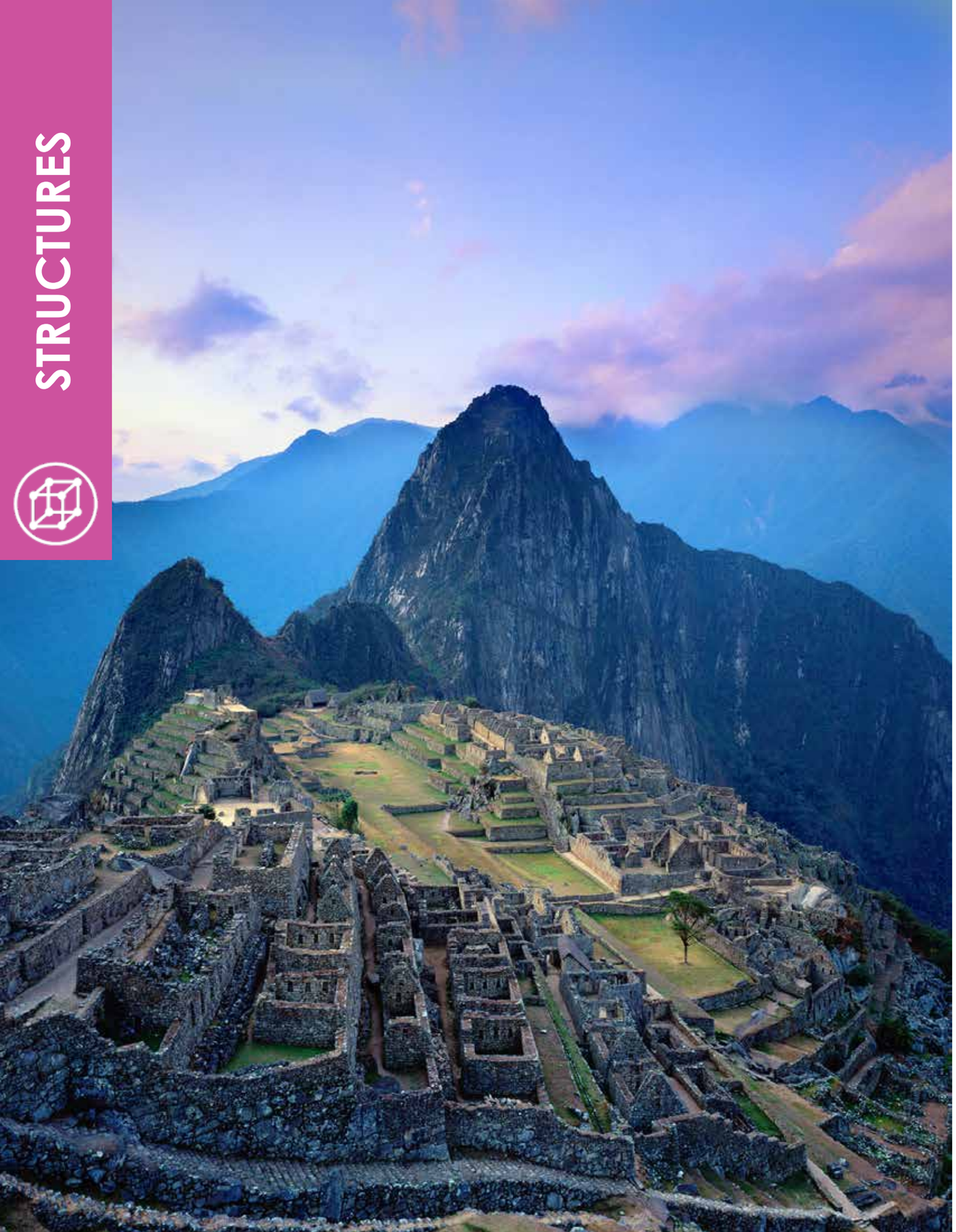
STRUCTURES

WHAT (&WHY) WE BUILD

Complex systems depend on simple structures to thrive.

These structures provide stability, stimulate creativity, and help ensure that a living system remains connected to all aspects of itself.

What, then, are the simple structures we must create?



The Question: *What's Needed?*

"If we could change a society like we can change the position of the furniture in a house, it would be fantastic. It would just be a question of muscular power. But history is not like this."

— Paolo Freire

And so we end where we would usually begin: with the things that surround us; the things we can actually *see.*

At least that's where Edward Lorenz began, when, in 1960, he tried to turn his MIT computer lab into a place that could complete man's mastery of the natural world by dependably predicting the most elusive entity of all: *the weather.*

All day, Lorenz's computer printed out row upon row of numbers based on equations that expressed the relationship between every conceivable variable, from temperature to air pressure to wind speed. Then, from the printouts, Lorenz and his colleagues would make educated predictions about what the weather would do.

Sometimes they got it right. Sometimes they got it wrong. Yet nothing ever happened the same way twice.

This last fact challenged the Newtonian worldview every scientist had always been taught to revere. Understand the laws of physics, they'd been assured, and you can eventually unlock the secret structures of the universe itself. As mathematician Pierre-Simon LaPlace once put it, classical physics promised a world that would "embrace in the same formula the movements of the greatest bodies in the universe and those of the lightest atom; for it, nothing would be uncertain and the future, as the past, would be present to its eyes."

But Lorenz's work exposed a fundamental problem which undercut those foundational beliefs. As one theoretician liked to tell his students: "The basic idea of Western science is that you don't have to take into account the falling of a leaf on some planet in another galaxy when you're trying to account for the motion of a billiard ball on a pool table on earth. Very small influences can be neglected. There's a convergence in the way things work, and arbitrarily small influences don't blow up to have arbitrarily large effects."

Lorenz's research, albeit unintentionally, demonstrated that the opposite is true.

One afternoon, instead of running the same group of numbers through the system from the start, he restarted the process halfway through, and then left to get a cup of coffee. The new run should have

mirrored the old, but when he returned an hour later, he found a weather pattern that had completely diverged from its previous course.

Eventually, he discovered the difference in the two experiments: in the computer's memory, six decimal places were stored. Yet on the printout, Lorenz had only entered the first three, assuming the one-part-in-a-thousand difference was inconsequential.

It wasn't.

The implications were clear: Measuring complex systems will *always* be imprecise. Certitude is a chimera.

And the Butterfly Effect — or the notion that a butterfly's wings in Beijing today could shape next month's weather patterns in New York City — was more than just idle chatter; it was the natural order of our natural world.

In time, Lorenz's accidental discovery helped launch an entirely new scientific field: Chaos Theory, or the idea that simple systems can create extraordinarily difficult problems of predictability — and still give rise to a spontaneous sort of order.

Structure, in other words, is a prerequisite to freedom — but only when it is a function of engendering *order*, as opposed to ensuring *control*.

This feels like a vital insight for a modern world torn asunder by a seemingly endless list of things to fear, and a similarly desperate effort by all of us to keep the various boogeymen at bay. "We seem hypnotized by structures," writes Margaret Wheatley, "and we build them strong and complex because they must, we believe, hold back the dark forces that threaten to destroy us."

Yet even in this digital age, one in which the meaning of 'social network' has taken on both new and added meaning, there can be great comfort in recognizing the ways a well-calibrated living system actually works. "The observation that the bio-logic, or pattern of organization of a simple cell, is the same as that of an entire social structure is highly nontrivial," Fritjof Capra explains.

"It suggests a fundamental unity of life, and hence also the need to study and understand all living structures from such a unifying perspective."

This notion of unity, James Gleick adds, reveals a universe that is "rough, not rounded, scabrous, not smooth. It is a geometry of the pitted, pocked, and broken up, the twisted, tangled and intertwined." And yet "the pits and tangles are more than blemishes distorting the classic shapes of Euclidian geometry. They are often the keys to the essence of the thing."

These sea changes in scientific thinking illuminate an enduring truth of the natural world — one that we, too, can heed in the human realm:

It is *identity*, not structure, that must drive our designs.

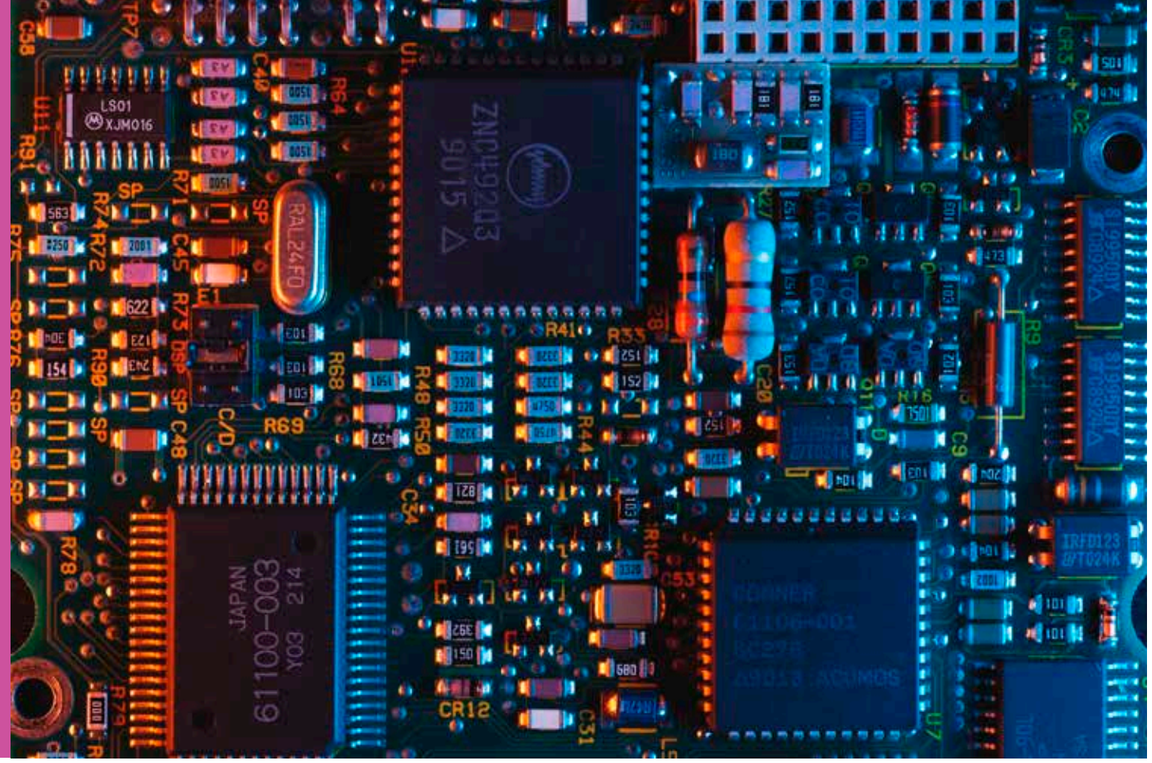
"What occurs in living systems," Margaret Wheatley explains, "is contrary to our normal way of thinking. Openness to the environment over time spawns a stronger system, one that is less susceptible to externally induced change.

What comes to dominate over time is not outside influences, but the self-organizing dynamics of the system itself.

Because it partners *with* its environment, the system develops increasing autonomy *from* the environment and also develops new capacities that make it increasingly resourceful.

"We usually act from the reverse belief. We believe that in order to maintain ourselves and protect our individual freedom, we must defend ourselves from external forces."

If you're still reading, you've already seen the ways in which doing the work required to establish *identity*, share *information*, and



strengthen *relationships* helps living systems plant their own seeds for growth — seeds that can then start to germinate through the principles of *emergence*.

Once these seeds for growth and change have been established, living systems become self-generating by paying close attention to the *patterns* that reveal its overall health, and choosing the *processes* that support the ongoing process of self-regulation.

So what, then, is the role of the thing we have, up to now, always started with and overvalued — the *structures* of the system itself?

As you'll see in the stories that follow, the primary role of structure in the natural world is not to be eternal, but *temporary;* and not to guard, but to *share.*

In the science of an Aspen Grove, we see what appears to be an entire forest of separate trees, all connected through a single extensive root system that allows each tree to be part of a vast network that comprises the largest single living organism on the planet.

From the art of SimCity, we experience the intense interconnectedness of the systems we inhabit, and see what happens when we get to erect the structures that shape a world of our own making.

Through the legacy of Maria Montessori, we see how a few simple rules in a shared environment can unleash the orderly individual exploration of a roomful of otherwise-boisterous children.

And at the Academy for Global Citizenship, a public charter school on the Southwest side of Chicago, we see what happens when a community dares to imagine what a fully harmonious relationship between a school and its surroundings would actually need to *look like* — and require.

Whitman was right. We contain multitudes.

And the way we can honor them all is not by denying that some even exist, but by creating space for *all* of them — and all of *us* — to find our rightful place, form and expression.

"The richest relationships," writes Maria Popova, "are often those that don't fit neatly into the preconceived slots we have made for the archetypes we imagine would populate our lives — the friend, the lover, the parent, the sibling, the mentor, the muse. We meet people who belong to no single slot, who figure into multiple categories at different times and in different magnitudes. We then must stretch ourselves to create new slots shaped after these singular relationships, enduring the growing pains of self-expansion, or petrify."

This is the work.

The questions we hold become the maps we walk.

The Science: An Aspen Grove

It’s the most common tree in North America, a symbol of the American West whose slender, bleach-white trunks are spread across tens of millions of acres, ski slopes, and mountains.

The namesake of Aspen, Colorado, it’s known by some as the “Quaking Aspen” because of the way its leaves tremble in even the slightest breeze (and perhaps also because its wood was used to make the cross on which Jesus was crucified).

Yet what is most surprising about these dense groves of trees is that they are not, in fact, separate at all — but single, living organisms, and the most massive such singular entities in the world.

This is the science of an Aspen Grove — an entire forest in which every tree is part of the whole.

Indeed, unlike giant sequoias, which are genetically separate entities, a grove of aspens share a single root system and a unique, perpetually replicating set of genes. The largest of these, just south of the Wasatch Mountains in Utah, is known as Pando, which is Latin for *I spread*. Made up of 47,000 seemingly separate tree trunks, Pando covers 106 acres and weighs more than 13 million pounds.

Aspen Groves are able to reach such vast dimensions through a kind of growth called *vegetative reproduction.* It works whenever a plant sends out horizontal stems or roots, either above ground or below, that travel some distance before taking root themselves and growing into new, connected plants.

When an Aspen does this, it sends out its roots horizontally underground, and then vertically sprouts new shoots called *ramets.* These shoots eventually develop into trunks that can grow as tall as 100 feet each, although its root system may lie dormant for years until the conditions are right for its emergence. And because each root can travel hundreds of feet from its source before sprouting — and because each new trunk can then do the same — well, you get the idea.

Not surprisingly, Aspen Groves are just as complex below ground. A superhighway of roots exists to distribute food and water throughout the entire grove, enabling a single clone to live as long as 80,000 years — and, perhaps, as much as a million in total.

Today, however, giant clones like Pando are more vulnerable than ever before, thanks to us. Private homes are now being built within one of its sections, which has led the U.S. Forest Service to start suppressing wildfires

— which may sound like a good thing, except that naturally occurring fires are part of what allows clones like Pando to have such long lifespans. In fact, Pando probably reached such a huge size because until recently he experienced a regular sequence of fires that let him regenerate, spread, and maintain himself. As the University of Colorado's Michael C. Grant put it, "the fires didn't happen so quickly that they eradicated him, nor were they so infrequent that conifers had time to replace him."

In addition, rapid changes in climate have affected many groves with extreme drought and high temperatures, weakening the trees to disease and insects. "We're seeing major ecological responses to warming," says Thomas Veblen, an ecologist at the University of Colorado at Boulder and a longtime student of Rocky Mountain forests. "That's the common theme that's hitting everybody in the face."

As with us, then, the fate of organisms like Pando depends on our ability to recognize, and protect, the inextricable connectedness of the natural world. "An Aspen is so much more than a tree," writes Stephanie Pace-Marshall, "and an Aspen Grove is so much more than a forest.

"It is a mentor for how we can sustainably live together within community. It is a map for how we can design together in ways that are 'naturally right.'

It is a model for how we can innovatively create and build together. And it is a quaking, massive embodiment of the giant web of life to which we all belong."

The Art: SimCity

For historian Lewis Mumford, the human idea of a *city* originated "as a symbol of the possible," and a place "where all the original feelings of awe, reverence, pride, and joy would be further multiplied by the number of responsive participants."

For video game designer Will Wright, the city holds a similar appeal. "It's so hard for people to think 50 or 100 years out," he explained, "It's almost in the same way that a telescope or microscope recalibrates your eyesight;

> I think computer simulations can recalibrate your instinct across vast scales of both space and time."

Those observations led Wright to create *SimCity*, one of the first commercially successful "sandbox games" — in which the gamer is free to roam at will, thanks to the absence of a predetermined storyline — and one of the best ways to understand the intricate interdependence of the systems and structures that shape our modern world.

In the *SimCity* games — the first was released in 1989, and the franchise has sold more than 200 million copies since — the player gets to develop an entire city from scratch. They control where to place everything, from homes and schools to hospitals and roads. They get to determine the tax rate, the budget, and the city's social policy. And their decisions are borne out by the goodwill (or lack thereof) of the city's simulated residents, aka the "Sims."

> In this sense, the goal of SimCity is less about winning, and more about seeing the structural ripples that flow from a series of seemingly unrelated choices.

Whereas one player may seek to maximize population size, for example, another may pursue maximum profitability, or aesthetic beauty, or absolute anarchy.

Consequently, Wright figured such a game would only be interesting to architects and city planners. Most insiders agreed — until the first version wound up selling more than a million copies.

So what was, and *is*, *SimCity*'s appeal?

For Wright, whose follow-up to *SimCity* was a sandbox game with an even longer time horizon — the player gets to evolve all the way from single-celled organism to successful species to (perhaps) celestial superpower — the appeal of games like these is the same thing you'll find in your neighborhood Montessori school. "Maria Montessori thought it very valuable for kids to discover things on their own rather than being taught these things overtly," he said,

"And she would design these toys, where kids in playing with the toys would come to understand these deep principles of life and nature through play.

And since *they* discovered this, it stuck with them so much more, and also they would experience their own failures. And so, the games that I do, I think of really more as modern Montessori toys. And I really kind of want them to be presented in a way to where kids can explore and discover their own principles.

"What happens if you give somebody a toy planet, and let them play with a lot of dynamics on it? What could they discover? What might they learn on this?

Most games put the player in the role of Luke Skywalker, this protagonist playing through this story. But this is more about putting the player in the role of George Lucas. I want them, after they've played this game, to have extracted an entire world that they're now interacting with."

Of course, games like *SimCity* are not without their critics, chief among them that the model imposes an old-school approach to urban planning, one that suggests all problems have a binary solution (i.e., if you want to lower crime rates, build more police stations). "A lot of the assumptions baked into that game are the normative assumptions that we need to be questioning," said Aaron Brown, a community organizer and transportation activist who credits his early enthusiasm for transit to *SimCity*.

Yet as journalist Jessica Roy discovered when she interviewed Brown and a dozen other people who evolved from *SimCity* enthusiasts to real-life professional planners, what people liked most about the game were the same things: "The way you can visualize how a single change affects a whole city. The ability to see how transit, livability and the economy are all connected.

The fact that no one likes to live near a landfill."

And for Wright, that's precisely the point. "The reason why I make toys like this is because I think if there's one difference I could possibly make in the world, that I would like to somehow give people just a little bit better calibration on long-term thinking.

Because I think most of the problems that our world is facing right now are the result of short-term thinking, and the fact that it is so hard for us to think 50, 100, or 1,000 years out.

And I think by giving kids toys like this and letting them replay dynamics, very long-term dynamics over the short term, and getting some sense of what we're doing now, what it's going to be like in 100 years, I think probably is the most effective thing I can be doing to help the world."

The Practitioner: Maria Montessori

Maria Montessori was born in Italy in 1870. When she graduated from medical school in 1896, Montessori's early medical practice focused on psychiatry. She later developed an interest in education that led her to question the prevailing methods of teaching children with intellectual and developmental disabilities.

In 1907, she opened the first Montessori school—the Casa dei Bambini, or Children's House— for a group of underserved children who were left to their own devices while their parents went out to work.

Using scientific observation and experience gained from her earlier work with young children, Montessori intentionally structured an environment that fostered each child's natural desire to learn.

Her major ideas —that there is a close relationship between movement and cognition, that the best learning is active, that order is beneficial for children, that people need control over their lives, that personal interest matters, that extrinsic rewards negatively impact motivation, and that collaborative environments are conducive to individual development and growth —are all supported by a strong body of evidence in developmental psychology.

Montessori died peacefully in a friend's garden in 1952; this "interview" is assembled from her own writings and public statements.

There are now more than 25,000 Montessori schools around the world.

Q: What do adults need to understand about childen?

A: The child is the spiritual builder of mankind, and obstacles to his free development are the stones in the wall by which the soul of man has become imprisoned. If what we really want is a new world, then education must take as its aim the development of these hidden possibilities.

If we follow these rules, the child, instead of being a burden, shows himself to us as the greatest and most consoling of nature's wonders! We find ourselves confronted by a being no longer to be thought of as helpless, like a receptive void waiting to be filled with our wisdom; but one whose dignity increases in the measure to which we see in him the builder of our own minds; one guided by his inward teacher, who labors indefatigably in joy and happiness — following a precise timetable — at the work of constructing that greatest marvel in the Universe, the human being. We teachers can only help the work going on, as servants wait upon a master. We then become witnesses to the development of the human soul; the emergence of the New Man, who will no longer be the victim of events but, thanks to his clarity of vision, will become able to direct and to mold the future of mankind.

Q: What distinguishes Montessori schools from traditional ones?

A: The children in our schools are free, but that does not mean there is no organization. Organization, in fact, is necessary, and if the children are to be free to *work*, it must be even more thorough than in the ordinary schools.

Order and precision, we found, were the keys to spontaneous work in the school.

Discipline in freedom seemed to solve a problem which had hitherto seemed insoluble. One does not need to threaten or cajole, but only to 'normalize the conditions' under which the child lives.

If we leave children in this new type of environment that we have provided, they give us quite an unexpected impression of their nature and abilities. They seem to be happier, and they have such deep interests that they can work for long periods of time without fatigue. As a result, their minds seem to open out and they become eager for knowledge.

And so we discovered that education is not something which the teacher does, but that it is a natural process which develops spontaneously in the human being.

It is not acquired by listening to words, but in virtue of experiences in which the child acts on his environment. The teacher's task is not to talk, but to prepare and arrange a series of motives for cultural activity in a special environment made for the child.

Q: How do you prepare someone to be an effective Montessori teacher?

A: The first step an intending Montessori teacher must take is to prepare herself. For one thing, she must keep her imagination alive; for while, in the traditional schools, the teacher sees the immediate behavior of her pupils, knowing that she must look after them and what she has to teach,

the Montessori teacher is constantly looking for a child *who is not yet there.*

This is the main point of difference. The teacher, when she begins work in our schools, must have a kind of faith that the *child will reveal himself* through work.

So what must she look out for? What she does will usually have three aspects.

First Stage. The teacher becomes the keeper and custodian of the environment. Its influence is indirect, but unless it be well done there will be no effective and permanent results of any kind, physical, intellectual, or spiritual.

Second Stage. Having considered the environment, we must ask how the teacher shall behave towards the children. The teacher, in this first period, before concentration has shown itself, must be like the flame which heartens all by its warmth, enlivens and invites. There is no need to fear that she will interrupt some important psychic process, since these have not yet begun. Before concentration occurs, the teacher may do more or less what she thinks best; she can interfere with the children's activities as much as she deems necessary.

Third Stage. Finally, the time comes in which the children begin to take an interest in something. When the child begins to show interest, the teacher must not interrupt, because this interest corresponds with natural laws and opens up a whole cycle of new activities. But the first step is so fragile, so delicate, that a touch can make it vanish again, like a soap bubble, and with it goes all the beauty of that moment.

This is the moment at which the teacher most often goes wrong. The child, who up to that moment has been very difficult, finally concentrates on a piece of work. If, as she passes, the teacher merely says, 'Good,' it is enough to make the trouble break out all over again.

So the great principle which brings success to the teacher is this: *as soon as concentration has begun, act as if the child does not exist.*

The duty of the teacher is only to present new things when she knows that a child has exhausted all the possibilities of those he was using before.

To serve the children is to feel one is serving the spirit of man, a spirit which has to free itself.

The difference of level has truly been set not by the teacher but by the child.

What is the greatest sign of success for a teacher thus transformed? It is to be able to say, ‘The children are now working as if I did not exist.’

Q: What is the central difference between children and adults?

A: Our mind, as it is, would not be able to do what the child’s mind does. To develop a language from nothing needs a different type of mentality. This the child has. His intelligence is not of the same kind as ours. It may be said that we acquire knowledge by using our minds; but the child absorbs knowledge directly into his psychic life. A kind of mental chemistry goes on within him. We, by contrast, are recipients. Impressions pour into us and we store them in our minds; but we ourselves remain apart from them, just as a vase keeps separate from the water it contains. Instead, the child undergoes a transformation. Impressions do not merely enter his mind; they form it. They incarnate themselves in him.

If you watch a child of three, you will say that he is always playing with something. This means that he is working out, and making conscious, something that his unconscious mind has earlier absorbed. Through his outward experience, in the guise of a game, he examines those things and impressions that he has taken in unconsciously. He becomes fully conscious and constructs the future man, by means of his activities. He is directed by a mysterious power, great and wonderful, that he incarnates little by little. In this way, he becomes a man.

How splendid would it be, if we could, by standing ready, by treating the child intelligently, with understanding of his vital needs, prolong the period in which he has this capacity to absorb! What a service we should render mankind if we could help the human being to acquire knowledge without fatigue; if people could find themselves replete with information without knowing how they came by it — as if it were magic!

Though it is true, is it not, that all the works of nature are, perhaps, magical and mysterious?

Q: What can we learn from the natural world?

A: Only nature, which has established certain laws and determined the needs of the human being in course of development, can dictate the educational method to be followed; for this is settled by its aim — to satisfy the needs and laws of life.

So here is a great new upheaval in our ideas! From this fresh point of view, the purposes of the living seem to be related rather to the doing of work needed by the environment. It is almost as if the living were agents of creation, charged each with a particular task, like the servants of a large house, or the employees of a business. The harmony of nature on the earth’s surface is produced by the efforts of countless human beings, each of which has its own duties. These are the forms of behavior that we observe, and it follows that such behavior serves purposes far beyond the mere ministering of each to its own vital needs.

The will does not lead to disorder and violence. These are signs of emotional disturbance and suffering. Under proper conditions, the will is a force which impels activities beneficial to life.

Nature imposes on the child the task of growing up, and his will leads him to make progress and to develop his powers.

Q: What should be the purpose of education?

A: The education of today is humiliating. It supplies men with crutches when they could run on swift feet. It is an education based on man's lower powers, not on his higher ones.

So all is ready; we have only to build. The various contributions for science are like stones from the quarry already squared for placing in the building. All we have to do is find people ready to put them together and so erect the new structure which civilization so badly needs.

The concept of an education centered upon the care of the living being alters all previous ideas. Resting no longer on a curriculum or a timetable, education must conform to the facts of human life.

This is the bright new hope for mankind. Not reconstruction, but help for the constructive work that the human soul is called upon to do, and to bring to fruition; a work of formation which brings out the immense potentialities with which children, the sons of men, are endowed.

The Community:

Academy for Global Citizenship (Chicago, Illinois)

"To change something, build a new model that makes the existing one obsolete."

— Buckminster Fuller

Before these six acres were left to the trees, before the buildings were razed and the families displaced, before the $31 million promise or the thousands of visitors, and before there was ever a blueprint for a campus that might light a path towards the school of the future — there was the young woman on the bike with the 600-page plan under her arms, the one whose childhood teachers labeled her defiant, the one who set out alone to discover the world while still a teenager, who refused to take no for an answer, and who looked out at these abandoned lots and neglected tapestry and saw the culmination of everything those 600 pages had outlined.

For Sarah Elizabeth Ippel, it was an idea that had first taken hold of her as a child, and would not let go until she found a way to make it manifest in the world: Humans re-learning to live in harmony with nature — and schools as the vital containers in which that re-education could begin.

Before her twenty-fifth birthday, Ippel had already traveled to six continents to speak with educators, sit in classrooms, and look for patterns that might reveal the most irreducible elements of a transformative education — the design principles of a living, thriving school.

As a girl, she had always felt like she was hiding in plain sight. What she experienced as curiosity, her teachers saw as misbehavior. And what she felt as frustration, the adults in her life described as the price of the ticket.

You need to play the game, they instructed, to become a player in the game. Sit and get, so that one day you can stand and deliver.

But those rules never made sense to Ippel — or to the millions of others like her, whose natural iconoclasm, or wanderlust, or mischief, or undiagnosed trauma, or all of the above made it all but impossible to abide by The Game's overarching rule: conformity.

In her travels, however, Ippel found a willing audience for her marked intensity and drive — and a more useful set of models for her musings about the best way to reimagine the timeworn thing we have always called "school."

What she learned spilled across the pages of her ambitious proposal to the Chicago Board of Education. The Academy for Global Citizenship (AGC), she promised, would provide a new public educational model for the 21st century — one that prepared *all* students for an increasingly uncertain, interdependent, and ecologically fragile

world. AGC's curriculum would foster a schoolwide commitment to holistic wellness and sustainability that expanded from the inside out — developing healthier humans, communities, and ecosystems. And it would do all of this with the children whose well-being was usually the last to be addressed.

Twice, the city said no. The approach was "too sophisticated" for the community she wanted to serve. Topics like global citizenship and the environment would have to wait until basic literacy and numeracy improved. Recess was a luxury. Healthy food was a nice-to-have. Nature was a distraction.

Not true, Ippel insisted. Empowering students to make positive change would provide them with the motivation for academic growth.

Before students could become stewards of the earth, they must first fall in love *with* nature.

In short, there were no shortcuts.

In 2008, on the third try, AGC's application was finally approved, and Ippel and her colleagues got their chance.

They spent their first year in the ground floor of a former dental tool factory that had been turned into a church. Founding teacher Meredith McNamara recalled needing to keep students quiet during funerals, and struggling to choreograph the daily, sometimes oppositional dance between theory and practice. "We discovered during that first year there are the ideas you have about how a learning experience should unfold," she explained, "and then there are the realities and interests and needs of the kids in front of you, which, in the end, is all that matters. Whatever sparks their natural curiosity, that's what you should do."

In time, the school found its distinctive intellectual rhythm — six in-depth academic units a year, three curricular themes (responsibility for oneself, for one's community and for the Earth) frequent field trips and speakers, and an integrated exploration of health and wellness. "As we evolved," McNamara explained, "we realized we needed more structure for everything from community governance (i.e., becoming more democratic) to teacher collaboration (i.e., reserving two planning days at the start of each six-week cycle). We also realized just how confining the larger system of the city is, and how limiting it is to imagine our model, which depends on a certain type of physical space, in a place that's not our own.

It's hard to teach kids to fall in love with nature if they're never in it."

Indeed, despite all its successes, AGC is still housed in two rented buildings, one of which is a former barrel factory, in the industrial landscape of the Garfield Ridge neighborhood on Chicago's Southwest Side. The campuses are separated by Cicero Avenue — a frequent thoroughfare for long-distance truckers — so the businesses that surround the schools are a mixture of automotive shops, fast-food restaurants, and motels. It's a gray, flat section of the city, with scores of undeveloped lots alongside nearby residential streets and rows of well-manicured, single-story houses.

More than 90 percent of AGC's student body come from these nearby streets and houses. Two-thirds of them are low income. Three out of ten are learning English for the first time. And one out of four have special learning requirements.

To support the needs of these children, Ippel and her colleagues have done everything they can to create a greener landscape.

An asphalt parking lot now features raised garden beds, a greenhouse, and some schoolyard chickens. The students grow their own vegetables, and eat what they grow thanks to an on-site chef working in a zero-waste organic cafeteria. Classrooms are lit by on-site solar panels; a wind turbine anchors the outdoor playground; rainwater gets collected from the greenhouse gutters.

And yet.

“When we started AGC,” Ippel told me, “we always knew we needed a future home of our own design — an environment that fully reflected the vision of what we are trying to achieve here. To build a thriving world, we must design the template of a living school, and create a prototype so that others can do the same.”

And so, while her colleagues went on with the critical daily work of teaching and learning, Ippel went on the hunt for funding, and for a team of visionary designers from across the globe.

The team came first, and their work has engendered what critic Alexandra Lange describes as “the most architecturally ambitious design I’ve seen in the U.S.”

In a section of the city in which healthy food options are scarce, more than half of the six-acre site will be reserved for neighborhood gardens, orchards, food forests, hoop houses, greenhouses, teaching kitchens and a community farm café and store.

Instead of traditional classrooms, the school will be organized into Neighborhoods that get shared by grade-level bands. Each building will have a sloped roof, tilted toward the sun and covered with photovoltaic panels. On the shady sides, a clerestory window will let in cool northern light. Gutters running along the low points in the roof will collect stormwater for toilets and gardens. Students will move throughout the day along a series of meandering outdoor paths. And the campus will abide by the world’s most robust sustainability performance standards.

“It’s a flipped relationship with circulation space,” Ippel says. “Rather than breaking learning spaces up with hallways and walls and asking each educator to stay in one space with one group of students, teachers will circulate around the entire shared learning space throughout the day.

The campus itself will be a living system — with geothermal wells, animals, a learning barn, and ample green space.

"We’re adding trees to improve outdoor air and remove air pollutants. We’re giving preference to building products and materials that are recycled, salvaged, rapidly renewable, or sustainably harvested. And we’re doing all of this using the same cost per square foot as the district, so that the ideas and design principles are accessible to anyone who hopes to replicate this approach in their own communities."

“Why would we all *not* do this? Why would we *not* make this the new standard?”

Good question. And in 2019, Ippel finally got some answers when, after seeing the school’s sustainable design and its possibilities for replication, Illinois Governor J.B. Pritzker authorized $31 million of state funds to support the school’s construction.

Making the decision easier for the Governor, Ippel had already found the land on which AGC’s vision could eventually become a reality — a site that runs alongside the Stevenson Expressway, a few blocks from AGC’s current campuses, and about a mile from Midway Airport. It’s a patchwork of large tracts of overgrown grass, comprising more than forty acres in total, broken up by a cross of empty roadways, and currently housing little more than a well-spaced community of sturdy Oak trees.

Its barrenness, in the shadow of the Chicago skyline, makes one wonder why it is barren, and what or who was here before.

And, as you might suspect, the story of this land is a reminder of just how many other forces are always at play in our cities and communities, and just how far we still have to travel as a people.

That’s because AGC’s future home was also once the home of LeClaire Courts, a public housing complex of 600 two-story row houses that stretched along Cicero Avenue. Built in 1950, Leclaire Courts was an early attempt at integrated, low-rise public housing. And over the years, it became the home of thousands of African-American children and families.

That all changed in 1999, when Chicago Mayor Richard Daley announced what he called “The Plan for Transformation.” It was a plan to demolish every remaining public housing complex in the city — more than 18,000 units. It would take ten years, the Mayor said, at a cost of $1.6 billion. It would ostensibly result in a slew of transformational public-private developments, and a bevy of new and improved public housing options. And it would guarantee most of the families that were going to be displaced a “right of return” once the old buildings were demolished and the new units were built.

In 2011, the Courts were torn down, and its families were displaced. The site has been barren ever since. And now, nearly ten years later, according to the *Chicago Reader’s* Lucia Anaya, “the list of LeClaire residents with a right to return has dwindled from 400 families to fewer than 40. Some no longer qualify for return or have died. Others have simply lost hope of ever returning and have made their temporary homes permanent.”

As a result, Garfield Ridge’s Black families, once the majority in the neighborhood, are now being joined in increasing numbers by Latino children and families. “Daley didn’t believe public housing developments could ever be assets to the neighborhoods around them,” writes Chicago native Ben Austen. His belief was that “the very landscape would be remade, the skyline altered, the street

grid restored." Anything less, the Mayor proclaimed, and "you wouldn't have a city of the future. You'd have a city of the past."

But timing is everything, and the Plan was devised amid the real estate bubble of 2008. As money dried up overnight, Austen explained, "the poured foundation set exposed like a Roman ruin, harking back to an age that had yet to be."

For residents like Tara Stamps, a CPS teacher who had grown up in one of the houses the city had destroyed, the feeling of displacement left a permanent scar. "Those were not just buildings," she said. "Those were families. Those were communities." The people who lived there "are rooted to the land. They have a blood memory there. Their grandparents and their aunts and their cousins and their favorite memories were there."

So the story of this place does not begin with the young woman on the bike after all, just as our own stories do not begin with us. Instead, like all stories, they are a kaleidoscope of things and memories and people, equal parts beauty and tragedy, injustice and fairness — the dialectical legacy of *homo sapiens,* sunk into the soil of our shared landscapes.

Wherever we are, in other words, old bones are buried, stubborn legacies persist, and new life is bound to emerge.

How willing are we to find the roots of the stories that shape us?

By her own admission, Berenice Salas wasn't willing at all. She grew up in this neighborhood — the daughter of educators — and the only things she was certain of as a young woman were that she wanted to leave, and she didn't want to teach.

Once she moved away, however, she felt the land of her family pulling her back.

And when she heard what they were doing in a former barrel factory near her childhood home, she allowed herself to be pulled all the way in.

Now, as AGC's elementary school principal, Salas sees her work as a part of something larger than herself. "This is the school I would have dreamt of growing up," she told me. "We are creating our own little ecosystem — right next to the highway. The Southwest side has always been unfairly under-resourced. But we can be the anchor of something that is both very new and very old. My dad was a farmer in Mexico. This work makes me feel like I'm going back to my roots, and reestablishing what was lost.

"I'm continuing the work of my ancestors, but in a different way."

For too long, this is the work that too many of us have tried to forget.

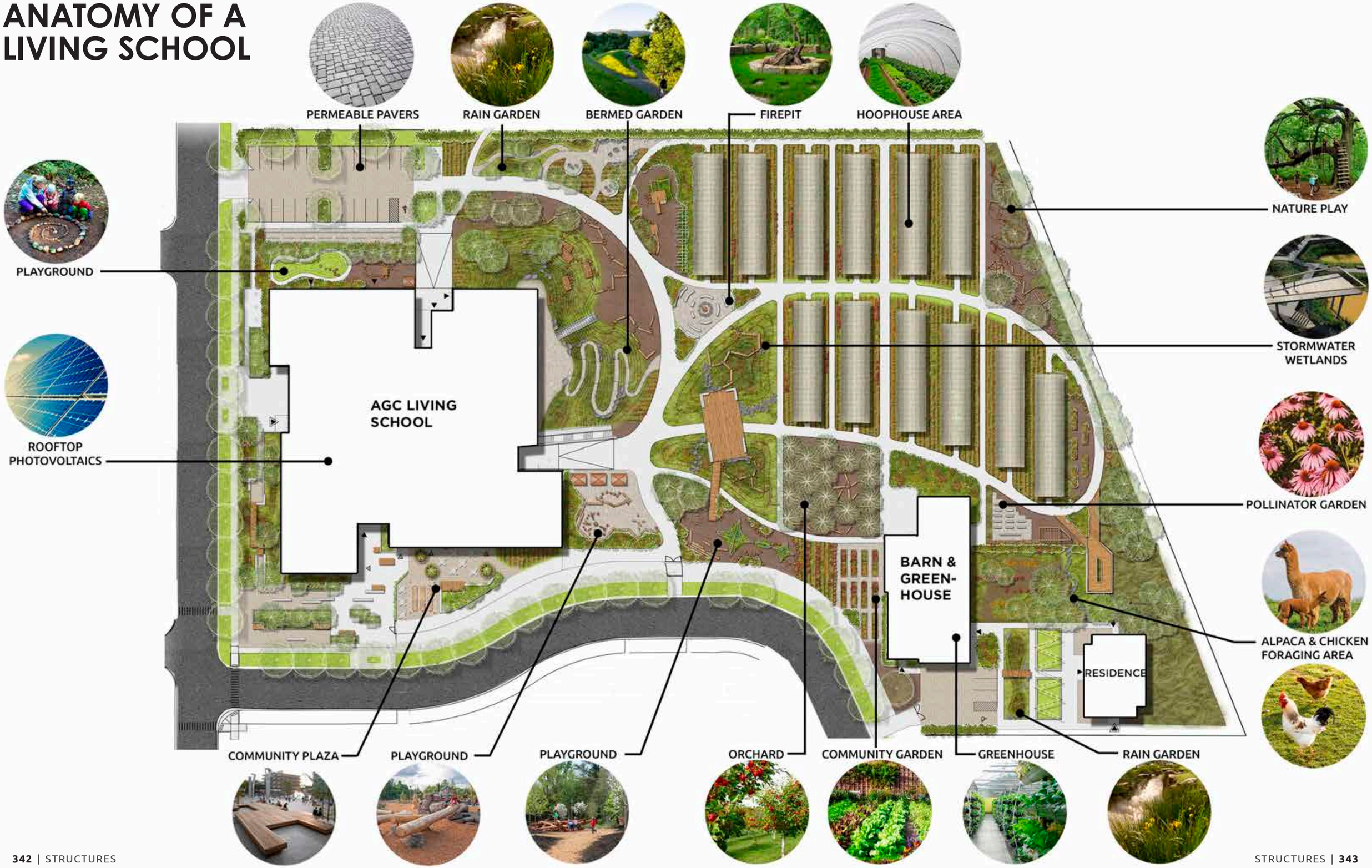
For generations, we have practiced the logic of delusion, and the slow dance of collective suicide.

And now we must remember — before it's too late.

"Our school lies at the crossroads of a great city," Ippel says, "bounded by racial divisions and economic challenges. But our citizens are the seeds that will give birth to new gardens here, and new chapters of hope across the globe.

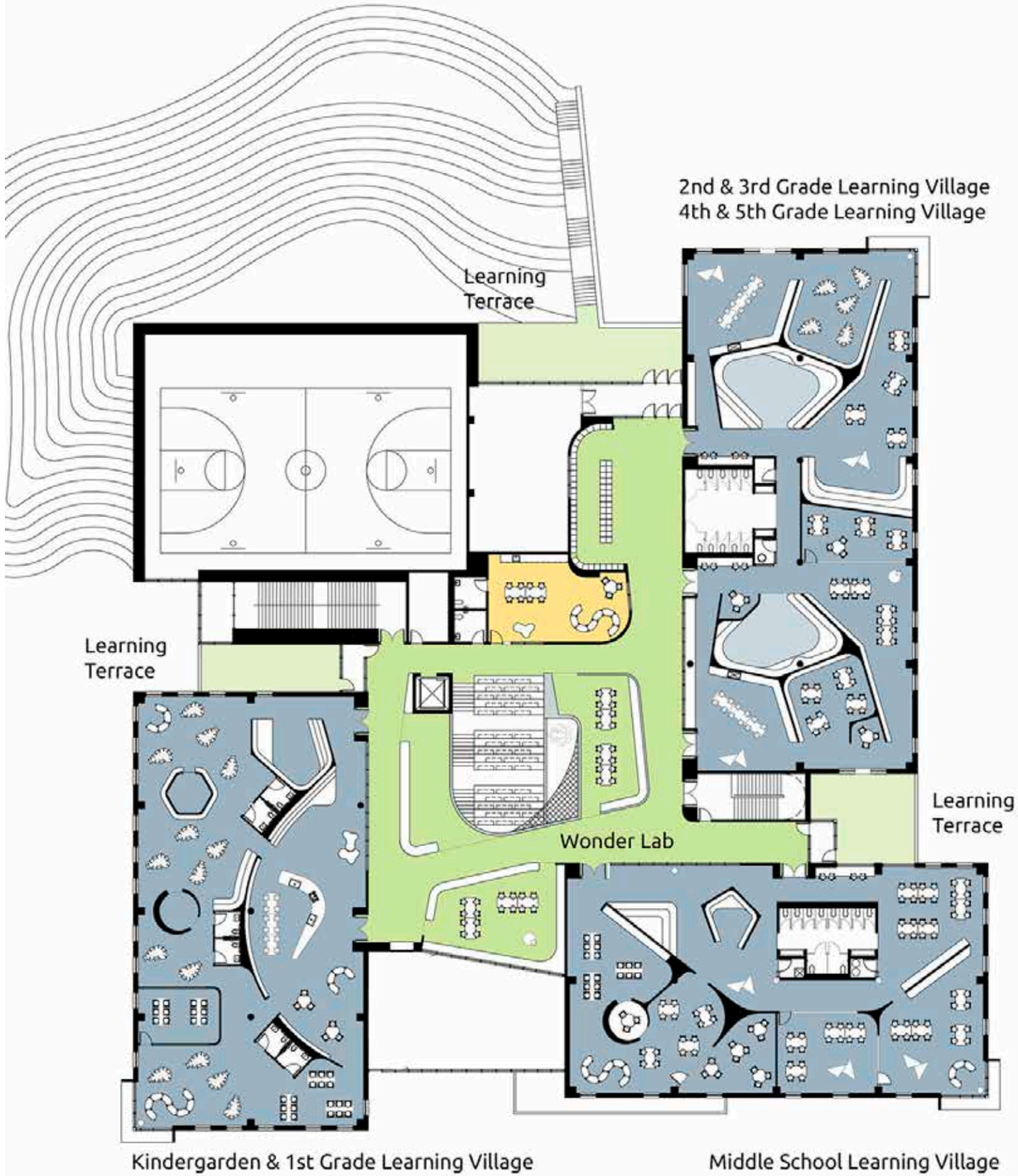
Together, we can all be the seeds that inspire people everywhere to reimagine the structure and purpose of school."

ANATOMY OF A LIVING SCHOOL

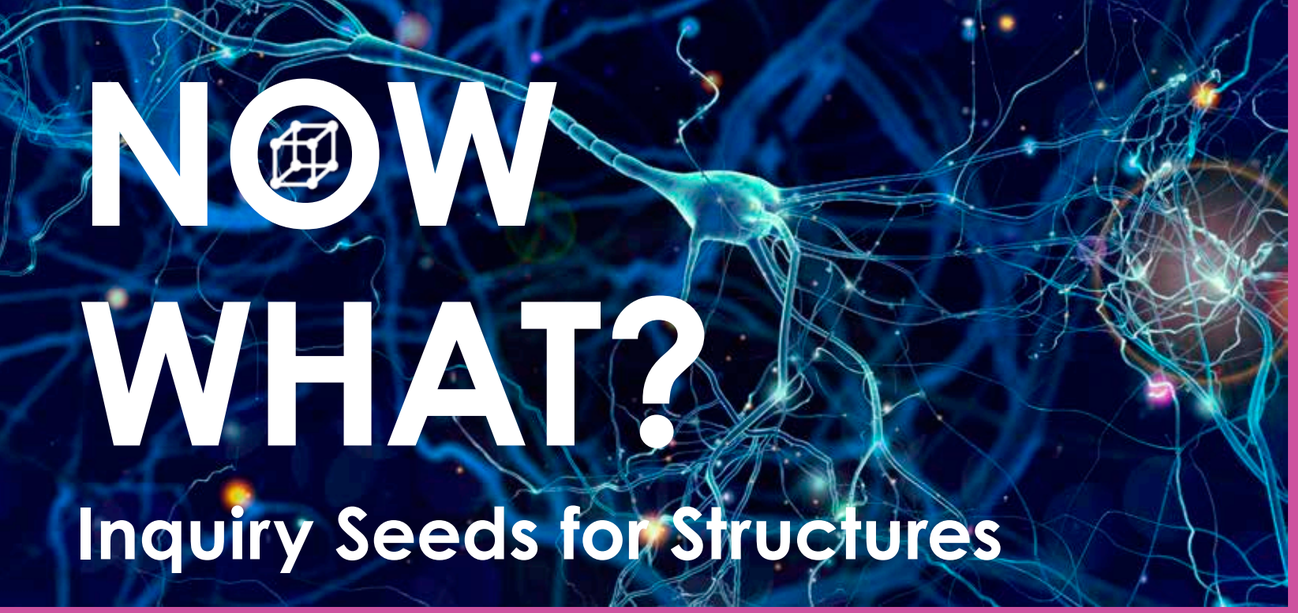


ANATOMY OF A LIVING SCHOOL

GROUND FLOOR PLAN



SECOND FLOOR PLAN



NOW WHAT?

Inquiry Seeds for Structures

System structures are the tangible dimensions of our organizations that embody and give form to our identity, allow for meaningful information to freely travel, and provide space and time for relationships to flourish. They are the visible and often temporary forms we create to ensure our work gets done.

Structures can be both intentionally designed and emergent. Formally designed structures provide system stability; emergent structures stimulate continuous creativity, adaptation, growth and change.

The integrity and vibrancy of the system's identity is sustained when both designed and emergent structures connect the whole system to itself.

me

ASK yourself, what structures most clearly reflect our community's identity? What structures are the defaults for sharing information? What structures have an outsized influence on how people relate to one another?

we

PLOT a history of your school's structures. Get a diverse group together. Make sure that your group includes people from a variety of time periods of the organization's history. Use painters tape to create a horizontal line on the wall. This is your timeline. The left end point represents the origins of the organization. The right end point represents the present moment. Using Post-its, record key "plot points" in the history of your organization's key structures: buildings and campus, organizational designs, governance body, and more. What do you notice? What periods of time seem busier than others? Why? What structures seem to have an outsized effect on the culture's identity? What structures seem to "punch under their weight" — and why?

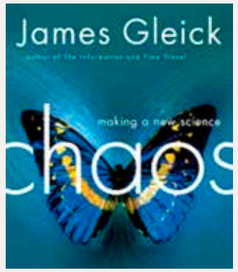
DESIGN for primates. Humans are slightly evolved apes with big brains and less hair (in most cases). The last 100 years of technological innovation in the workplace have focused on the big brain part. Books, computers, desks, offices are all focused on helping us get the most out of our brains. But let's look at apes and their bodies for a second. Visit any zoo and you'll see that apes spend time sitting — lots of it. But they also climb, crawl, swing, lie down, and wrestle. They even negotiate status in space through posture, position and movement. Remove the desk from the equation, give people permission to assume alternative postures, and watch what happens. Find ways to get the body moving, such as open space, non-prescriptive seating, and multiple seating heights. (To learn more, check out *Make Space.*)

STAGE a mock trial that puts the current structures of schooling on trial. Use accepted legal structures and protocols to frame the charge. Create the criteria for jury selection. Select the attorneys for the two sides. Determine the clients for either position. Ask each attorney to make a case for and against the charges; and provide evidence of wrongdoing (guilt) and harm that has been caused. Bring in witnesses to provide evidence for and against the charges. Ask the jury to reach an actual decision, and then, in lieu of "jail," offer an alternate "restitution" the community can enact.

REDESIGN a current physical space of your organization in a way that embodies your aspirational future. Use the seven principles of a living system as your design drivers:

- IDENTITY: Who — and why — are we?
- INFORMATION: What are we paying attention to — and is it what we should be paying attention to?
- RELATIONSHIPS: How do we relate to one another? How does trust build and flow?
- EMERGENCE: What behaviors ought to form the atomic units of this space? What is seeking to emerge?
- PATTERNS: What norms ought to govern our behaviors? Which patterns are showing up over time?
- PROCESSES: What rituals, routines, decisions, and rewards is this space for?
- STRUCTURES: How does this space place human beings at the center of the experience?

GO DEEPER



Chaos

James Gleick

James Gleick lays out a cutting edge field of science with enough grace and precision that any reader will be able to grasp the science behind the beautiful complexity of the world around us.

Figuring

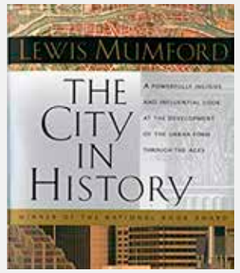
Maria Popova

Figuring explores the complexities of love and the human search for truth and meaning through the interconnected lives of several historical figures across four centuries—beginning with the astronomer Johannes Kepler and ending with the marine biologist and author Rachel Carson.

The Absorbent Mind

Maria Montessori

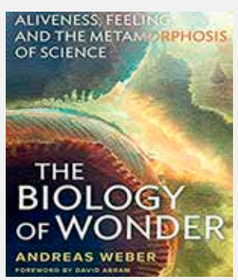
Written by the woman whose name is synonymous worldwide with child development theory, *The Absorbent Mind* takes its title from the phrase that the inspired Italian doctor coined to characterize the child's most crucial developmental stage: the first six years.



The City in History

Lewis Mumford

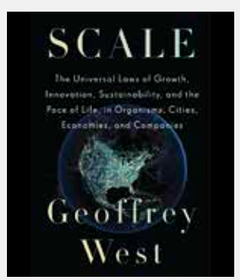
A 1961 National Book Award winner by American historian Lewis Mumford, The City in History argues for a world not in which technology rules, but rather in which it achieves a balance with nature. His ideal vision is what can be described as an "organic city," where culture is not usurped by technological innovation but rather thrives with it.



The Biology of Wonder: Aliveness, Feeling and the Metamorphosis of Science

Andreas Weber

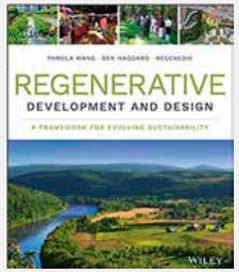
The Biology of Wonder demonstrates that there is no separation between us and the world we inhabit, and in so doing it validates the essence of our deep experience.



Scale: The Universal Laws of Growth, Innovation, Sustainability and the Pace of Life in Organisms, Cities, Economies and Companies

Geoffrey West

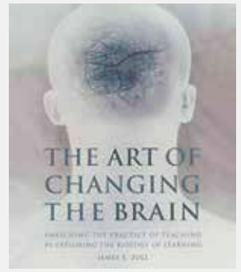
Scale is a thrilling scientific adventure story about the elemental natural laws that bind us together in simple but profound ways.



Regenerative Development & Design

Pamela Mang and
Ben Haggard

Regenerative Development and Design positions humans as co-creative and mutually-evolving participants in an ecosystem—not just a built environment. This book describes how to bring that focus to your design from the earliest stages.



The Art of Changing the Brain: Enriching the Practice of Teaching by Exploring the Biology of Learning

James Zull

James Zull invites teachers in higher education or any other setting to accompany him in his exploration of what scientists can tell us about the brain and to discover how this knowledge can influence the practice of teaching.

The Third Teacher

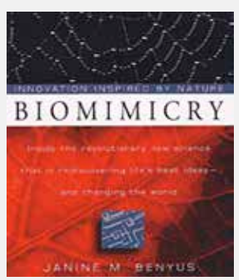
OWP&P,
VS Furniture and
Bruce Mau

The Third Teacher explores the critical link between the school environment and how children learn, and offers 79 practical design ideas, both great and small, to guide readers' efforts to improve our schools.

Make Space: How to Set the Stage for Creative Collaboration

Scott Doorley and
Scott Witthoft

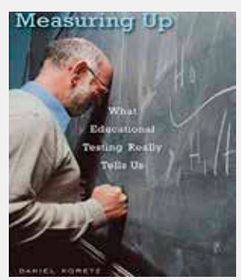
Based on the work at the Stanford University d.school and its Environments Collaborative Initiative, Make Space is a tool that shows how space can be intentionally manipulated to ignite creativity.



Biomimicry: Innovation Inspired by Nature

Janine Benvus

Janine Benyus takes her readers into the lab and in the field with maverick thinkers as they: discover miracle drugs by watching what chimps eat when they're sick; learn how to create by watching spiders weave fibers; harness energy by examining how a leaf converts sunlight into fuel in trillionths of a second; and many more examples.



Measuring Up: What Educational Testing Really Tells Us

Daniel Koretz

Measuring Up demystifies educational testing. Bringing statistical terms down to earth, Daniel Koretz takes readers through the most fundamental issues that arise in educational testing and shows how they apply to some of the most controversial issues in education today, from high-stakes testing to special education.

GO YOUNGER

What We'll Build

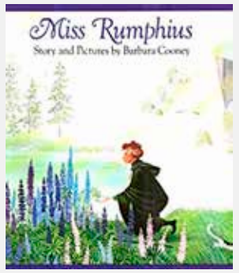
Oliver Jeffers

Inspired by the birth of his daughter, and in the same vein as *Here We Are*, *What We'll Build* is a rhythmic and heartwarming father and daughter story from the beloved Oliver Jeffers.

Sparrow Girl

Sara Pennypacker

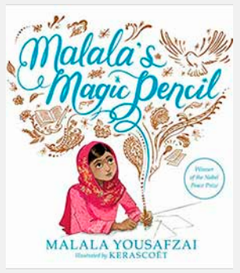
In 1958, the Chinese government ordered the death of all sparrows, blaming them for destroying the nation's wheat crop. But the consequence of their disappearance brought on a plague of locusts, destroying all the crops. Ming Li rescues seven sparrows before the cull, which end up killing the locusts and saving the village from a devastating famine.



Miss Rumphius

Barbara Cooney

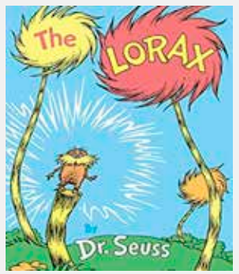
Alice made a promise to make the world a more beautiful place, then a seed of an idea is planted and blossoms into a beautiful plan. This beloved classic and celebration of nature — written by a beloved Caldecott winner — is lovelier than ever!



Malala's Magic Pencil

Malala Yousafzai

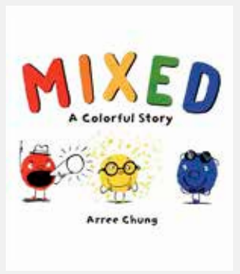
As a child in Pakistan, Malala made a wish for a magic pencil. She would use it to make everyone happy, to erase the smell of garbage from her city, to sleep an extra hour in the morning. But as she grew older, Malala saw that there were more important things to wish for — a world that needed fixing — and that she could still work hard every day to make her wishes come true.



The Lorax

Dr. Seuss

Dr. Seuss teaches kids to speak up and stand up for those who can't. *The Lorax* allows readers to experience the beauty of the Truffula Trees and the danger of taking our earth for granted. The book's final pages teach us that just one small seed, or one small child, can make a difference.



Mixed: A Colorful Story

Arree Chung

In the beginning, there were three colors: Reds, Yellows, and Blues. One day, a Red says "Reds are the best!" and starts a color kerfuffle. When the colors decide to separate, is there anything that can change their minds? A Yellow, a Blue, and a never-before-seen color might just save the day in this inspiring book about color, tolerance, and embracing differences.

We are born to thrive.

Epilogue: Pale Blue Dot

Look again at that dot. That's here. That's home. That's us.

On it everyone you love, everyone you know, everyone you ever heard of, every human being who ever was, lived out their lives. The aggregate of our joy and suffering, thousands of confident religions, ideologies, and economic doctrines, every hunter and forager, every hero and coward, every creator and destroyer of civilization, every king and peasant, every young couple in love, every mother and father, hopeful child, inventor and explorer, every teacher of morals, every corrupt politician, every "superstar," every "supreme leader," every saint and sinner in the history of our species lived there — on a mote of dust suspended in a sunbeam.

The Earth is a very small stage in a vast cosmic arena. Think of the rivers of blood spilled by all those generals and emperors so that, in glory and triumph, they could become the momentary masters of a fraction of a dot. Think of the endless cruelties visited by the inhabitants of one corner of this pixel on the scarcely distinguishable inhabitants of some other corner, how frequent their misunderstandings, how eager they are to kill one another, how fervent their hatreds.

Our posturings, our imagined self-importance, the delusion that we have some privileged position in the Universe, are challenged by this point of pale light. Our planet is a lonely speck in the great enveloping cosmic dark. In our obscurity, in all this vastness, there is no hint that help will come from elsewhere to save us from ourselves.

The Earth is the only world known so far to harbor life. There is nowhere else, at least in the near future, to which our species could migrate. Visit, yes. Settle, not yet. Like it or not, for the moment the Earth is where we make our stand.

It has been said that astronomy is a humbling and character-building experience. There is perhaps no better demonstration of the folly of human conceits than this distant image of our tiny world. To me, it underscores our responsibility to deal more kindly with one another, and to preserve and cherish the pale blue dot, the only home we've ever known.

— Carl Sagan, 1994

The Collaborators

180 STUDIO and ECKENHOFF SAUNDERS ARCHITECTS

The world is changing. What is it shifting from, and to?

As designers of educational spaces and curators of educational experiences, this is the question we held and wrestled with from our respective professional perches.

After a two-year collaborative investigation, *Seed + Spark* is our collective response.

Over 2018 and 2019, we met, wondered, sketched, researched, designed, imagined and wrote. We took field trips, sat in classrooms, visited showrooms, facilitated community conversations, and applied a more critical eye to the everyday patterns of our lives. We shared ideas and potential paths with friends and colleagues — from educators and designers to activists and policymakers, and from artists and scientists to the young and the young at heart.

Through it all, we traced our thinking back to the core question, and to our search for a fundamental set of principles for the future of learning that were as irreducible as the four bases in a DNA molecule — the “A, G, C & T” of a learning culture that was dynamic, purpose-full, and, most importantly, alive.

Our journey was enriched by the thoughtfulness of our colleagues at VS America: Dietmar Lang, Sam Hatch, Emily Jackson and Christine Debrot. It was deepened by the research contributions of educator, writer and fellow wonderer Jennifer New. It was reshaped and improved by an all-star roster of teachers and learners: Shaun Adamec, Bo Adams, Helen Beattie, Alanna Beebe, Ron Berger, Mira Browne, Thanh Bui, Stephanie Bunton, Andy Calkins, Kim Carter, Wendy Cole, Theresa Collins, Zac Chase, Ben Daley, Lydia Dobyns, Scott Doorley, Jenny Finn, Andrew Frishman, Ayla Gavins, Loretta Goodwin, Rosa Gonzalez, Richard Gray, Ulcca Joshi Hansen, Rand Harrington, Scott Hartl, T. Elijah Hawkes, Brett Jacobsen, Pam Jordan, Diana Laufenberg, Chris Lehmann, Bobbi Macdonald, Susan Harris Mackay, Deborah Meier, Kathy Minardi, Carlos Moreno, Ned Murray, Scott Nine, Pedro Noguera, Trace Pickering, Larry Rosenstock, Monica Snelling, Carla Silver, Julietta Skoog, Michael Soguero, Christian Talbot, Diane Tavenner, Angela Valenzuela, Derek Willard, Scott Witthoft, Kelly Young, and Joanna "Squirrelbunny" Zhang.

And it was guided by two individuals who served as our respective North Stars: Stephanie Pace Marshall, an internationally recognized educational thought leader, systems thinker, and writer whose translation of living systems to the reimagination and redesign of learning and schooling transformed our understanding of how people learn; and Christie Wylie, a passionate and joyous elementary school teacher whose daily grounding in the lives of children helped keep us all focused squarely on how to make *Seed + Spark* most useful to those of us who are already deeply engaged in the work.

This book, therefore, is just the beginning — and its pages are just one way to explore these concepts and their implications for our work and lives.

Join us to widen the circle, and go deeper, at seedandspark.live.

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(p. 151) Wicked Bodies at ASU. Photo by Jenny Gerena
(p. 152) The company of Healing Wars at Arena Stage at the Mead Center for American Theater June 6-29, 2014. Photo by Teresa Wood
(p. 153) Tamara Hurwitz Pullman in Healing Wars at Arena Stage at the Mead Center for American Theater June 6-29, 2014. Photo by Teresa Wood
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