finalmile.
a fractal company

Working with Complex Behavioral Problems

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This is a story about how Final Mile has changed since we began working in 2008. Some organizations grow by doing one thing well and expanding their client base for that service. Some grow by increasing their market share within a particular sector. But our story is different: we solve problems related to how people behave, and our journey has taken us from simplicity to complexity.

We've gone from solving relatively specific behavioral challenges to more complex ones, from problems that are well-structured to ones that are ill-structured—what the economist and cognitive psychologist Herbert Simon called "wicked" problems.

A well-structured problem has clear boundaries, clear goals, and can be tackled with one straightforward solution. It is easy to grasp.	A wicked problem is one that is complex, difficult to define, and has no single or easy solution. Wicked problems have no clear boundaries, and interventions have non-linear consequences.

During our early years, we worked on problems with a specific behavior change objective, such as increasing the consumer preference for a particular brand of tea. There are well-established behavioral levers for a marketing problem like that. Even as we chalked up successes with commercial work, we started exploring the development sector as well. Here again, we began with focused behavioral issues. One of our first briefs was to reduce trespassing on Mumbai's railway tracks—a transportation system relied on by millions every day. People crossing the tracks led to injuries and deaths, as well as delays for passengers and economic disruption for businesses.

We found ourselves tackling a more complex issue with the problem of medication adherence among tuberculosis patients.

In India, 1,200 people die of TB every day. The standard treatment involves taking a set of pills daily for six months. Adherence rates are not optimal, which is bad for individual patients—and leads to the spread of drug-resistant TB, which in 2016 affected around 147,000 people in India, more than in any other country in the world.

On the face of it, this appears to be a well-defined behavior problem—finding a solution so that people will take their pills every day.

But as we started looking deeper, we discovered that medication adherence is influenced by multiple social and personal factors that interact in complex ways. It has to do with reliable access to medication, financial means, social stigma, the reduced sense of urgency as symptoms subside, and many other variables. This makes it a wicked problem.

We realized that in cases like this, if policymakers and health authorities approach problems with a well-structured problem mindset, that's a problem in itself. Seeking a unique research insight or a "silver bullet" solution results in simplistic, ineffective interventions, like TV campaigns or posters.

A mindset for well-structured problems can't solve complex behavioral issues

Unfortunately, this mindset is seen across all kinds of complex issues – in public health alone, the HIV epidemic, maternal and infant mortality, and sanitation are just three areas where all too often, officials have treated wicked problems as if they were well-structured. But we find wicked problems in areas such as education, financial services, and poverty reduction, too.

Over the years, Final Mile has intentionally changed our approach to better respond to wicked problems. On this site you can find out more about our thinking and some of the work we've done, whether on HIV prevention in South Africa, economic empowerment in Tanzania, or maternal and neonatal health in India. We start by describing the mindset we've developed to tackle wicked problems.

As you explore, we hope you'll find some inspiration for how you think about solving behavioral challenges.

STORY 1

Our Problem-Solving Approach

What mindset is needed to tackle wicked problems? What kind of people do we need on our teams? What values do we need to build? What challenges do we face on a daily basis? Adopting the optimal mindset for our work has been an important part of Final Mile's journey. Several themes have emerged along the way.

Storytelling

All too often, people present problems and solutions in a simplified way, believing that complexity is too hard for others to grasp. A slide deck with topline insights and bullet-pointed solutions seems preferable to a blizzard of data and text. We've come to realize that complexity is a communications problem—and the solution we've found is storytelling. Once we've done the research and analysis, our mindset is to encapsulate it in stories of the people whose behavior we're aiming to change. A good story can communicate complexity, contradiction and open-endedness, without simplifying the problem. And we find our clients often appreciate the effort we put into communicating insights through storytelling.

Collaboration

Complexity means that by definition, no one person—or organization—has the know-how to cover every aspect of a wicked problem. You have to know your limitations, as we learned when we tried to run a workshop on improving sanitation in India. We fell flat on our faces because our team lacked the right expertise. We've learned to have a collaborative mindset, rather than limiting ourselves to a single discipline. Now, when we start to problem-solve on a new project, we put together non-hierarchical, cross-disciplinary teams.

Our projects bring together people with following expertise:

› BEHAVIORAL SCIENCE

› HUMAN-CENTERED DESIGN

› DATA SCIENCE

› PROGRAM MANAGEMENT

› PROGRAM IMPLEMENTATION

Learning

Collaboration has also helped us learn new approaches to problem-solving. We are always looking to expand our toolkit so that we tackle behavioral challenges in a nuanced and varied way. As the problems we've worked on have grown in range and scale, we've been able to develop and test new research methodologies, and find different ways to synthesize and use our findings. It's also crucial to stay on top of developments from researchers and practitioners whose approaches are relevant to solving wicked problems. Constant learning is a way to guard against the temptation to simplify—or even trivialize—a problem.

Struggle

We work on problems characterized by uncertainty and ambiguity. The mindset required for a wicked problem is one that delves deep, unearthing increasing layers of complexity and contingency. It means accepting that our frustration at not finding easy answers is probably a sign we're on the right track. And it requires a willingness to continue to struggle through confusion, iterating our analyses to gain in-depth insights. We don't aim for perfection, because wicked problems are never completely solved. Instead we strive for what Herbert Simon called satisficing—a viable, useful, and acceptable set of interventions for the problem at hand.

Humility

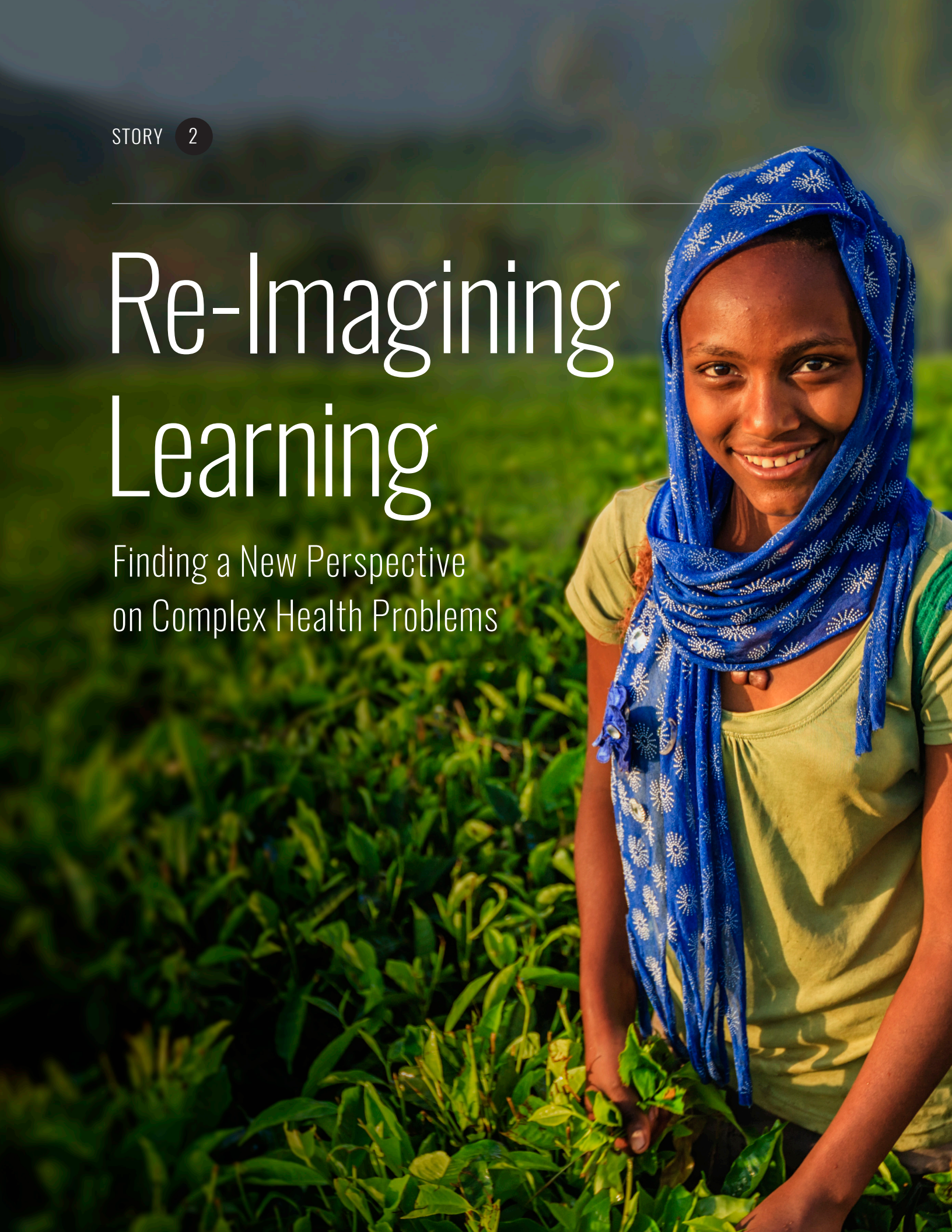
The journey from simplicity to complexity has not been easy for us. We're pleased with our progress, and glad when we see it make an impact—for our clients or wider society. But our journey has also taught us humility. We understand that we're not the first people to work on problems like this. We appreciate what others have done and strive to build on it. And we aim to select and communicate a manageable level of complexity, knowing that, by their nature, wicked problems can never be entirely **solved**.

That's perhaps been the biggest lesson of all: when confronted with a wicked problem, perhaps "solve" is too simplistic a word. We tell stories, we collaborate, we learn, we struggle—and by doing that, we spark change, improvement, growth. This is what enables us to make a difference.

STORY 2

Re-Imagining Learning

Finding a New Perspective on Complex Health Problems



If you do a simple Google search for any of the issues we've worked on, you'll see there's a large body of extant research into the topic. One of the challenges we've had to address is the "research fatigue" that our clients often feel. They've already heard and thought so much about a problem that it's understandable when they tell us they're looking for something fresh and new. But that often gets us worried.

WHAT IF THERE WERE ROOM FOR CANDID CONVERSATIONS LIKE THIS:

> "Yes, we know that a lot of work has already been done. And no, we are not chasing a brand-new insight. Don't look for us to come back with something that will blow your mind. Instead, ask us if we can provide a new frame of understanding the problem."

In 2017, we began a project to understand how adolescent girls and young women make decisions about HIV prevention. HIV is a huge problem among this population: globally, new HIV infections among 10-19-year-old females are three times as high as among males of the same age. Lots of money and resources have been spent trying to understand adolescent girls and young women, their barriers to HIV prevention, what will motivate them to take up prevention products, and so on. We were certainly not the first group to tackle the problem, and we're unlikely to be the last.

AVERAGE ANNUAL NEW HIV INFECTIONS GLOBALLY AMONG 10-19-YEAR-OLDS, 2016-2018

MALES

50,000

FEMALES

150,000

SOURCE: UNAIDS

When our client asked us to investigate, they warned us that the HIV prevention sector had seen enough of insights along the lines that “adolescent girls and young women are much more worried about getting pregnant than getting HIV”.

> We decided that instead of looking for a new insight, we’d try to gain a fresh perspective.

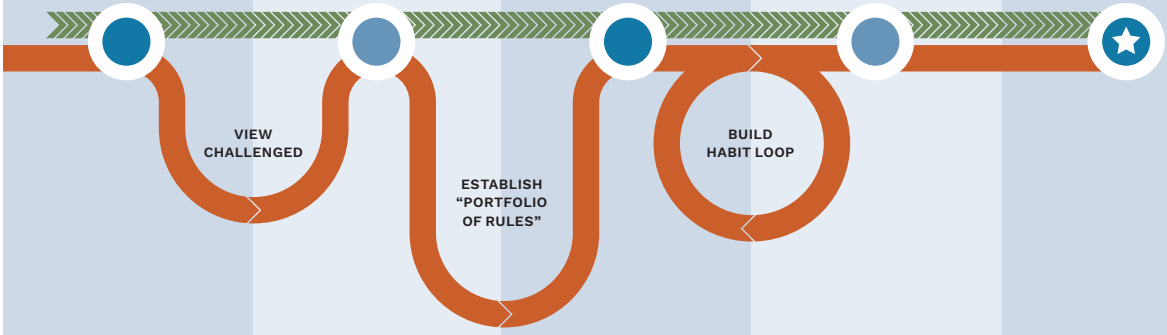
Our approach focused on developing a more useful, holistic way of understanding the problem of HIV infection among adolescent girls and young women, rather than on narrowing it down to a single issue or solution.

Why did we do this? We believe that placing a premium on uniqueness can lead us to ignore what is valuable in current knowledge. We end up searching for one or two new insights, and recommending one or two narrow interventions. For example, “If adolescent girls are worried about getting pregnant, address HIV risk within the context of contraception.” But such a linear mindset ignores precisely the complex web of behavioral factors that makes it so difficult to design effective HIV prevention programs for adolescent girls and young women.

Our approach led us to develop a new frame for understanding decision-making among adolescent girls and young women.

The Journey

STAGE 1 Shaping opinion	STAGE 2 Seeing Reality	STAGE 3 Re-calibrating Relationships	STAGE 4 Embedding habits	STAGE 5 Evolving Habits
As an adolescent girl forms her self-identity, she re-filters or rejects rules imposed on her by society. She educates herself and arrives at a new view of her relationship goals.	Uses her experience to assess the opinions she has formed, and to form her own rules for relationship and sexual health management.	Explores how her resolution works in the real world in various contexts with different pressures and constraints. This entails forming new ways to deal with partners, driven by personal goals and the ability to cope with fallout.	Continues to adhere to her own rules for sexual health decisions, and decisions become habitual rather than deliberate. She tries to make new choices aligning her relationship with her goals.	Consistent adherence to her own sexual health rules, with the tools, confidence and insight to adapt as necessary.
MILESTONE 1 Has formed her own opinion on relationships and how to manage them, as well as on what constitutes sexual health and which habits may be misguided or incorrect.	**MILESTONE 2** Expresses new, idealised resolutions to protect her sexual health.	**MILESTONE 3** No longer uses separate rules or exceptions for various partners but a single rule that protects her sexual health. This milestone represents the 'big flip' from being externally focused to internally focused, with her own needs prioritised.	**MILESTONE 4** Lifestyle choices are aligned with goals. Exhibits predominately consistent and healthy sexual relationship habits.	**MILESTONE 5** Continues to evolve strategies and rules according to life and changing circumstances, while adhering to and supporting her larger goals. She consistently makes decisions that are positive for her.



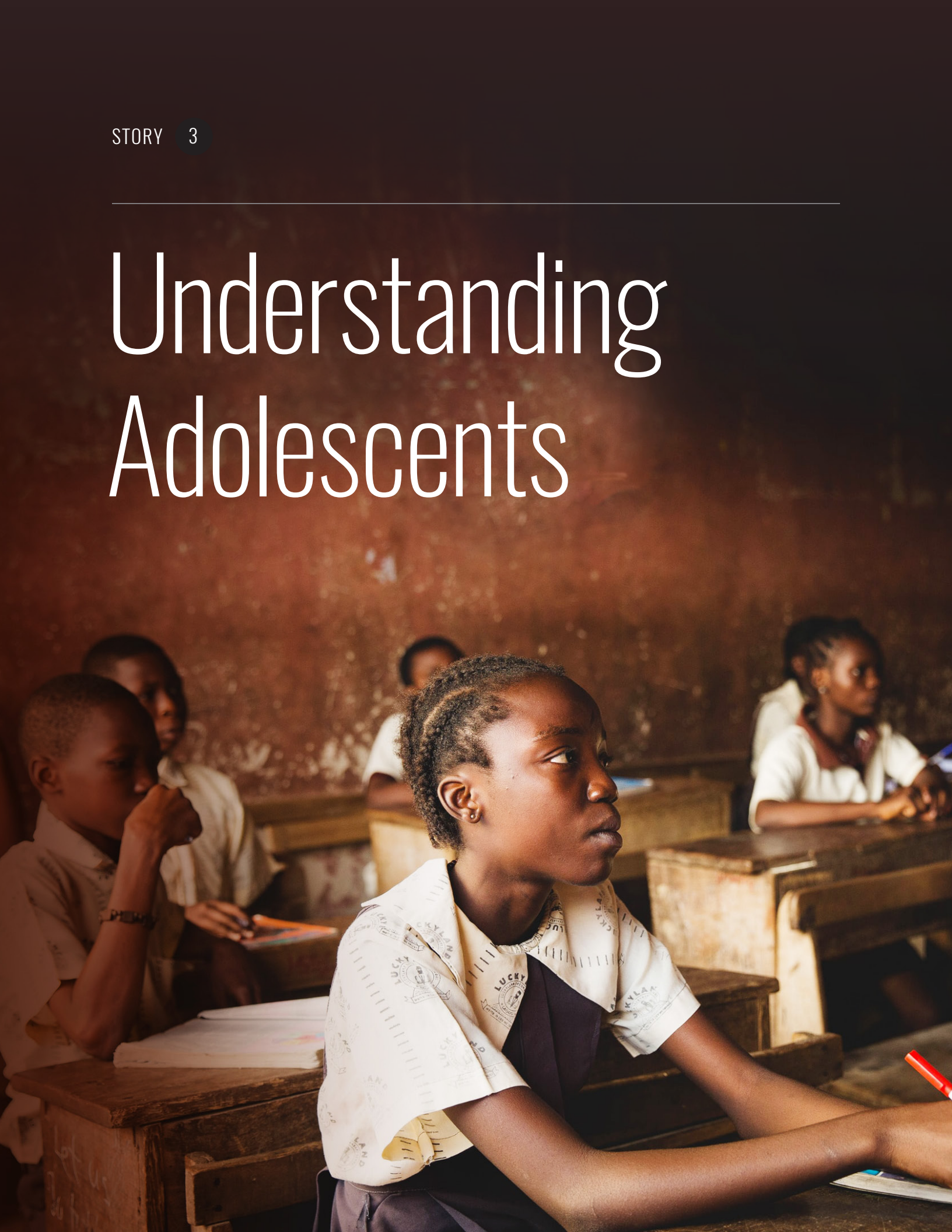
Rather than focusing exclusively on HIV prevention, we contextualized it within the journey of a young woman as she passes through stages of developing her self-understanding and her capacity to manage her sexual and romantic relationships. The journey framework captures the numerous factors that may facilitate or prevent her progress, and it includes milestones that identify which stage she is in. The framework provides a new way to understand, question, and work on the problem of HIV prevention among this crucial population.

Our approach often results in a framework like this that aims not to oversimplify the problem, but to communicate it in a comprehensible way. It acknowledges and is unafraid of complexity. It doesn't offer a solution—but it helps people ask better questions as a first step to addressing the problem. In the design world, this step is sometimes termed "reframing".

Reframing is a tool for satisficing – creating a viable, useful, and acceptable set of interventions for the problem at hand.

STORY 3

Understanding Adolescents



The popularity of adolescence as a subject for film, fiction, and drama is not surprising—for many people, it's one of the most exciting phases of life. Yet adolescence is also one of the periods of greatest vulnerability. Around the world, 6,000 girls and young women aged 15-24 become infected with HIV each week; close to 1,000 young people die every day in road accidents; and adolescents are disproportionately impacted by other forms of violent death. These outcomes are associated with risk-taking.

It's all too easy for those whose adolescence is far behind them to label adolescents as recklessly thrill-seeking for the risks that they take, or simply as too undeveloped—or even stupid—to make good decisions. This kind of narrative is frequently heard in the public health space.

But let's be honest:

If we had the chance to go back in time, would we tell our adolescent self to take fewer risks?

Maybe—but even if we did, what are the chances our adolescent self would listen?

The "heedless adolescent" narrative leads to the diagnosis that adolescents lack proper knowledge and awareness of the risks associated with their behaviors. The linear response is, therefore, to increase risk awareness and education. So we see endless information, education, and communication (IEC) initiatives, but to the surprise of few, changes in risky behaviors remain frustratingly small or nonexistent.

Is it possible that we're oversimplifying the issue?

What if adolescents' behavior is a result not of ignorance or lack of awareness, but of many different factors? What if adolescents know their actions carry risks, but they underestimate these risks, while overestimating the rewards? What if the contextual factors that impact those evaluations of risk and reward play out differently depending on the individual, their community, and the specific behavior in question? If any of this is true—and we believe it is—then the universal, broad-based IEC approach cannot be the most effective strategy.

An example from our work illustrates this problem.

Adolescent girls and young women (AGYW) are one of the population groups most at risk of acquiring HIV (see our story on re-imagining learning). Millions have been spent developing programs to control or manage their risky sexual behaviors, with mechanisms such as community mobilizers to encourage uptake of prevention services and products. This IEC is augmented by expensive media campaigns, but the outcomes continue to be disappointing.

Having spoken to a large number of adolescent girls and young women across South Africa and Tanzania, we found that merely encouraging and providing access to HIV prevention services is unlikely to move the needle.

A different approach is needed.

First, HIV prevention is generally associated with pregnancy, but it may be more effective to dissociate it from family planning, and instead frame it within young women's relationship goals. Second, not all adolescent girls and young women have the same goals. We may need to pursue different intervention strategies among different segments of this population.

	EXTERNALLY-FOCUSED			INTERNALLY-FOCUSED	
	STAGE 1 Shaping Opinion — Opinion Formed	**STAGE 2** Seeing Reality — New Resolutions	**STAGE 3** Re-calibrating Relationships — The Big Flip	**STAGE 4** Embedding Habits — Life-style Aligned	**STAGE 5** Evolving Habits — Continually Evolving
LIFESTYLE SEEKER 	If someone cares about me, they should show me (with gifts)	I need to make sure men are going to provide for me	I don't need to risk my health to live the lifestyle I desire	My relationships are aligned to a successful lifestyle	Relationships continue to be aligned to lifestyle goals
AFFIRMATION SEEKER 	I should be with partners that make me feel desirable and safe	One man is not enough to satisfy my emotional needs	Relationships can fulfill my emotional needs without compromising my health	I am emotionally fulfilled in my relationships	Relationships continue to provide sustained adoration
RESPECT SEEKER 	I can keep myself safe by making good partner choices	No more men – I need to wait until I find men that are trustworthy	I am able to take more control for protecting my health	Sexual health is a shared relationship goal	Relationships continue to be mutually respectful

Finally, we must get out of a medical treatment mindset—"take a pill and you'll be fine"—that tends to persist, even though HIV prevention is a very different context from family planning.

We are negotiating with implementing partners in South African and Tanzania to use this approach (more on that in another story).

We find they need some time to internalize it and change their behaviors. Maybe we're all not so different from adolescents after all...
