Applying Social Norms Theory in CATS Programming
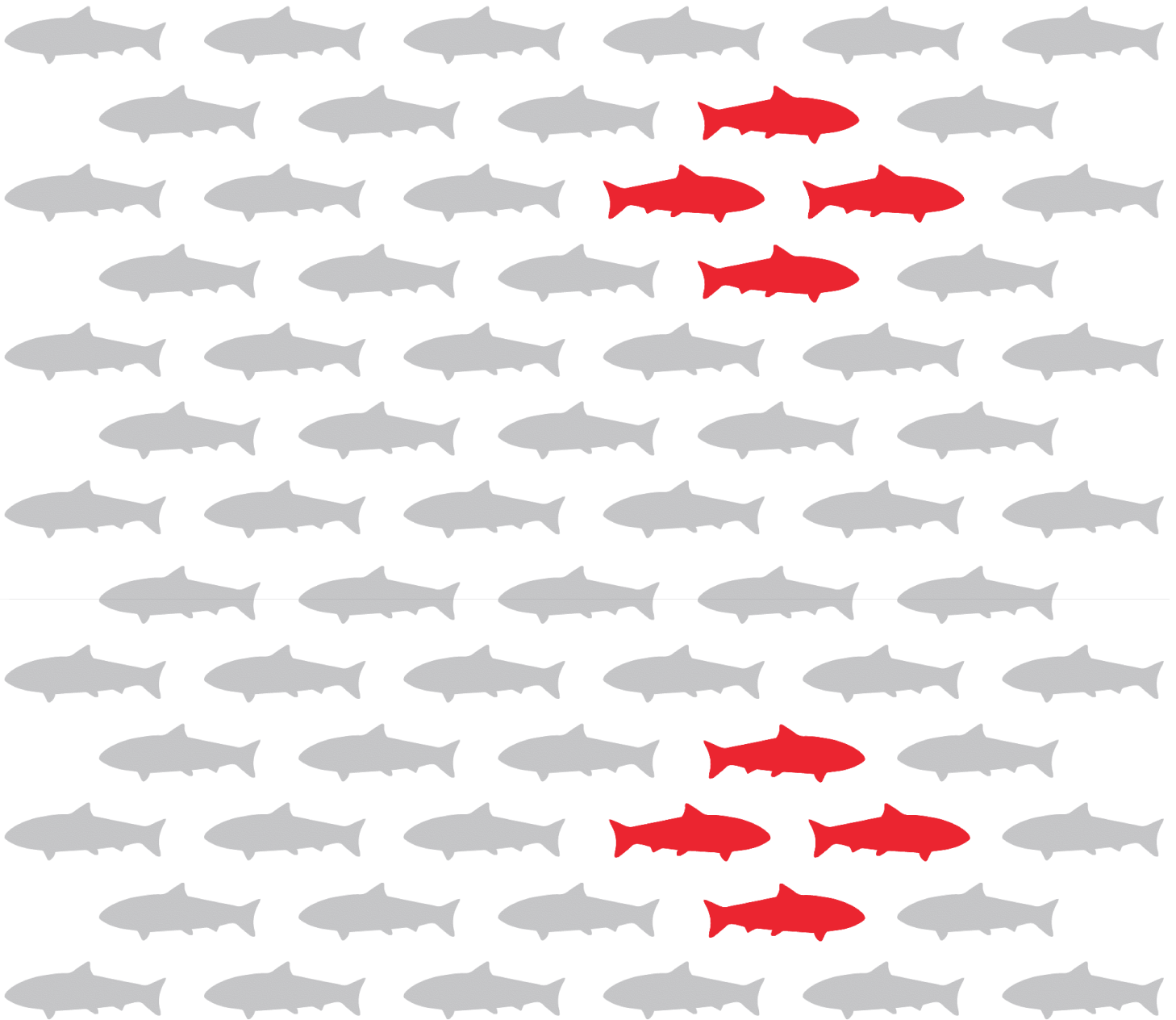
PENN SoNG
University of Pennsylvania **Social Norms Group**

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ACKNOWLEDGEMENTS

Penn Social Norms Group

The ideas and concepts providing the foundation of the course teachings and this manual are from Cristina Bicchieri's *Norms in the Wild: how to diagnose, measure and change social norms,* Oxford University Press, 2016 and her Penn-UNICEF Lectures on Social Norms and Social Change, 2010-2015. The content for this manual was developed thanks to the creative ideas emerging from the 2016 Penn-UNICEF WASH Social Norms Workshop led by Prof. Bicchieri and facilitated by Thomas Noah, Erik Thulin, Marie Barnett and Raj Patel. Erik Thulin, Alex Shepnev and Doug Paletta also contributed thoughts and commentary to the manual's development.

Workshop Organizers, Speakers And Participants

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PREFACE:
Goals of the WASH Guidance Document

The primary goal of this document is to provide necessary information on the importance, nature and application of the theory of social norms to sanitation specialists. In order to promote positive social change with regard to many harmful collective patterns of behavior related to sanitation, understanding the theory of social norms is crucial.

Penn SONG has worked with UNICEF and partner organizations on sanitation and other collective patterns of behavior for many years. These partnerships have produced direct training to sanitation and other specialists on the theory of social norms, as well as a joint Penn/UNICEF Coursera on social norms and social change. Those interested in further knowledge of the nature of social norms and social change are strongly encouraged to seek out the available Coursera training modules. In addition, Cristina Bicchieri – founder of the theory of social norms and Director of Penn SONG – has transformed previous work, notably *The Grammar of Society: The Nature and Dynamics of Social Norms* (2006), into a book dedicated to the application of the theory of social norms to real world problems with Oxford University Press: *Norms in the Wild: How to Diagnose, Measure, and Change Social Norms* (2016). Practitioners eager for further knowledge are strongly encouraged to seek out these source materials.

This document aims to distill the insights from these joint collaborations into one place to aid WASH specialists aiming to bring about positive social change with regard to harmful collective patterns of behavior related to sanitation.

This document is not meant as a replacement to the *Handbook on Community-Led Total Sanitation* or *Facilitating "Hands-On" Training Workshops for Community-Led Total Sanitation: A Trainer's Training Guide* or any other relevant sanitation document. Rather, this document aims to complement the literature in sanitation by blending aspects of the social norm approach to social change with existing best practices and standards, wherever possible.
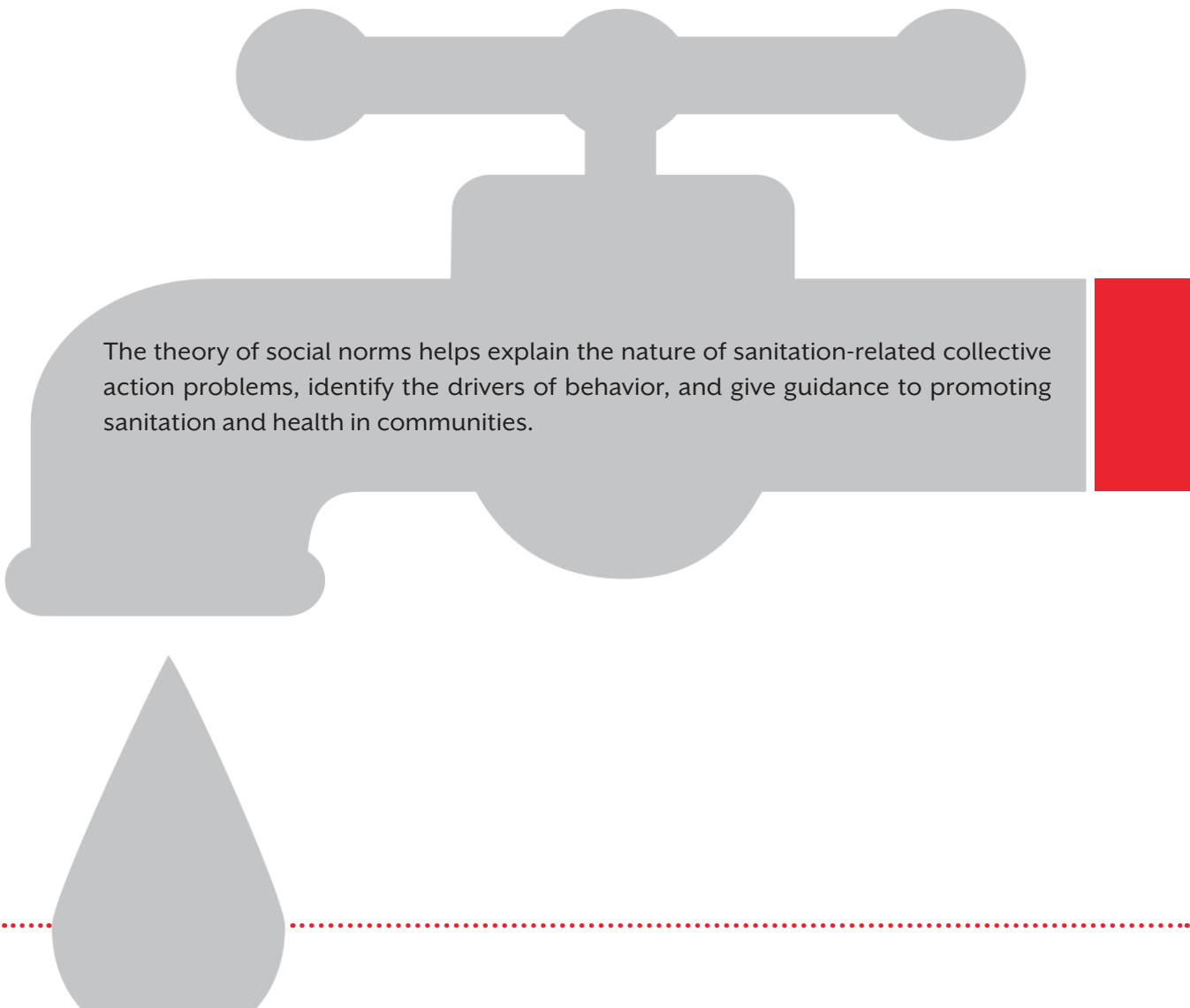
Why would the theory of social norms help complement existing best practices in WASH? We need to be able to explain and predict behavior. For example, we need to explain why people defecate in the open, and we need to be able to predict the conditions under which they would use latrines. In order to explain and predict behavior, the theory of social norms says that we must understand *reasons for action*. The theory presupposes that people do what they do because of their reasons for action; therefore, in order to explain and predict behavior, we must identify those reasons. Further, we must be able to differentiate behaviors, especially collective patterns of behavior. This is to say, not all collective patterns of behavior are due to the same reasons. Moreover, a single type of collective behavior – say, latrine maintenance – may be due to one kind of reason in one setting but to another kind of reason in a different setting. In order to understand the reasons that motivate collective behaviors, we must be guided by a specific model of behavior. Finally, we must be able to measure the behavior and the reasons for action. In order to explain and predict behavior, a model must have measurable components. The theory of social norms provides a specific model of behavior that has measurable components allowing us to identify reasons for action and to differentiate collective patterns of behavior. Identifying these reasons and diagnosing the collective pattern of behavior in a reliably measurable way is a key to successful interventions.

This is not to say that the social norms approach is a panacea that will solve all remaining difficulties in promoting positive social change with respect to sanitation-related behaviors. Social change is often difficult to achieve, and there are often a variety of factors that contribute to existing harmful practices – technological, legal, political, economic, and so on. The theory of social norms, though, can serve as an additional tool to bring about social change – in particular, by understanding what motivates people to engage in certain collective patterns of behavior, by providing new tools of measurement and diagnosis that reveal the drivers of behavior, and by synthesizing insights concerning how to bring about social change once one has reliably diagnosed and measured the drivers of behavior.

One aspect of sanitation that the theory of social norms brings out clearly is that communities are often facing a collective action problem whenever they move from open defecation to latrine use.

Collective action is often associated with a social dilemma: i.e., a situation in which what is in the best interest of each individual makes everyone worse off. For example, it can be in the "best interest" of each individual to defecate in the open – they do not have to spend money on building or maintaining latrines. But if every individual thinks that way and acts on it, then the community suffers a negative public health impact. Since sanitation requires the cooperation of all in a community in order to reap public benefits, social norms can become a powerful mechanism for solving the social dilemma that is embedded in collective action.

The theory of social norms helps explain the nature of sanitation-related collective action problems, identify the drivers of behavior, and give guidance to promoting sanitation and health in communities.

SECTION 1:
The Basic Concepts of the Theory of Social Norms

The theory of social norms starts with asking the basic question: Why do people do what they do? We can make the question more focused by asking about specific behaviors: Why do people engage in open defecation? Why do people not wash their hands? We can make the question more focused still by asking about the specific behaviors of specific people: Why do these people in this area engage in open defecation?

The people who are engaged in the harmful collective pattern of behavior and those who work to change or eliminate the behavior will each have ideas about why, for example, people are engaging in open defecation. But it is imperative that we reliably know why people are openly defecating, and it is insufficient to rely upon intuition or educated guesses. Misdiagnosis or misidentification of what is causing the behavior could lead to failed interventions, which unnecessarily prolong the negative public health impacts of the harmful behavior and end up costing additional time and money.

The basic concepts of the theory of social norms provide the groundwork for a theory of social behavior and social change. By using relatively simple, well-grounded, and, importantly, *measureable* concepts, the theory of social norms allows us to identify the causes and drivers of behavior (Bicchieri 2006, 2016).

These are the relevant concepts:

▶ Independent and Interdependent Behaviors
▶ Factual Beliefs and Personal Normative Beliefs
▶ Empirical Expectations and Normative Expectations
▶ Conditional and Unconditional Preferences
▶ Reference Networks

With these concepts, we can both *measure* and *diagnose* different collective patterns of behavior by referencing their characteristic motivational profile. There are four types of collective patterns of behavior:

▶ Custom
▶ Moral Norm
▶ Descriptive Norm
▶ Social Norm

Each type of collective pattern of behavior has a different type of reason for action. Two are especially salient for work on sanitation: customs and social norms. As we will see, many harmful collective patterns of behavior related to sanitation – such as open defecation – are customs; that is, many people engage in open defecation because they believe that it meets their needs and that open defecation is not that harmful to themselves and relevant others. They almost never defecate in the open because they believe that it is the morally right thing to do or because they believe that relevant others think that they should defecate in that way. However, to eliminate open defecation in a particular group of people, we will often want to create a social norm promoting latrine usage and maintenance; that is, people will need to believe that relevant others think they should use and maintain latrines, and that belief will need to motivate people to engage in open defecation-free behaviors.

This section explains and develops the basic concepts of the theory of social norms with specific reference to sanitation-related behaviors of interest.

For more in-depth explanations of the relevant theory and aspects of this section, please see the following:

▸ C. Bicchieri, *Norms in the Wild*, Oxford University Press 2016. Chapter 1.

▸ C. Bicchieri and R. Muldoon, "Social Norms." *The Stanford Encyclopedia of Philosophy*, 2011.

▸ C. Bicchieri, *The Grammar of Society: The Nature and Dynamics of Social Norms*, Cambridge University Press, 2006. Chapter 1.

1.1 Independent and Interdependent Behaviors

The first and most basic distinction in the theory of social norms is the distinction between *independent* and *interdependent* behaviors.

A behavior is *independent* just in case an individual behaves in a certain way *regardless* of whether others also behave in that way and whether others think that they should behave in a certain way.

A behavior is *interdependent* just in case an individual behaves in a certain way *because* others also behave in that way or *because* others thinks that they should behave in a certain way or *both*.

It can be difficult to reliably know whether a behavior is independent or interdependent merely by observing the behavior. A behavior that is independent in one context among one set of people may be interdependent in another context or among another set of people. Take the example of someone using a latrine. In an OD community, someone may behave that way – use a latrine – purely due to personal preference (an independent action). That exact same behavior in an ODF community may be due to fear of social sanctions, shaming or punishment (an interdependent action). In the first case, no one else's behavior or expectations mattered. In the second, they motivated the behavior. Observation of behavior, per se, does not tell us whether the behavior is independent or interdependent.

However, we know from many past experiences that open defecation – a harmful collective pattern of behavior – is often *independent.* Even though people may rightly believe that others in their community are practicing open defecation, that belief is not *causing* them to defecate in the open. Rather, they defecate in the open because they believe that this is a convenient way to meet their need of eliminating bodily waste.

INDEPENDENT CHOICE
one in which what I choose
does not depend on what others choose.

INTERDEPENDENT CHOICE
one in which what I choose
depends, in part, on what others choose.

1.2 Factual Beliefs and Personal Normative Beliefs

The second basic distinction is between factual beliefs and personal normative beliefs.

Factual beliefs are beliefs about states of affairs or how the world is. One of the most relevant types of factual beliefs for our purposes are beliefs about cause and effect.

Here are some examples of factual beliefs relevant to sanitation:

▸ Children's feces are safe.

▸ Most mothers do not wash their hands, and their children are healthy.

▸ Open defecation is a fertilizer and not harmful.

▸ It is difficult to build a latrine in this terrain.

▸ Most schools cannot afford water and soap.

▸ No one will maintain the latrine.

Note that it is possible for factual beliefs to be wrong or false. The belief "Children's feces are safe" is unfortunately common in many communities that practice open defecation, but it is false. The belief "Most mothers do not wash their hands, and their children are healthy" is a false causal belief. People who hold this belief think that there is no causal connection between handwashing and children's health. This may, in some places, be a true but disappointing belief.

Factual beliefs contribute and are causally related to people's preferences.

Personal normative beliefs are beliefs about what people should do. Personal normative beliefs can be about what *I should do* or what *we should do* or what *other people should do* or what *everyone should do*. Notice beliefs of this type all have a "should" element. Whenever there is a "should" element to a belief, then we are dealing with normativity.

There are two types of personal normative beliefs: prudential and non-prudential. *Prudential personal normative beliefs* are beliefs about what people should do based on considerations of prudence or what is in their best interest. *Non-prudential personal normative beliefs,* by contrast, are beliefs about what people should do based on considerations over and above prudence. Exemplary cases on non-prudential personal normative beliefs are beliefs about what people should do based upon what morality or religion commands.

Here are some personal normative beliefs that may be relevant to sanitation:

▸ A real man should not use a latrine (non-prudential).

▸ A person should not put his feces on top of another person's, especially of an opposite gender, as mixing the feces would anger the gods (non-prudential).

▸ People should defecate far away from their homes to avoid the smell of feces (prudential).

▸ Human waste should be deposited in the fields as it fertilizes crops and makes the corn taste sweet (prudential).

The first two are examples of non-prudential personal normative beliefs. The first belief is non-prudential because the explanation of the "should" references a "real man" – that is, to the "should" comes from existing ideas about masculinity and the behaviors expected of a "real man." The second is more obviously non-prudential in that it references a religious belief. The next two examples are prudential – the "should" comes from how to action helps people get what they want: avoiding bad smells and producing good crops, respectively.

ATTITUDES: evaluative dispositions toward some person, object or behavior

- Broad category
- Difficult to measure
- Does not distinguish readily between prudential and non-prudential personal normative beliefs

It is common in WASH programming to rely upon the idea of attitudes. Attitudes are evaluative dispositions toward some person, object, or behavior. As such, "attitude" is a broad category that includes likings and dislikings along with evaluations and personal normative beliefs. In this way, personal normative beliefs are a subset of the broader category of attitude. The theory of social norms uses the concept of *personal normative belief* rather than *attitude* because the concept attitude does not clearly distinguish prudential reasons from non-prudential reasons in the way that personal normative belief does. If someone believes that they should engage in some behavior because it is the morally right thing to do (non-prudential), that requires a very different intervention strategy than if someone believes they should engage in some behavior because it is convenient to them (prudential). Because of this difference in intervention strategy, we must make sure to use concepts that identify the causally-relevant factors that drive specific behaviors. Many of our "attitudes" or broadly evaluative beliefs are causally inert, and we must be able to distinguish the prudential from the non-prudential. Hence, the theory of social norms does not make use of the broader category of attitude.

Personal normative beliefs contribute to preferences and are causally relevant for them. While factual beliefs will always matter to all behaviors, personal normative beliefs will not. Personal normative beliefs will matter only when they are causing, at least in part, the behavior.

PERSONAL NORMATIVE BELIEFS:

beliefs about what people should do

- Narrower category
- Simple to measure
- Distinguishes between prudential and non-prudential

1.3 Empirical and Normative Expectations

The third important distinction in the theory is the distinction between empirical expectations and normative expectations. The theory of social norms groups these two types of expectations under the umbrella concept of "social expectations," for they are beliefs about other people. However, the distinction between empirical expectations and normative expectations is absolutely critical and a key aspect of the theory of social norms.

Empirical expectations are beliefs about what we expect others to do.

Here are some examples of empirical expectations that may be relevant to sanitation:

EMPIRICAL EXPECTATIONS:

what we believe others do

- Everyone in my village practices open defecation.
- Most mothers and children do not wash their hands with soap and water at critical times.
- People in the nearby village are building latrines.

Note that each of these empirical expectations are beliefs about what others do or are doing. But keep in mind that, as in the case with factual beliefs, empirical expectations can be false. For example, a person may believe that "most mothers and children do not wash their hands with soap and water at critical times," but that belief could be mistaken. Empirical expectations are more likely to be true when the behavior is public and repeatable.

Normative expectations are beliefs about what personal normative beliefs others have. Put another way, normative expectations are beliefs about what others think we should do.

Here are some examples of normative expectations that may be relevant to sanitation:

NORMATIVE EXPECTATIONS: what we believe others to think we should do

▸ Other people in the village think I should not defecate in the open.

▸ My friends think that people should defecate far away from their homes in order to avoid the smell of feces.

▸ Men believe that women should not use the same latrines as the men do.

Note that, like factual beliefs and empirical expectations, normative expectations are capable of being true or false. It is either true or false that other people in the village think I should not defecate in the open. Therefore, as in the case of factual beliefs and empirical expectations, normative expectations can be correct or incorrect.

Normative expectations should not be confused with personal normative beliefs! Personal normative beliefs are personal beliefs about what people should do. Normative expectations are beliefs about other people's personal beliefs about what people should do. A man may believe that it is perfectly acceptable for women to use the same latrines as men (personal normative belief), while also believing that all the other men think that women should not use the same latrines as men (normative expectation).

1.4 Conditional Preferences and Unconditional Preferences

The fourth basic distinction is the distinction between conditional preferences and unconditional preferences.

A preference is a disposition to act in a certain way in a certain situation. Importantly, preferences are intimately connected with choice. If I choose A over B – for whatever reason – then we say that I prefer A over B. For example, if I choose to defecate in the open rather than to use a latrine, then I prefer to defecate in the open rather than to use a latrine. Or say that I always wash my hands prior to handling food rather than simply handling the food without washing my hands; there, I prefer to wash hands prior to handling food rather than the alternative of not washing hands.

Importantly, preferences are not the same as likings. I may like B more than A, but if I always choose A over B, then I prefer A over B. For example, assume that there is an open defecation-free village. A person in that village may still like to defecate in the open (for example, defecating in the open would mean that they would not have to walk to a latrine or lose time in the field). However, because the person believes that the other villagers think they should use the latrine, the person uses the latrine instead. In this example, the person prefers to use the latrine but likes to defecate in the open. The liking does not translate into behavior though, for the person chooses to use the latrine. On the contrary, preferences are tightly connected to choice and behavior in a way that mere likings are not. This is a crucial point because we should not assume in programming or interventions that people like some behavior because they engage in it. Sometimes people like the behaviors they are engaged in, but at other times they do not. That said, people always *prefer* the behaviors that they engage in.

Preferences can either be *unconditional* or *conditional.* Of course, in some sense, all of our beliefs are subject to some conditions. However, the theory of social norms divides preferences on the basis of whether they are conditional upon social expectations – empirical and normative.

A preference is socially *unconditional* just in case the person prefers to engage in the behavior *regardless* of whether others also engage in the behavior and whether others think that they should engage in the behavior. That is, when people have socially unconditional preferences, they prefer to engage in the behavior regardless of their empirical and normative expectations.

A preference is socially *conditional* when the person prefers to engage in the behavior *because* others are engaging in the behavior or *because* others think that they should engage in the behavior. That is, when people have socially conditional preferences, they prefer to engage in the behavior conditional upon empirical expectations, normative expectations, or both. From now on, when we say "conditional" or "unconditional" preference, we always mean "socially conditional" or "socially unconditional."

The distinction between unconditional preferences and conditional preferences mirrors the distinction between independent behaviors and interdependent behaviors. If I have an unconditional preference to engage in open defecation and if enough others have a similar preference, then open defecation in the village is an independent behavior. If I prefer to use a latrine because I believe that others think I should and if enough others have a similar preference, then latrine use in the village is an interdependent behavior.

Importantly, if social expectations matter to behavior, then a change in social expectations should produce a change in behavior.

DISTINCTION BETWEEN CONDITIONAL AND UNCONDITIONAL PREFERENCES

▶ **PREFERENCE:** A disposition to act in a certain way in a certain situation.

▶ **CONDITIONAL PREFERENCE:** A preference is socially conditional when it depends on what I believe others do (empirical expectations) or what I believe others think I should do (normative expectations)

▶ **UNCONDITIONAL PREFERENCE:** A preference is socially unconditional when it does not matter what I believe others do (empirical expectations) or what I believe others think I should do (normative expectations)

1.5 Reference Networks

The fifth and final concept is that of a reference network.

If a person has a socially conditional preference to engage in some behavior, then their behavior depends, at least in part, on their empirical and/or normative expectations about other people. But which other people? The answer is that it varies for the type of behavior, situation and person considered. When you drive in New York, only the other drivers, pedestrians, cyclists, etc. that you may encounter matter to your choices. When you cook for your family, family members matter to your choice. Even if a Somali lives in London, it is well possible that, in matters of marriage, the people that matter to her are her extended family in Somalia. Only social expectations about certain relevant others will matter for the behavior – that is, cause the behavior.

A *reference network* is composed of those individuals whose behaviors and beliefs matter to my choice. When I am choosing whether to engage in some behavior, I *refer* to my social expectations of certain others.

The people who matter to one's choice vary. In some cases, it may just be family members. In other cases, it could be a religious authority or co-workers or the entire village.

It is often the case in open defecation free communities that the reference network consists of the entire village. People will refer to their expectations about whether other community members are using latrines and whether other community members think that they should use latrines.

> **THE REFERENCE NETWORK IS COMPOSED OF THE PEOPLE WHO MATTER TO ONE'S CHOICES.**
>
> **The behaviors and beliefs of people inside my reference network matter to me.**
> **The behaviors and beliefs of people outside my reference network matter very little or not at all.**

1.6 Putting the Concepts to Work: Diagnosis

With this stock of relatively simple, clear and measurable concepts, we can diagnose different collective patterns of behavior.

The theory of social norms identifies four types of collective patterns of behavior:

▶ Custom
▶ Moral Norm
▶ Descriptive Norm
▶ Social Norm

Again, for many behaviors relevant to sanitation, the key types of collective patterns of behavior will be customs and social norms.

An important thing to note is that "custom," "moral norm," "descriptive norm," and "social norm" are being used in a technical sense. In what follows, there will be precise definitions of each of these terms. In social science and in programming, these terms are often used interchangeably. But, in the theory of social norms, these are all different types of behavior, with different characteristic motivational profiles, that require different intervention strategies.

BEHAVIOR

INDEPENDENT ACTION

INTERDEPENDENT ACTION

because it's useful or meets a need

because it's moral or right

because you expect others to do it

because you expect others to do it and you think they expect you should too

CUSTOM

MORAL RULE

DESCRIPTIVE NORM

SOCIAL NORM

1.6.1 Customs

A *custom* is a habitual pattern of behavior such that individuals prefer to conform to it because it meets their needs.

ESSENTIAL FEATURES OF CUSTOMS

· "I do it because it meets my needs."

· Unconditionally preferred (independent)

· Social expectations (empirical and normative) don't matter

· It meets a need

Customs are practices we engage in primarily because we think they will meet our needs or satisfy our desires. A practice is a custom, then, when we do it independently of our social expectations. That is, empirical and normative expectations do not matter to my choice: I am not motivated to engage in a custom by my belief that others are doing it or by my belief that others expect me to do it. Instead, I do it because it suits me: I believe it serves my purposes. People do not walk on the shady side of a street because of what they think others believe or do, they do it to stay cool.

Again, notice that this theory uses "custom" in a way that is very different from usual uses of the word: a "custom" in this sense is not necessarily a cherished tradition or something that we do self-consciously because we think it is "part of our culture." It is just something we believe is useful.

In almost all scenarios, open defecation is a custom. People defecate in the open, in most instances, because they believe that it meets a need to get rid of bodily waste. They prefer to defecate in the open because it meets that need. They may have relevant factual beliefs, such as that children's feces are not harmful or that it is too costly to build and maintain a latrine. They may believe that others are also defecating in the open, but that empirical expectation does not matter to their choice. Put another way, they are not defecating in the open *because* others are so doing. Rather, they are defecating in the open because it is convenient. In some cases, there are other considerations besides convenience. For example, open defecation practices may facilitate certain kinds of social interactions that are also seen as useful.

It is not the case that open defecation is always a custom. However, it is a legitimate default assumption that open defecation in many contexts is a custom. The motivational profile captures a large majority of cases.

There are a couple of ways to change customs. First, because customs rely on factual beliefs, you can target those factual beliefs. Suppose that people believe that it is too costly to build a latrine but that, in fact, there are ways to construct them that are not too costly. You can present individuals with the alternative, and, if their behavior is motivated by the belief about cost, change the behavior. Alternatively, you could change their personal normative beliefs or create new preferences. This is what marketing attempts to do: create new preferences. Or, importantly, you could attempt to create social norms. In a social norm, people prefer to engage in some behavior conditional upon their empirical and normative expectations. This last method is already an essential part of CLTS interventions.

Occasionally, there are external conditions that produce particular needs or unconditional preferences. If it really is too costly to build a latrine or if there are no adequate resources, then people will unconditionally prefer to defecate in the open. But that preference could change if those external conditions were to change.

1.6.2 Moral Norms

A *moral norm* is a rule of behavior such that individuals prefer to conform to it because it is the right thing to do.

Moral norms are practices we engage in primarily because we believe that they are the right thing to do; they are what morality demands of us. Like customs, we follow genuinely moral norms independently of our social expectations; if we strongly believe something is morally right, we should often do it no matter what other people do or think. Similarly, if we believe something is morally wrong, we should not do it just because other do or because others think we should. Moral norms differ from customs because we follow them out of a sense of duty rather than a sense of self-interest.

> **ESSENTIALS OF MORAL NORMS**
> ....
> - "I do it because it's right."
> - Unconditionally preferred (independent)
> - Social expectations (empirical and normative) don't matter
> - Believe it's right (Non-prudential personal normative belief)

Moral norms are often not relevant to harmful sanitation-related behaviors. The overwhelming majority of people are not engaging in open defecation or failing to wash their hands at critical moments *because* they think that open defecation or not washing hands is morally required.

Attempting to create a moral norm about being open defecation-free or handwashing could be difficult. Changing individuals' moral beliefs is a sensitive and intensive process that has a number of pitfalls. Further, most people already have some non-prudential personal normative beliefs that can be leveraged to create positive social change. For example, most people have the non-prudential personal normative belief that it is morally required to not harm children. What they need is not a change in moral belief but a change in factual belief about the relative dangers of open defecation.

1.6.3 Descriptive Norms

> **ESSENTIALS OF DESCRIPTIVE NORMS**
> ....
> - "I do it because other people do."
> - Conditionally preferred (interdependent)
> - Empirical expectations matter . . . but normative expectations do not
> - Coordinate actions with what other people do

A *descriptive norm* is a pattern of behavior such that individuals prefer to conform to it on the condition that they believe most people in their reference network conform to it.

Descriptive norms are practices we engage in because, at least in part, we want to coordinate what we do with what other people in our reference network are doing: "I do it because I believe others do the same." Hence, descriptive norms, unlike customs or moral norms, are *interdependent:* we prefer to engage in them only on the condition that we believe others are doing the same. They depend, that is, on our empirical expectations.

There are a couple of scenarios where empirical expectation matter to choice. The expectations may be *unilateral.* When we imitate others, empirical expectations matter to choice. But those whom we imitate are not imitating us back. That is why the expectation is unilateral or "one-way." By contrast, the expectations could be *multilateral* or "reciprocal." In such a case, a person engages in some behavior because they expect others to do so and *vice versa.* Consider which side of the road to drive on: everyone wants to coordinate with everyone else to drive on one side of the road so that there are no accidents.

If open defecation were a descriptive norm, then we should expect that a mere change in empirical expectations would be sufficient to bring about the desired change to latrine use. However, we know from past experiences that people coming to believe that others are using a latrine is often insufficient to bring about positive social change in this regard. That said, there may be some communities in which open defecation is a descriptive norm.

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ESSENTIALS OF SOCIAL NORMS

· ·

- **"I do it because other people expect me to."**

- **Conditionally preferred (interdependent)**

- **Empirical _and_ normative expectations matter**

- **It meets expectations of people in my reference Network**

- **Sometimes to avoid sanctions (informal punishments)**

</div>

1.6.4 Social Norms

A _social norm_ is a rule of behavior such that individuals prefer to conform to it on the condition that they believe that most people in their reference network conform to it (empirical expectations) and most people in the reference network believe that they should conform to it (normative expectations).

Social norms are rules of behavior we follow because we believe others follow them and because we believe those other people think we should follow them too. Social norms, therefore, depend on both empirical and normative expectations. Like descriptive norms, social norms govern interdependent behavior. But unlike descriptive norms, empirical expectations alone are not enough. To prefer to follow a social norm, a person must not only believe that others are doing the same; they must also believe that others expect them to conform as well. When following a social norm, in part, "I do it because other people expect me to."

There are many situations in which immediate selfish interests conflict with acting in accordance with collective interest. Open defecation may be one of these cases. Even if I see that everyone else is using a latrine, I might be very happy to defecate in the open. Others are using latrines; what is the harm in my defecating in the open? If enough people think like this, then a community that was open defecation-free can revert to open defecation. What can keep the community using latrines in this case is the presence of a social norm: "I don't defecate in the open because I know that all the others think I should not and would therefore be angry if I did." This kind of social pressure can be extremely powerful, in both beneficial and harmful ways. Social norms often rely upon sanctions, and sanctions can be an indicator that a social norm exits. These informal, not legal, sanctions include things like praise, gossip, social isolation, and social embarrassment.
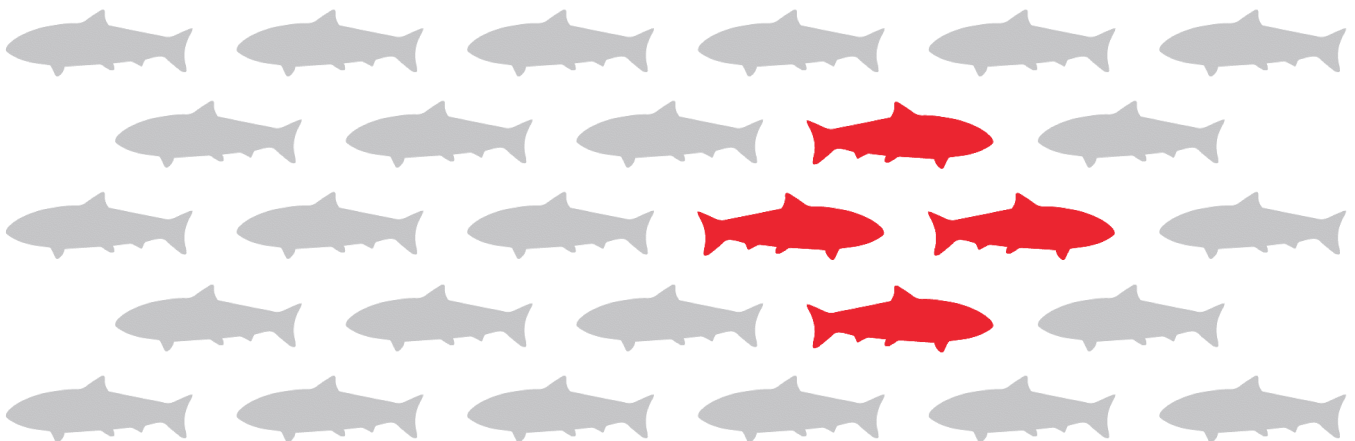
SECTION 2:
Measuring Social Norms

We have in place the basic building blocks of the theory of social norms along with the diagnostic schema for differentiating collective patterns of behavior by their characteristic motivational profiles. Now we turn to *measurement,* which is a crucial part of social norm theory. Successful sanitation interventions require being able to reliably know why people are engaging in harmful collective patterns of behavior. So we must be able to measure the behaviors, beliefs, and social expectations of different networks of individuals if we wish to have successful and sustainable interventions.

For more in-depth explanations of the relevant theory and aspects of this section, please see the following:

▸ C. Bicchieri, *Norms in the Wild,* Oxford University, Press 2016. Chapter 2.

▸ Bicchieri, J.W. Lindemans and T. Jiang, "A Structured Approach to the Diagnostic of Collective Practices." *Frontiers in Psychology,* vol. 5, December 2014.

▸ C. Bicchieri and A. Chavez, "Behaving as Expected: Public Information and Fairness Norms." *Journal of Behavioral Decision Making,* 23 (2): 161-178, 2010.

▸ C. Bicchieri and E. Xiao, "Do the right thing: but only if others do so." *Journal of Behavioral Decision Making,* 22: 191-208, 2009.

2.1 Current Standards in WASH/Sanitation Measurement

Current standards in WASH and sanitation measurement are insufficient to get all the information required by the theory of social norms. Although there are some efforts to include social norm and motivational questions into existing questionnaires, there is still more work to do.

Current measurement often relies on Knowledge, Attitude and Practice (KAP) surveys. These surveys do provide some information about empirical expectation and behavioral prevalence but fail to distinguish all of the key concepts from section 1. There is also community-led direct monitoring and proxy measure evaluation in terms of public health impacts.

The following subsections provide information about measuring the basic concepts of the theory of social norms. The measures should be thought of as supplements to existing measures rather than overhauls. Current measures do provide useful information. However, we must also precisely measure peoples' reasons for engaging in harmful collective patterns of behavior if we wish to have a fuller and deeper understanding of the target behavior. Further, these additional measures are necessary in order to keep separate questions about personal normative beliefs from normative expectation, which current surveys often merge.

CATS and sanitation programming often seeks to create a social norm around latrine use. So we need to not only be able to measure what is causing the original harmful collective pattern of behavior, but we also must be able to measure when intervention strategies have successfully created a social norm. This is key to preventing slippage and maintaining the new positive collective pattern of behavior.

We must have measures of the following:

▸ Reference Network
▸ Behavior
▸ Factual Beliefs
▸ Personal Normative Beliefs
▸ Empirical Expectations
▸ Normative Expectations
▸ Belief in the Presence of Sanctions
▸ Conditionality of Preference

Current measures are sufficient to capture at least some of the above, for example behavior and factual beliefs. The sub-sections that follow will focus on particular measures that are important but often not captured.

In measuring whether an intervention was successful in promoting a new social norm, we must have answers to the following questions:

▸ Do people expect that others (who matter to them) conform to the specific behavioral rule? That is, do empirical expectations exist?

▸ Do people expect that others (who matter to them) think they should conform to the specific behavior rule? That is, do normative expectations exist?

▸ Is there some form of punishment for those who transgress the rule?

▸ Is the preference to conform to the specific behavioral rule conditional on those social expectations and sanctions? That is, does a conditional preference to conform exist?

If the answer to all four questions is "yes," then a social norm exists or has been created. If the answer is "no" to any of the four questions, then a social norm does not exist or has not been created.

2.2 Networks

First and foremost, when we measure expectations it must be clear to whom these expectations refer. This is why we need to measure reference networks. Social norms are a property of networks, not individuals.

There are three primary methods for uncovering, identifying, and measuring networks. The approaches – in descending order of both cost but also information about social structure – are the full network approach, the snowball approach, and the egocentric approach. Each method has particular strengths and weaknesses, although the snowball approach strikes a nice balance between cost and information about social structure that suggests it may be most practical in many circumstances.

TIE —
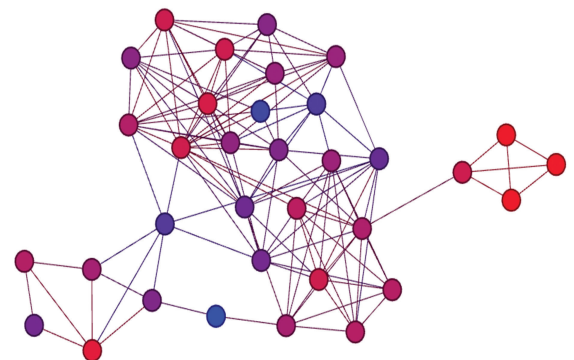
NODE —

In each approach, we must first identify the relations that obtain between individuals in a particular group. Networks are sets of relations and are built out of "nodes" and "ties" (also sometimes called "edges"). Nodes represent individuals or families or villages, depending upon the level of analysis. Ties represent relations that obtain between nodes. Ties can be "directed" or "undirected." Directed ties represent one-way relationships. For example, "being the son of" is a one-way relation – two individuals cannot each be the son of each other. By contrast, undirected ties represent two-way relationships. For example, "uses the same toilet as" is a two-way relation – if A uses the same toilet as B, then B uses the same toilet as A.

There are particular networks of interest to sanitation. The first and most obvious is the reference network. Again, a reference network is composed of those individuals whose beliefs and behaviors matter to one's choice. In some case these ties will be directed, in others undirected. The second is the trust network, which also varies by whether it is directed or not. The information-sharing relation is also important. Finally, there will be particular relations that are of interest with respect to a target behavior. For example, when considering open defecation, "uses the same toilet as" is an important relation.

In the *full network approach,* an experimenter surveys everyone in a population. They ask to each individual the questions of interest. And, importantly, they ask everyone in the target population the same questions at once. From there, they can use answers to generate the network. For example:

▸ Who might be disappointed if you defecate in the open?

▸ Whose opinion do you respect?

▸ Who do you talk to daily?

▸ Who uses the same toilet as you?

The full network approach is the costliest but most complete approach. Because it is so resource and labor intensive, it is likely a poor fit for measuring large populations. However, it may be appropriate in small villages.

In the *snowball approach,* an experimenter asks one or a small number of people whatever questions they have. As the respondents list other people in their responses, the experimenter then goes to those individuals and surveys them as well. The experimenter stops surveying individuals either when they stop getting new people or when they decide that they have enough data to map the network.

This method has the benefit that it is not as costly and resource-intensive as the full network approach. However, the snowball approach is less informative of social structure than the full network approach because the experimenter is not capturing the information of everyone in the population. The experimenter will have to make inferences from the survey group to the general population. This is the case when a network is disconnected. In a *connected network,* there is a path from each node to any other node in the network. In a *disconnected network,* there is not a path from each node to any other node. "Paths" are a measure of distance between nodes.

A network is not "good" because it is connected or "bad" because it is disconnected. It depends on the particular relation that the ties represent in the network. "Trust" may be a good relation to have in a connected network, while "uses the same toilet as" may potentially be bad since a connected network that uses the same toilet represents a situation where everyone is using the same (perhaps few) resources.

That said, if you are dealing with a disconnected network (with respect to say, the information-sharing relation), the snowball method may risk missing out on components of a disconnected networks. On the other hand, the snowball approach can be useful for tracking down sub-populations within larger populations. When using a snowball approach, it is therefore crucial that you are sampling from multiple parts of the population to make sure that you are hitting all relevant sections of a network, regardless of whether the network is connected or disconnected. Careful choice of starting points in the initial survey is crucial.

In the *egocentric approach,* an experimenter surveys a group of individuals with a set of questions. For example, a surveyor may ask, "Whose opinion do you respect?" or "Who do you talk to daily?" The experimenter then asks the same questions to the same individuals, but this time the questions are about their friends. For example, "Of those whose opinions you respect, whose opinions do they respect?" or "Of those you talk to daily, who do they talk to daily?" And so on. Unlike the snowball approach, the experimenter does not then go to the individuals the respondents listed.

This approach is the least informative of social structure of the three. People may know who they trust but are more likely to be mistaken about who those people trust. But the method is also cheap since the experimenter is not asking the questions to many individuals in the network. In a large city, the egocentric approach may be useful. If repeated, the method may identify natural opinion leaders (if, for example, the responses frequently draw out particular individuals as salient in the network). The egocentric approach does reveal, however, information on who influences the specific respondent (or, at least, who they perceive as having influence upon them).

2.3 Behavior

There are two primary ways of measuring behavior: monitors and self-reports. Each has costs and benefits, although self-reports are often the better of the two options.

A primary problem in the measurement of behavior – especially private behaviors and potentially embarrassing behaviors – is that people may give untruthful answers. Social desirability bias refers to the phenomenon of people giving answers that they think are socially acceptable (rather than truthful answers). Acting on the bias, respondents may give answers they think the inquirer seeks, wants, or finds acceptable. Monitors – whether direct monitors or through indirect proxies – are not subject to such self-report biases. However, monitoring can be difficult (if not impossible for private behaviors), may influence the behavior measured, is often expensive, and is hard to scale. Moreover, monitoring of, say, latrine use has precision issues. It is hard to track frequency of use, as well as the identity of those using a particular latrine.

Because of this, self-reports are often the better solution. Self-reports are relatively cheap (compared to monitoring), easy to administer and easy to scale. One problem with self-reports concerns the wording of questions to make sure that you are isolating the same target phenomena. For example, if we want to compare different survey instruments, we must be sure they are measuring the same thing. There is also the concern about social desirability bias.

Wording is also subject to interpretation. Consider questions from two household surveys about sanitation. In a Sanitation Program at Scale in Pakistan Knowledge, Attitude and Practice Household Survey Evaluation Question, respondents were asked "Where to you/your household members defecate?

(Latrine, Open, Both)." In a WASH Sustainability Action Plan Household Survey Question, respondents were asked, "Are there family members who do not always use the latrine? (Yes, No)." Although these questions seem similar, they are actually asking about different things. The first question bundles together a question about personal behavior with empirical expectations about household members and is relatively open with respect to its answer. The second question concerns family members and asks whether there is any family member who defecates in the open at least once. These are different questions about potentially different people. And differences in responses to these questions may just be due to wording. If using different questions, experiments are necessary to determine the consistency of the wording in triangulating on the same target phenomena.

There are three different ways to try to address concerns about social desirability bias that do not put responders in an awkward or embarrassing position.

The first is to normalize the behavior through the wording of the question. The idea is to remove or minimize the social stigma from whatever target behavior we ask about. So, for example, a survey may ask about latrine use and normalize the behavior as follows: "In this village, some people use a latrine and some people do not. How often do you use a latrine?"

A second option is to use a randomized response technique. This method shields the true response from the experimenter, and the idea is that this frees individuals to self-report accurately. For example, we may ask the question: "Do you ever defecate in the open?" The responder is told to secretly select a side of a coin, heads or tails, and then toss the coin. If the side they secretly picked comes up, they must say they practice open defecation. Otherwise, they must tell the truth. In this case, the response is completely private because the experimenter cannot know why the respondent said that they engaged in open defecation (it could be true, or it could be the result of the coin toss). However, the experimenter can infer about behavioral prevalence from the community-wide statistic by accounting for approximately half the respondents stating they openly defecate as a result of the coin flip.

A third option is to anonymize responses. Respondents anonymously write answers on a piece of paper that they drop in a box. Or, for less literate groups, experimenters can use objects that signal the behavior.

2.4 Empirical Expectations

Measuring empirical expectations is a two-step process. First, you must measure the prevalence of the behavior (see the previous section). Second, you must measure empirical expectations about that behavior.

The second step is to measure empirical expectations. There is no way to measure empirical expectations except through self-report measures. Remember that empirical expectations are beliefs about how others in the reference network act. Therefore, questions measuring empirical expectations must first attach the question to the relevant reference network and then ask the respondent about his or her expectation of the behavior of that particular group of people.

For example: "Out of 10 other people surveyed, how many do you think engage in open defecation?"

Note that the question specifies the people or group (the 10 other people surveyed) and then further specifies the behavior (open defecation). These two elements must be specified to measure the empirical expectations about *who* is doing *what.* The question could also be asked in different ways – say, targeting percentages – if the population is numerically literate enough.

The important thing is to elicit accurate empirical expectations. "Accuracy" here does not refer to respondents correctly guessing how many relevant others engage in the target behavior. Rather, "accuracy" refers to respondents providing their genuine empirical expectations regardless of whether those empirical expectations are correct. People may have confused ideas about the behaviors of others. Or people may not seriously consider the question when it is posed to them. Or, again, there is the problem of social desirability bias, where respondents may not give accurate representations of their empirical expectations because of potential shame or embarrassment.

For these reasons, among others, we strongly suggest incentivizing answers to empirical expectations. This document discusses potential problems and worries about incentives later in the measurement sub-section on pitfalls. For now, let us focus on how to use incentives.

In cases where behavior has already been measured, experimenters can incentivize answers to empirical expectations. For example, respondents can be told "If you correctly guess how many out of 10 people surveyed engage in open defecation, you get a reward." The incentive works as a mechanism to get people to focus on what they expect other people to do. If the incentive works correctly, then people will be more motivated to give an answer that genuinely reflects their considered judgment on how many others are engaging in the behavior.

2.5 Normativity

Given that behavior and empirical expectations have been measured, now we need to measure normative expectations. Remember that normative expectations are beliefs about relevant others' personal normative beliefs. Hence measuring normative expectations, as in the case of measuring empirical expectations, is a two-step process. First, we measure the personal normative beliefs of the target population. Then, measure expectations about those beliefs – normative expectations. As in the case of empirical expectations, measuring personal normative beliefs and measuring normative expectation require self-reports and cannot be measured through monitors.

2.5.1 Personal Normative Beliefs

Remember that personal normative beliefs are beliefs about what people should do. In measuring personal normative beliefs, it is important to focus on non-prudential personal normative beliefs. A collective practice supported by prudential beliefs can be much easier to change either through information campaigns or by changing facts on the ground. Here is an example of the difference between the two:

▸ Prudential: I think people should use a toilet because it is safer than defecating in the open.

▸ Non-Prudential: I think people should use a toilet because it is the right thing to do.

It is important to focus on non-prudential personal normative beliefs, and it is possible to isolate them in self-reports. For example:

▸ Q1: Do you believe that people in your village should use a latrine?
  - ☐ Yes
  - ☐ No (Skip Next Question)

▸ Q2: Why do you think people in your village should use a latrine?
  - ☐ Because it is the right thing to do
  - ☐ Other reasons

Most surveys do not clearly distinguish personal normative beliefs from attitudes, personal normative beliefs from normative expectations, and prudential personal normative beliefs from non-prudential personal normative beliefs. This is one of the major limitations of existing measures.

Most surveys measure 'attitudes' and not 'personal normative beliefs' specifically. Remember that attitudes reflect evaluations of people, objects and actions. Personal normative beliefs about what you should do may give rise to feelings of like or dislike (e.g., "I like to defecate in the open"), but personal normative beliefs should not be confused with such feelings!

There is still a remaining worry here about social desirability bias and eliciting accurate representations of personal normative beliefs. There is no way to incentivize questions about personal normative beliefs (as there is no way to independently monitor them), but experimenters can apply the same anonymizing techniques (normalizing, anonymous answers, randomization) as in the behavioral measures.

Finally, experimenters can use multiple questions to target personal normative beliefs. For example:

▸ Q1: Do you believe that people should defecate in the open because it is the right thing to do?
▸ Q2: Do you think it is wrong to defecate in the open?
▸ Q3: Do you approve of open defecation?

By taking the average response across a variety of questions, experimenters can reduce noise from both the questions and the participant response, thereby increasing reliability.

2.5.2 Normative Expectations

The steps for measuring normative expectations are similar to the steps for measuring empirical expectations. Remember that normative expectations are beliefs about other people's personal normative beliefs. Using the data about personal normative beliefs we collected, experimenters can measure normative expectations about the reference network's personal normative beliefs. For example:

▸ Q: Out of 10 other people surveyed, how many do you think said that one should use a latrine because it is the right thing to do?

As in the case with empirical expectations, experimenters can incentivize answers to elicit accurate representations of normative expectations. Again, the important thing is not that normative expectations and personal normative beliefs match; rather, the important thing is eliciting accurate representation of people's normative expectations. Normative expectations can be correct or incorrect. And experimenters need to know whether the target population has correct normative expectations for planning successful intervention strategies.

An alternative to directly measuring normative expectations is to measure belief in sanctions. Measuring beliefs about sanctions can be a proxy for measuring normative expectations, as sanction often result from violations of normative expectations. For example:

▸ Q: What do you think would happen in your community if it were discovered that someone was engaging in open defecation?

If the answer is that there would be some form of social punishment (shaming, ridicule, isolation, and so on), this signals the probable existence of normative expectations.

2.6 Conditionality of Preference

The previously discussed measures are necessary but insufficient to establish the presence of a social norm. For example, we may discover that in the target population there are mutually consistent normative expectations – that is, everyone thinks that everyone else thinks that everyone should use a latrine. We cannot infer from this data that a social norm exists! There could be a shared moral or religious norm, where everyone has correct normative expectations about others' personal normative beliefs, but the personal normative beliefs of each individual are (by themselves) driving the behavior. In that case, we do not have conditional preferences. Rather, each individual has an unconditional preference to engage in the behavior (for moral or religious reasons). This behavior is independent rather than interdependent or social because even though everyone has the accurate normative expectation that others expect them to behave in this way, the normative expectation is motivationally inert. Therefore, it is critical to measure whether conditional preferences exist in the population or, in other words, whether behaviors are interdependent.

Notice in the case above, while you have measured the normative expectation and you have measured the behavior you cannot say whether the social expectation caused the behavior. To establish the causal claim, you need to imagine what would happen if the normative expectation did not exist. If you removed or changed the normative expectation, would people behave in the same way? If so as in the example above, the expectation does not cause the behavior. In the case, however, that removing or changing the normative expectation also removes or changes the behavior, we can say that the behavior (causally) depends on the expectation. This kind of dependence is called *counterfactual dependence.* To put the point more formally, A causes B when (1) in all the cases where you find A you also find B and (2) *counter to that fact* if hypothetically A did not occur in those cases neither would B (assuming B has no other sufficient causes).

In the case of social norms, behavior will only be caused by social expectations when those social expectations are also accompanied by conditional preferences. That is, if people have a conditional preference to behave in accordance with social expectations, then they will behave one way when the social expectations exist and behave another way when they do not. The behavior will be interdependent since it is conditioned on the expectation of what others do or believe. Put differently, how can experimenters know that the social expectation in question has a causal influence on the observed behavior? This is the same thing as asking, "Do people have conditional preferences?"

The challenge in measuring conditional preferences comes from trying to capture how people would behave if counter to the fact they held different beliefs or expectations. If a social expectation has causal influence on behavior, it must be the case that – were the expectation absent or different – the preference (and behavior) would be different. Since someone cannot simply change his or her expectations at will, we have to use some hypothetical manipulations in our survey questions. For example, if I know that you defecate in the open and that you also expect a majority of community members to defecate in the open, I may want to ask you to entertain a hypothetical scenario in which a majority of community members now uses latrines, and ask you what, in that case, you would do. If you tell me that in this new scenario you would also use a latrine, I can conclude that your preference for latrine use is conditional on the empirical expectation that most others use latrines.

There are two ways of measuring conditionality of preference. First, experimenters can directly ask hypothetical questions to respondents. Second, experimenters can use vignettes. Each has costs and benefits, but vignettes are typically the better solution.

Direct hypotheticals ask respondents what they would do if their empirical and/or normative expectations were to change. For example:

DIRECT HYPOTHETHICALS

▶ **Low Empirical, Low Normative**: Imagine that *few* people in your village use a toilet, and *few* say that one should use a toilet. In this case, what would you do?

▶ **High Empirical, Low Normative**: Imagine that *almost all* people in your village use a toilet, but at the same time, *few* say that one should use a toilet. In this case, what would you do?

▶ **Low Empirical, High Normative**: Imagine that *few* people in your village use a toilet, but at the same time, *almost all* say that one should use a toilet. In this case, what would you do?

▶ **High Empirical, High Normative**: Imagine that *almost all* people in your village use a toilet, and *almost all* say that one should use a toilet. In this case, what would you do?

It can be difficult for people to entertain hypothetical questions. This difficulty can be amplified when people are asked to answer hypothetical questions involving people acting and believing in a way counter to known facts. When people have difficulty conceptualizing or answering a question, they are much more likely to give an answer that does not indicate their true view of the matter.

For these reasons, vignettes are often a better solution. Vignettes are short stories about imaginary characters and scenarios. By slightly changing the circumstances from scenario to scenario – in particular, by varying social expectations – an experimenter can identify whether social expectations matter to the behavior of the respondent. Vignettes ask respondents what they think the fictional character will do in each situation. Because the question is not self-relevant, people are more willing to answer honestly. And if the character has sufficient similarity to the respondent, then the answers can be taken as representative of the respondent's true view. Thus, if the respondent answers in a way that indicates the character has a conditional preference, they likely do as well.

VIGNETTES

▶ **Low Empirical, Low Normative**: Shahid lives in a nearby village. In the past, no one in his village used a toilet, including Shahid. Shahid has learned that *few* people in his village use a toilet, and few say that you should use a toilet. In this case, what would Shahid do?

▶ **High Empirical, Low Normative**: Shahid lives in a nearby village. In the past, no one in his village used a toilet, including Shahid. Shahid has learned that *almost all* people in his village now use a toilet, but at the same time, *few* say that you should use a toilet. In this case, what would Shahid do?

▶ **Low Empirical, High Normative**: Shahid lives in a nearby village. In the past, no one in his village used a toilet, including Shahid. Shahid has learned that *few* people in his village use a toilet, but at the same time, *almost all* now say that you should use a toilet. In this case, what would Shahid do?

▶ **High Empirical, High Normative**: Shahid lives in a nearby village. In the past, no one in his village used a toilet, including Shahid. Shahid has learned that *almost all* people in his village now use a toilet, and *almost all* now say that you should use a toilet. In this case, what would Shahid do?

2.7 Pitfalls

All of the potential pitfalls have been previously mentioned, but it is important to reiterate common traps and their solutions.

2.7.1 Comprehension

The experimenters seek to answer particular questions. They need to know the relevant networks, whether empirical expectations exist, whether normative expectations exist, and whether preferences are conditional. Do not mistake the questions that specialists need answers to for the questions that should be asked of a target population. It is important to work locally with knowledgeable individuals to develop questions that are comprehensible to the target population. The questions asked of the target population should, when analyzed, be able to help the experimenter answer his or her questions. Keep in mind that the target population's comprehension will vary along multiple dimensions.

2.7.2 Social Desirability Bias

Social desirability bias is an ever-present threat to all self-report measures. Make sure to take steps to minimize or eliminate the potential for such bias. The use of anonymizing techniques – such as normalization, randomization and anonymous responses – greatly reduces the potential for such bias.

2.7.3 Incentives

There is an ongoing debate in the sanitation community about the appropriateness and role of incentives in self-report measurement. Penn SONG supports the use of incentives where appropriate and useful. But it is important to note that the incentives should be tailored to the context and should be just large enough to prime respondents to give accurate answers representing their beliefs and expectations. An incentive that is not well-calibrated to the target population will not do the work that the incentive is supposed to do (and this holds whether the incentive is too small or too large). Local knowledge about what would count as an appropriate incentive is crucial.

2.7.4 When to Measure

It is important to measure at each step of programming, from baseline diagnostics to midpoint to end cycle and, potentially, beyond. Of course, frequency of measurement will depend, in part, on practical conditions and funding. However, if there is no reliable measurement at the various stages of diagnosis, monitoring and evaluation, or if the measures are not consistent across time, this greatly limits any inference we can draw from the collected data.

2.8 Analyzing Results and Making Inferences

With measures of networks, behavior, beliefs, social expectations, and conditionality of preference, practitioners can analyze the data and draw certain inferences.

If the data reveal that there is no conditionality of preference, then practitioners can validly infer that the target behavior is not interdependent, and certainly not a social norm. This is already clear from

the diagnostic schema. If further data show that people do not have a non-prudential personal normative belief concerning the target behavior, then practitioners can validly infer that the target behavior is a custom. If data reveal that there is conditionality of preference but only with respect to empirical expectations, then practitioners can validly infer that the target behavior is a descriptive norm. Finally, if data reveal conditionality of preference with respect to both empirical and normative expectations, then practitioners can validly infer the presence of a social norm.

There are other inferences that the data allow to be validly drawn. Suppose that there is a high level of normative expectation coupled with a personal normative belief that latrine use should happen but that many people are still practicing open defecation. This suggests that the problem is not motivational. Rather, this suggests that there is some sort of supply or technical problem. Remember again that there are extra-social factors that can sometimes drive harmful patterns of behavior.

SECTION 3:
Norm Creation

For many harmful sanitation-related collective patterns of behavior, the creation of a social norm is a strong solution to the problem behavior. The next couple of sub-sections will detail traditional approaches to bringing about social change and discuss their related pitfalls. After that, the sub-sections will argue for an integrated approach that focuses on people's reasons for engaging in harmful sanitation-related behaviors with specific reference to CLTS programming.

For more in-depth explanations of the relevant theory and aspects of this section, please see the following:

▸ C. Bicchieri, *Norms in the Wild,* Oxford University Press, 2016. Chapters 3, 4 and 5.

▸ Bicchieri and H. Mercier, "Norms and beliefs: How change occurs" in M. Xenitidou & B. Edmonds (eds.) *The Complexity of Social Norms.* Springer International Publishing, 2014. Chapter 2.

3.1 Traditional Approaches to Social Change

There are three main traditional approaches to social change: legal, informational, and economic. Each has associated costs and benefits, but all are unlikely to be successful in isolation.

3.1.1 Legal

One typical approach to changing behavior it to introduce legislation to outlaw it. However, the law is a blunt instrument and not always effective at producing the desired social change. In particular, the greater the distance from the law to the custom, the less likely people will follow or enforce the law.

When a law is closer to the custom, it can more effectively motivate behavioral change. This is the thought behind the "nudge" strategy to get people to opt into positive patterns of behavior. In addition, new laws can signal new personal normative beliefs and possibly affect normative expectations of those engaging in the harmful collective pattern of behavior. After all, clearly some people disapprove of the practice if they introduced and passed legislation to legally sanction it.

At the same time, though, this is often a fraught strategy. Existing trust in the government is important, and if people do not already trust the government, the new law could be seen as illegitimate. Moreover, if the legislators who pass the law are not themselves members of the reference network of the target population, the law could be seen as an outside intrusion or interference. The downside from this intervention could potentially be serious: a custom could turn into a social norm and serve as an in-group signal, which would be dire from an intervention perspective. Finally, laws require enforcement. However, the police and other authorities are themselves part of reference networks that may be engaging in the custom the law seeks to eliminate. If authorities themselves do not endorse the content of the law, then they are significantly less likely to enforce the law.

3.1.2 Informational

Another common approach to changing harmful behavior is to provide information about the problems associated with the practice. For example, there are many public health campaigns that stress the negative public health impacts of open defecation or failure to hand wash.

Informational campaigns, in isolation, often do not work. First, the informational campaigns are often statistical in nature, which makes it difficult for less numerically literate people to grasp the nature of the public health threat. In addition, informational campaigns have often used sanitized language (think "feces" versus "shit") that fails to connect emotionally with the target populations. Finally, information campaigns target *individual* beliefs and preferences – often factual beliefs and prudential personal normative beliefs. Often, they do not target *social expectations.* But if the goal is to create a positive social norm around latrine use, targeting factual beliefs alone is, in principle, a failed strategy.

3.1.3 Economic

The final traditional approach to social change is economic incentives. This approach has had inconsistent results, positive in some context and negative in others.

One acute problem with an approach that uses economic incentives only is that such incentives can crowd out intrinsic motivation. That is, the financial motivation can come to swamp the moral and social motivations that might otherwise be appealed to. Further, economic incentives can create a pricing effect: when behavior has a price, then paying a fine may reset that price. For example, assume that there is a small fine for open defecation behavior. If the fine is low enough, the behavior could be interpreted as "not that bad." If it were "really bad", there would be a heavier penalty! So a person is put in the position to choose between whether to engage in open defecation (and pay the fine) or use the latrine (and deal with the associated costs of latrine building and maintenance). A cost-benefit calculation may favor open defecation. Allowing this kind of choice creates a space and incentive for backsliding.

That said, economic incentives can play a useful role in promoting positive social change. If there is a temporally-specific and action-specific incentive for some behavior, it is possible to motivate the behavior by changing its costs and benefits. But, then again, if people are opting in to the positive behavior for the purpose of securing an economic incentive and the economic incentive stops, then what motivation will people have to resist falling into the old harmful behavior?

3.2 CLTS and the Social Norms Approach to Sanitation Programming

At this point, we have the basic building blocks of the theory – independent and interdependent behaviors, factual and personal normative beliefs, empirical expectations and normative expectations, conditional and unconditional preferences, and reference networks. We have learned how to use the basic building blocks to diagnose social practices into customs, moral norms, descriptive norms, and social norms. We have learned how to precisely measure the basic building blocks in order to diagnose and then draw valid inferences from data patterns. And we have looked at traditional approaches to social change, noting both their strengths and their weaknesses. Now we will put all of this together to think about how to change harmful collective patterns of behavior. When we create programs to bring about social change with respect to sanitation-related behaviors, what works? And why?

The social norms approach emphasizes the ways in which so many behaviors are interdependent: they depend on our beliefs about what others do and think. Even when confronting a harmful independent behavior, like a custom, the best solution may be to create a new social norm against the practice. For example, open defecation in most contexts is a custom (people do it mostly because it meets their needs, rather than in response to social expectations), but UNICEF WASH has, in many cases, successfully brought about change in this practice by *creating a social norm* against open defecation. Community members stop engaging in open defecation because they come to believe that others *do not* defecate in the open *and* because they believe that others think that they *should not* defecate in the open. Because social change is so often interdependent in this way, the social norms approach emphasizes the importance of programs that *engage the entire relevant community together,* rather than ones that target people at just an individual level – as the traditional legal, informational and economic approaches do.

The following sub-sections concern common features of norm creation: presence of negative externalities, collective action problems, shared reasons to change behavior, agreed upon sanctions, and collective change of expectations.

3.2.1 Presence of Negative Externalities

An *externality* is a loss or gain in the welfare of one party resulting from the activity of another party without the possibility of compensation. Norms often emerge when individual actions create externalities – that is, when individual actions have a positive or negative impact on others.

Externalities are associated with public goods. A *public good* is a good that is non-rival and non-excludable. "Non-rival" means that the consumption of the good by one individual does not reduce the availability of the good for consumption by others. "Non-excludable" means that no one can effectively be excluded from using the good.

Public health is a public good. No one can be excluded from the good effectively, and "consumption" of public health by one individual does not reduce the availability of public health for others.

Open defecation creates negative externalities. Everyone benefits from hygienic sanitation practices. Safely managed sanitation is a public good.

How can a public good be provided? Classical solutions involve creating property rights or imposing individual contributions (such as through taxation). But social norms can also provide a public good by aligning individual and collective interests. That is, social norms can motivate people to provide public goods, and naturally-evolving social norms often do just that. However, it is possible to create new social norms in response to the lack of public goods resulting from collective action problems.

3.2.2 Collective Action Problems

In sanitation, all have to cooperate in order to obtain a clean environment and public health. But it might not be in a person's self-interest to contribute their share to the public good. If everyone else uses a latrine, then an individual's contribution is unnecessary for providing the public good, and the individual benefits from the clean environment anyway. However, if most people are defecating in the open and not enough are using latrines so as to provide the public good, then an individual's contribution will not be sufficient to provide the public good (because it cannot produce it alone), and the individual incurs the costs associated with latrines without receiving the public health benefit. In either case, an individual has an incentive to defecate in the open.

Controlled laboratory experiments on public goods show that most people are *conditional* cooperators. An initial high level of cooperation declines rapidly as individuals defect – that is, empirical expectations matter for the provision of public goods. Moreover, introducing punishment keeps cooperation levels high – that is, normative expectations matter for the provision of public goods.

3.2.3 Shared Reasons to Change Behavior and Collective Decision to Change

Suppose, though, that people acquire shared reasons to change their customary behavior. Are such reasons sufficient to motivate change? Why is there a need to introduce sanctions?

Think here of CLTS programming. What do CLTS interventions do when they are successful? That is, what causes their success?

The theory of social norms and the *Handbook on Community Led Total Sanitation* both answer that CLTS is successful b*ecause* it gives communities shared reasons to change.

Consider the different strategies for the triggering stage. During a well-crafted CLTS intervention, the facilitator guides a community that has natural leaders who are already willing to change in some way. The transect walk elicits strong emotions such as disgust and shame. But it also serves to collectively inform people about the problems associated with open defecation and the advantages of latrine use or being open defecation free. Because people already have a strong aversion to and personal normative belief against eating the feces of others, CLTS leverages that pre-existing aversion and personal normative belief. The transect walk serves as a mechanism by which people can come to understand that their practice of open defection leads to fecal contamination, which in turn undermines the public goods of sanitation and health.
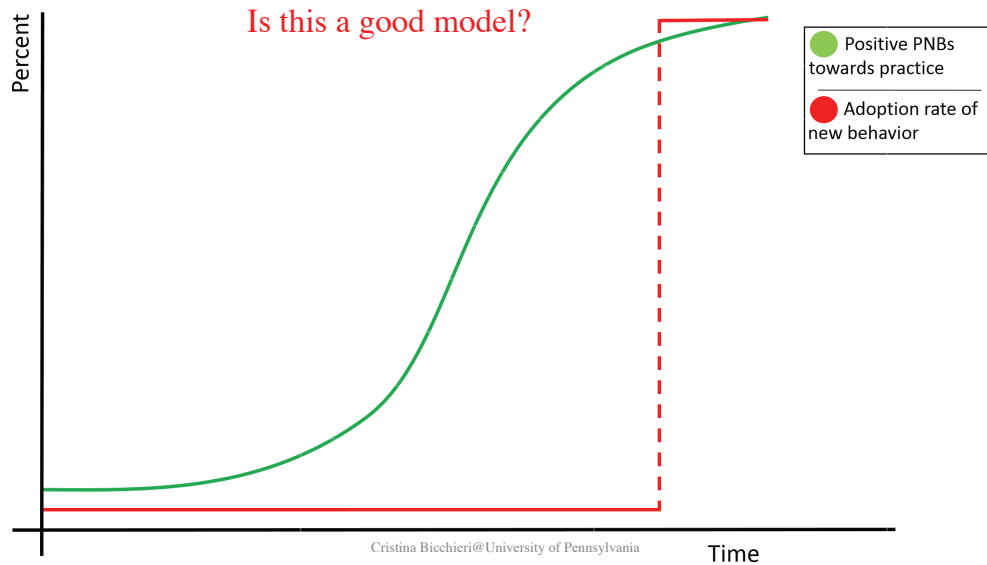
Importantly, everyone can see that everyone else is updating their factual beliefs at the same time. Because the actions related to being open defecation free are interdependent (based on social expectations), factual and personal normative belief change must be collective. And people should be aware that their peers' personal normative beliefs are changing alongside their own. This in turn creates new normative expectations in the target population. Remember again that normative expectations are beliefs about others' personal normative beliefs. People can see that their peers are coming to view open defecation as dangerous (update of factual beliefs) and to believe that people should not be defecating in the open (update of personal normative beliefs). This in turn causes a collective update of normative expectations, for everyone can directly observe that everyone else thinks that people should not defecate in the open. However, even if members of a reference network acquire shared reasons to change, having shared reasons for change is not enough. There must be a coordinated and collective decision to change. CLTS leaves open to community members whether to abandon open defecation. But when the triggering works well, community members, through collective discussions, come to the decision to abandon the practice. In good cases, trusted leaders and natural leaders facilitate these discussions, leading to a collective pledge to move toward being open defecation free. In good cases, the development of the action plan is "owned" by the community, and there is implementation of change by the entire community. Also, community monitoring systems, like village spot maps or colorful flags to mark houses, can be used to reinforce empirical expectations.

Of course, these are the good cases where there is enough trust in the community that such cooperation is possible. Sometimes the whole community may not agree to abandon open defecation. Coordination toward the positive behavior may be partially effective or may occur in starts and stops. In such cases, multiple points of coordination with multiple intervention strategies may be necessary.
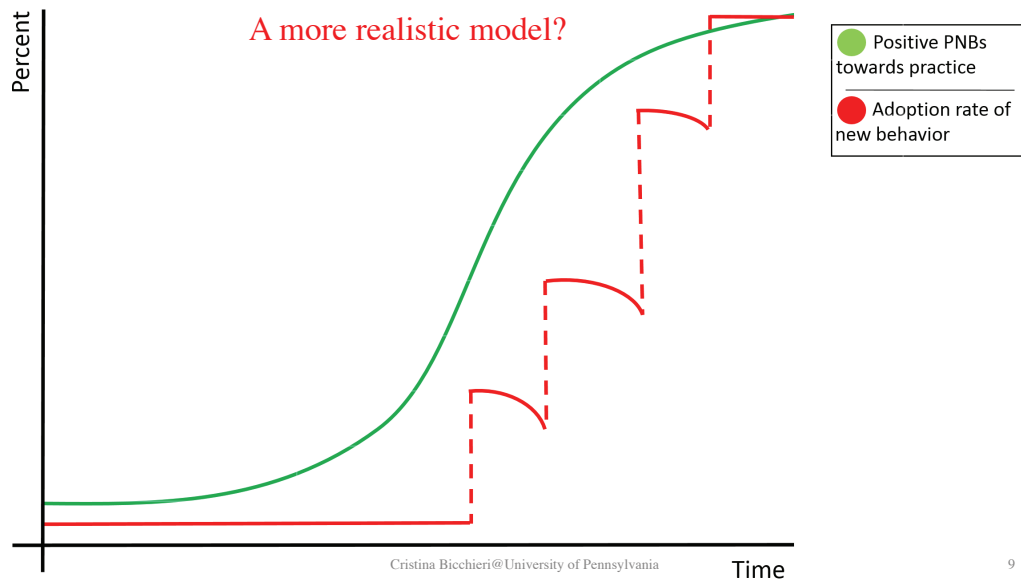
COORDINATED ADOPTION

Is this a good model?

Percent

Positive PNBs towards practice

Adoption rate of new behavior

Cristina Bicchieri@University of Pennsylvania

Time

IMPERFECTLY COORDINATED ADOPTION

A more realistic model?

Percent

Positive PNBs towards practice

Adoption rate of new behavior

Cristina Bicchieri@University of Pennsylvania

Time

9

3.2.4 Agreed Upon Sanctions

The function of agreed upon sanctions is to create or reinforce normative expectations about acceptable behavior with respect to sanitation and to clearly mark the consequences for transgressions.

The community itself decides collectively which sanctions to enact on transgressors. There may also be a role for either the community or the sanitation specialists or the government to create positive rewards for communities, creating a positive competition between communities to reach a new and positive pattern of behavior. This is arguably what ODF certification provides when it works well.

Sanctions strengthen normative expectations during the triggering and post-triggering phases. Agreed upon community punishment help disseminate the community's normative message that people should use a latrine because it is desirable for both one's own and others' well-being. Moreover, punishment

(when publicly implemented) promotes the targeted behavior to both those punished and to third-party observers. And, in general, new behaviors are more readily obeyed when they are made salient, which punishments do.

The sanctions, to be legitimate, must be agreed upon by the individuals in the community. Individuals must have the opportunity to take part in the decision-making process, to present their arguments, to be listened to, to having their views considered, and so on. In the good case, punishment is consensual, which increases the perception of fairness of enforcement and the likelihood of complying with the good social norm.

Finally, remember again that sanitation poses a social dilemma. There is the temptation to take advantage of the fact that everyone else is using latrines by not using one. Punishment serves as a further mechanism to prevent backsliding into the harmful old practice, but it must be community-led and constantly reinforced, especially in the early period of the emerging social norm.

3.2.5 Collective Change of Expectations

When there are shared reasons to change and a collective decision to change along with community led sanctions, there should be compliance with the new social norm. The emergence of the new behavior – driven by new normative expectations – will lead to updated empirical expectations, that in turn strengthen normative expectations, that in turn strengthen empirical expectations . . . and so on. The normative expectation that all believe that all should use and maintain latrines drives the empirical expectation that all are using latrines, and vice versa, creating a virtuous feedback loop or cycle. This is the key to sustainability, at least motivationally.

| COMMON FEATURES OF NORM CREATION |
|---|
| ▸ **Presence of negative externality** |
| ▸ **Collective action problem (conflict between individual and collective interest)** |
| ▸ **Shared reasons to change behavior (awareness of negative externalities)** |
| ▸ **Agreed upon sanctions (create normative expectations about acceptable behavior and the consequences of transgressions)** |
| ▸ **Collective change of expectations (observe that one's reference network has changed behavior)** |

3.3 Slippage and Sustainability

Slippage and sustainability are key concerns in sanitation programming. Practitioners need to know when slippage is acceptable and when it is not.

After a successful intervention, compliance with new social norms of latrine use and maintenance will be high. Some erosion is acceptable, such as the natural erosion that can occur when there are newcomers to the community or collapse of sanitation facilities. But some erosion is unacceptable: this is a drop-out effect due to non-adherence to the new social norm.

Slippage and Sustainability
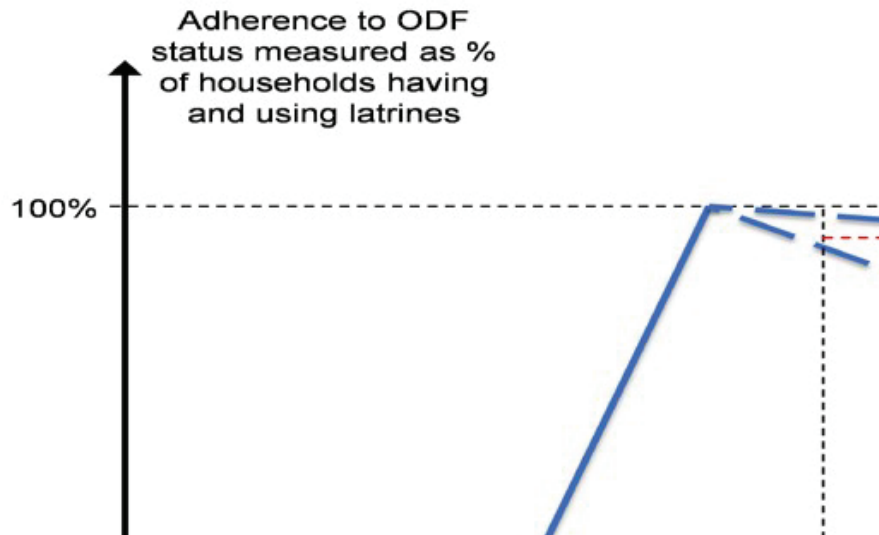
Therese Dooley (UNICEF Regional Adviser for South Asia), "Scaling up CATS Lessons Learned" presented at the National Rural Water Supply, Sanitation and Irrigation Program (Ru-WatSTIP) held by the Islamic Republic of Aghanistan Ministry of Rural Rehabilitation & Development (MRRD) http://www.mrrd-ru-watsip.org/afcosan-i/
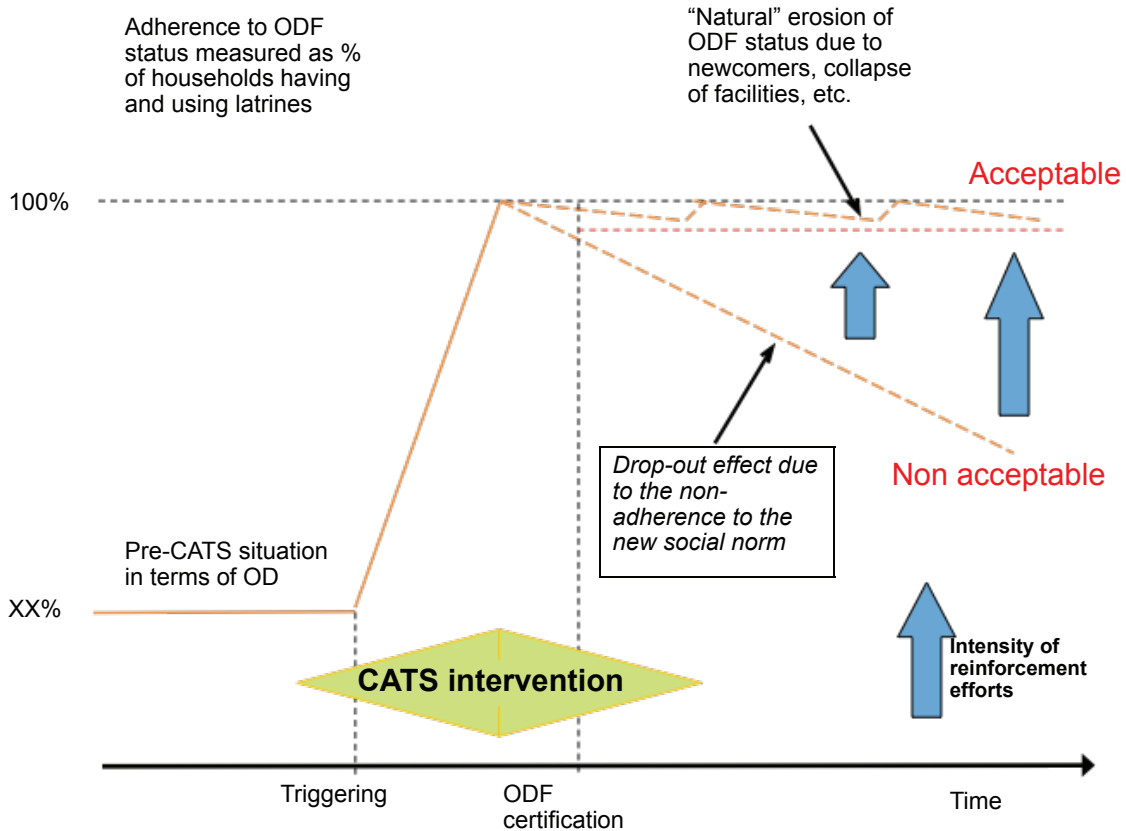
What could be the causes of such a drop-out effect? The theory of social norms, as well as Penn SONG's involvement with the UNICEF Pakistan WASH Sustainability Check Study, provide some insights.

First, it is important to know whether the community was truly "open defecation free" in the first place. There can be some variance in what counts as "open defecation free" in different contexts. But also, importantly, good and accurate measurement is crucial. Were there sufficient measures of behavior, the presence of empirical expectations, normative expectations, and conditionality of preference? Are there community-established sanctions that are well-known and understood by members of the reference network? Is there a community-wide commitment to actually follow through with sanctions? A community pledge to become open defecation free is not sufficient to establish that an intervention has successfully created a social norm, which is key to sustainable behavior.

Second, did normative expectations persist post-triggering? Normative expectations can start high, but as we have already seen when discussing public good experiments, observed deviation from the norm will weaken normative expectations over time.

This relates to the third point: did people believe that sanctions or punishments were likely to occur for norm violations? If people do not believe that the sanctions or punishments represent credible threats, then there is the space for individual incentives to deviate from the norm or backslide into harmful behavior.

The UNICEF Pakistan WASH Sustainability Check investigated communities certified open defecation free and rural water supply schemes, among many other sanitation-related behaviors. The former investigated households' exclusive use of latrines, while the latter investigated households paying to access a community water supply scheme. The check showed that although there were moderate normative expectations around exclusive use of latrines, there were low beliefs in sanctions as well as low latrine use rates and low empirical expectations. If there is a low belief in the possibility of punishment, then low latrine use rate and low empirical expectations are predictable.

The key to sustainable sanitation social norms is high normative expectations coupled with high belief in sanctions. Under good conditions, these drive behavior and new empirical expectations. But when belief in sanctions falters, the space has been opened for transgressing behavior, which can undermine and unacceptably erode the positive but fragile social norm.

SECTION 4:
Parting Thought:
The Limits of the Social Norm Approach

The theory of social norms and the social norm approach to social change are valuable tools to add to the practitioner's toolkit. But the theory of social norms is just one tool among many to bring about positive change with respect to sanitation-related behavior. However valuable the tool, it is not a panacea.

There are a number of non-social factors that prevent positive social change. There are supply problems with respect to latrine ownership. There are legal, technological, and economic, and political constraints that make promotion of good sanitation difficult in some contexts. Another way to put the point: we must recognize that not all bottlenecks are behavioral or social or motivational.
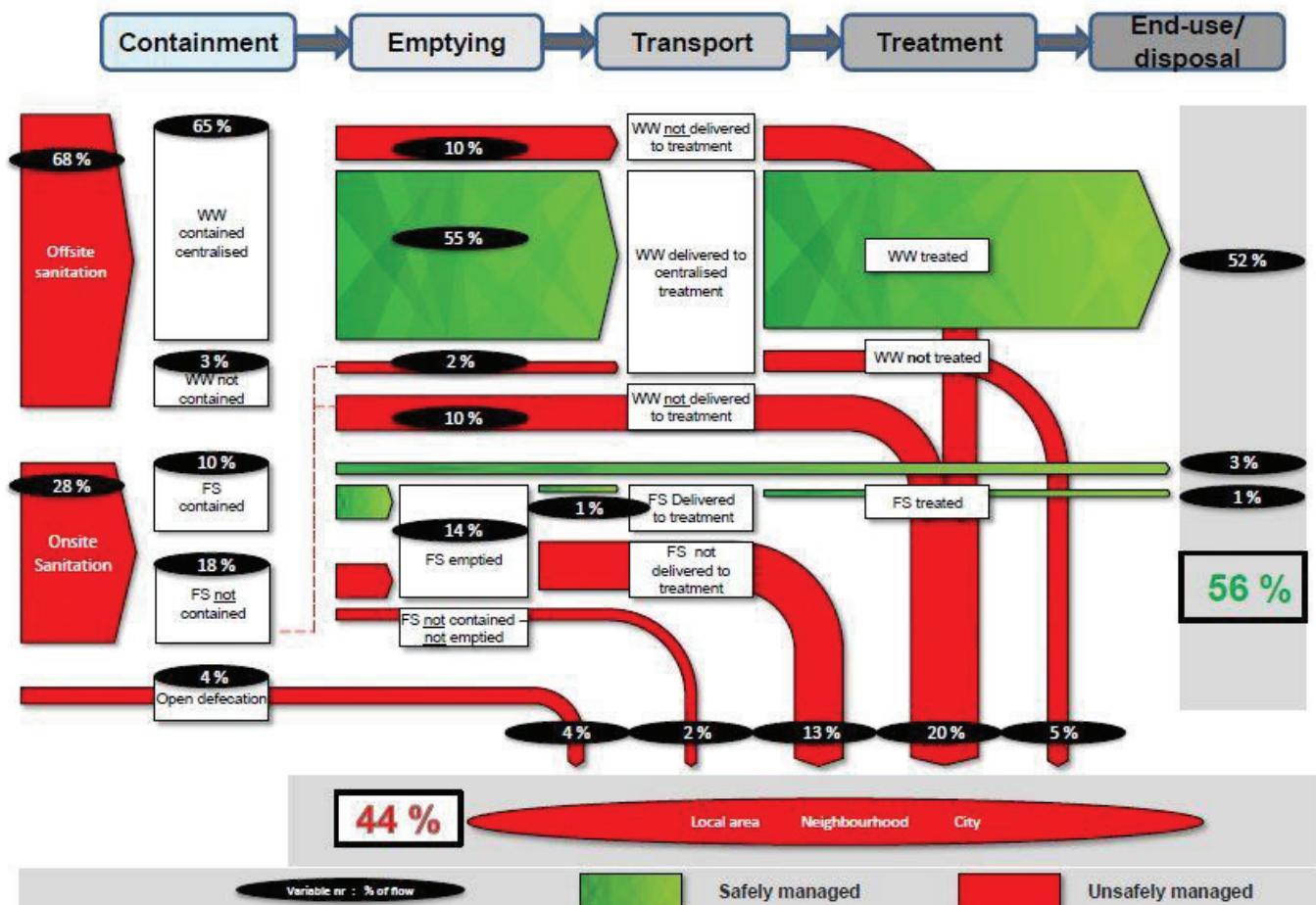
Centre for Science and Environment (CSE), "The Diagram." *SFD Promotion Initiative:* i, 2016. http://sfd.susana.org/sfd-worldwide/cities/50

Promoting sanitation is not merely a matter of getting everyone to believe that everyone believes that everyone should use a latrine. Maintaining conditions of sanitation or being open defecation free involves many steps that go beyond merely getting people to use latrines.

That said, many of the same lessons that apply to CLTS interventions and creating the demand for sanitation, latrines, public health, and so on cross-apply to creating and maintaining demands for increased access to the other conditions necessary for promoting sanitation.

One point of debate currently among sanitation specialists concerns the role of economic subsidies in providing latrines and other supplies. While it is beyond the scope of this document to fully investigate the matter, the social norm approach recognizes the valuable role that economic subsidies can sometimes play in promoting positive social change. All the social expectations in the world are not going to provide people with the material means necessary for securing sanitation, and economic subsidies and generous enabling environments may be necessary to secure sanitation for many of the least advantaged populations.

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