What are Social Norms?

How are They Measured?

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I. Introduction

The perpetuation of harmful practices, such as caregivers not conversing with infants or female genital mutilation/cutting (FGM/C), and the creation of beneficial new practices, such as exclusive breastfeeding or marriage at an adult age may be due to social motivations. They may involve an entire community's beliefs and actions rather than simply those of individuals and their families (UNICEF 2010). Social motivations, our focus here, can explain why a behavior – harmful or beneficial – is common in a group.

There are many other reasons why population groups might engage in behaviors that are beneficial or harmful to children. Many of the reasons have to do with the nonsocial environment in which they live or with their economic resources. These may determine, for example, their access to health and other services or the availability of clean water. We do not deny the great and often overwhelming importance of these extrasocial influences on behavior of interest. Rather, we focus on the social because it has been somewhat overlooked and misunderstood in development theory and practice.

There are three broad categories of beliefs: one's beliefs about the nonsocial environment (for example, the belief that colostrum is bad for the newborn); one's beliefs about the social environment, about what others in the group believe or do (for example, the belief that my mother-in-law expects me to discard the colostrum): and one's beliefs about one's self (see Adolphs 2009). Beliefs about one's self include one's self-efficacy (Bandura 1997) or, a similar concept, one's perceived behavioral control over an action (Fishbein and Ajzen 2010). Most development programs give ample consideration to beliefs about the nonsocial environment, and many measure self-efficacy beliefs and their change, but comparatively few consider beliefs about the social environment which are central to the understanding of social norms.

Beliefs about what others do, and what others think we should do, within some reference group, maintained by social approval and disapproval, often guide a person's actions in her social setting. If a harmful practice is social in nature, programs that concentrate on education of the individual, or increase in the availability of alternatives, or provide external incentives, may not be enough to change the social practice. Programs may be more effective if they support the revision, of social expectations of people throughout the entire community of interest.

Social-norms theory has not been widely examined in development circles (concepts from Fishbein and Ajzen's Reasoned Action Approach have been applied, but mostly in public health and in the developed world). The first half of this report attempts a primer on the subject. It offers an account of what social norms and other social practices are, with special attention to child well-being, and especially child protection.

Social-norms measurement is even less examined. In preparing this essay we examined 173 different publications and articles on social norms in global development.

Most of these studies theorize or detail programming; only about 14% discuss norms-measurements methods. Of these, most discuss qualitative findings or offered baseline and evaluation measures of individual attitudes and behaviors. They do not discuss expectations that members of a group hold of one another, which are the cement of social norms. Paluck and Ball (2010), reviewing studies of social norms marketing aimed at gender based violence, also find a rarity of specific measurement of social norms change. The second half of the report proposes some principles for the measurement of social norms and their change, and summarizes a variety of ways of doing measurement. Much more work remains to be done by all interested in the topic.

Extrasocial Influences and Social Norms

This document is about social norms and their measurement. Social ways to change social norms are mentioned only in passing or by reference, and nonsocial ways to change social norms not at all.[1] In this section we will call *social* any influence on action caused by social norms, and *extrasocial* any influence on action caused by any other factor that could be economic, legal, political, religious, or related to access to social services, technology change, or other factors.

We acknowledge that social norms can have nonsocial origins, and can be ended by nonsocial causes including nonsocial program engagements. For example, suppose that a social norm exists whereby families are expected to withdraw girls from school and marry them as children. One of the factors upholding the social norm is that girls receive threats to their honor in the way to and from school. These risks to girls could be reduced by providing school buses, improving public order, or using new cellphone technology to signal danger. With increased safety, more girls may be allowed to continue school and the social norm of withdrawing them and marrying them could erode.

Any human action in the present is determined by causes at multiple levels – individual, family, community, social, governmental, economic – and present causes are determined by past causes at different levels. For example, unequal gender norms, according to Boserup's (2007) hypothesis, may have originated or worsened with the shift long ago from hoe to plough agriculture in some regions. The new technology reduced the relative value of female labor, and hence reduced women's bargaining power in the household. The unequal gender norms persist for centuries after plough societies have moved out of agriculture: although originating in technology change they are maintained as social norms. They are solidified, but may begin to erode under the changed political

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[1] See Boudet et al. (2013); and see Cislaghi, Gillespie, and Melching (2014) for a discussion of community change of social norms which emphasizes program elements prior to organized abandonment of a social norm:

- Voice – enhanced capability of the community to remake the rules; bringing the excluded into the public sphere;
- Agency – learning as groups and individuals how to deliberate, decide, and act in public; expanded capacity to aspire and self-efficacy;
- Inspiration – to aim for a better future understood as the realization of human rights for all.

economy of modernity, as people move to the cities and seek education to participate in an economy that demands education, mobility, and skills that women can perform at least as well as men. That process is reported in an ethnography detailing changes in traditional gender norms in a rural Andalucian village from 1963 to 1983 (Collier 1997). Even though the change is pulled by large political and economic forces, human agency enacts the change, and movements, policies, and programs can hasten it.

Figure 1.2 Revised Conceptual Framework for Partner Violence

| Gender order	Norms	Violence in childhood	Interaction	Childhood violence
Lack of economic rights & entitlements for women	Acceptance of wife beating	Harsh physical punishment	Non-equalitarian decision making	Child sexual abuse
Discriminatory family law	Male right to discipline/ control female behaviour	Witnessing parental violence	Poor communication	Other childhood traumas
Ease of divorce for women	Tolerance of harsh physical punishment of children	Other childhood traumas	High relationship conflict	Witnessing mother being beaten
Composite measures of gender inequality	Stigma for divorced or single women	Psychological dysfunction		
		Antisocial behavior	**Conflict arena**	**Attitudes**
	Norms linking male honour to female purity	Adult attachment issues	Situational triggers	Tolerance of wife beating
Cultural factors	Family privacy	**Attitudes**	Sex/ infidelity	Socio-demographic
Collectivist versus individual cultural orientation	**Lack of sanctions**	Accepting of violence as a means to resolve conflict	Money/distribution of family resources	Young age (for current violence)
		Acceptance of partner violence	Children or in-laws	High educational attainment (protective)
Emphasis on women's purity & family honour	Lack of legal or moral sanction for violence	Gender hierarchical or transitional attitudes	Division of labor	
	Others do not intervene	**Alcohol abuse**	Male drinking	**Low social support**
Economic factors	**Neighbourhood**	**Gender role conflict**	Patriarchal triggers	**Factors that operate differently in different settings:**
Level of development	Community violence	**Delinquent peers**	Female challenge to male authority	
Women's access to formal wage employment	High unemployment	**Sociodemographic**	Failure to meet gender role expectations	Women's employment
	Low social capital	Young	Assertions of female autonomy	Participation in credit schemes or other development programs
	Poverty	Low educational level		Asset ownership

    The social-ecological model (Bronfenbrenner 2005) directs attention to the multiple levels of causation of an action or practice. Heise (2011), for instance, identifies social norms as one set of causes of intimate partner violence; her evidence-based, ecological model also identifies many more factors at all levels of influence. Other models also open

our eyes to multiple causes and multiple ways to respond. The Behaviour Change Wheel (Michie, Atkins, and West 2014) is an example.
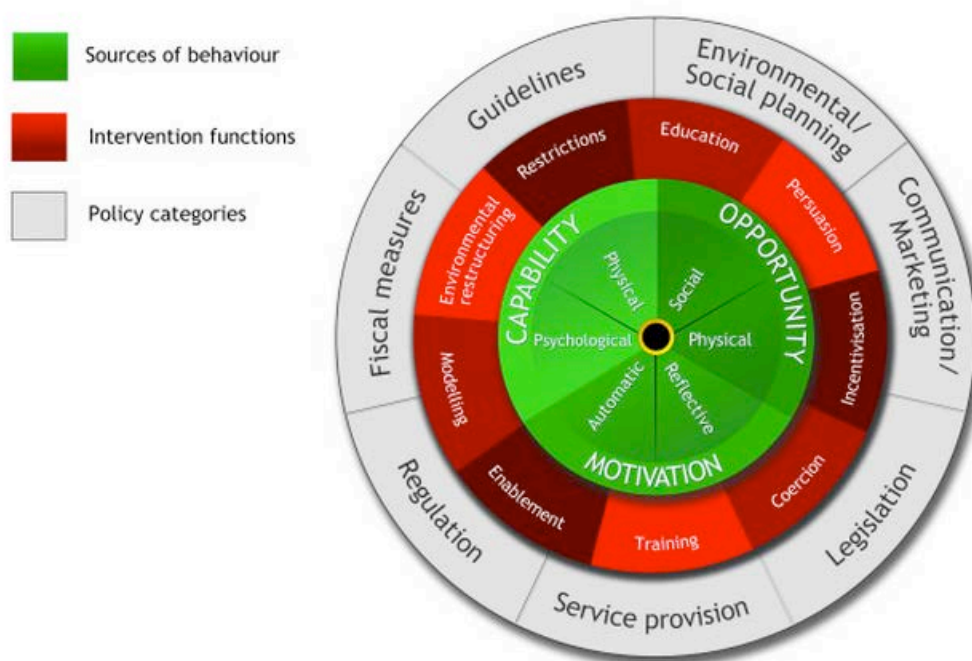
Michie and coworkers (2013) have also developed a taxonomy of 85 behavior change techniques, organized into 16 clusters by hierarchical analysis! Techniques relating to social norms comprise no more than 10% of the total.

The following two subsections preview the report. Material is presented in summary form with almost no citations. Full explication with citations is provided as the report unfolds.

What are Social Norms?

As a first approximation, a **social norm** is what people in some group believe to be normal in the group, that is, believed to be a typical action, an appropriate action, or both (Paluck and Ball 2010).

The actions of an individual range from the highly independent (like taking one's purse on the way out the door in the morning), to the dependent (listening to a radio show after learning from an acquaintance that it is entertaining,) to the highly interdependent (each driving on the right side of the road because everyone else does). A social norm is held in place by the reciprocal expectations of the people within a **reference group**. Because of the interdependence of expectation and action, social norms can be stiffly resistant to change.

Development thinking has tended to understand individual actions of programmatic interest as being independent; or as being one-way dependent, whereby one person's action depends on others', as in the diffusion of innovation. However, there are human actions where what one does depends on what others do, and what others do depends on what one does (many-way interdependence). The contrast will be illustrated later in the essay by the portrayal of the adoption of a better child nutriution by one family from another (one-way dependence) versus the community shift to toilet usage as a way to reduce contagious disease (many-way interdependence). Simple game theory can add to our understanding these distinctions.

The study of social norms builds on research from various disciplines. An economic approach originating in Thomas Schelling's reinterpretation of game theory emphasizes the connection of social practices to interdependent actions within reference groups. The Reasoned Action Approach (developed by Ajzen and Fishbein) offers a model to predict behavior from an individual's attitude, perceived subjective norm, and perceived behavioral control. Robert Cialdini's empirical research has shown the importance of a distinction between a **descriptive norm** (doing what others do) and an **injunctive norm** (doing what others think one should do). Cristina Bicchieri defines social norms in terms of one's beliefs about the actions and beliefs of others in the reference group. We sketch in Section II and show in great detail in Appendix II that the bewildering array of social-norms models and their terminologies tend to converge on the elements: a social norm has to do with beliefs about others, that is, social expectations; within some reference group; maintained by **social approval and disapproval** and other social influence. Approval or disapproval can include others' covert attitudes or their overt positive and negative sanctions.

In order to create beneficial social regularities or to change harmful ones, it is important to understand how they differ in structure. Different types call for different responses. We distinguish nonsocial, weakly social, and strongly social regularities. Strongly social regularities include social norms of coordination and social norms of cooperation. Legal norms are declared and sanctioned by the state. Moral norms are much more motivated by conscience than by social expectations. It is important and useful to draw these distinctions, as understanding them helps us analyze how to beneficially harmonize moral, legal, and social norms for the well-being of children.

How are Social Norms Measured?

Measurement is a special challenge, because social norms or their process of change cannot be inferred from behavioral observations alone. For example, most people in a group could be doing the same thing, but not because others in their group expect it of them. And people's beliefs about what others in their group expect of them can change over a period of time before manifesting behaviorally as a changed norm within the group.

We propose that to identify a social norm we would want to know:

- Who is the reference group?
- What is typical in the group?
- What is approved of in the group?

We review several different formulations of these principles suitable for different purposes including:

- Has the reference group changed?
- Over time is the old norm less typical in the group?
- Over time is the old norm less approved of in the group?
- Over time is the new norm more typical in the group?
- Over time is the new norm more approved of in the group?

Next, we offer general considerations on measuring social norms. To do so an investigator would measure one's beliefs about others, their social expectations; who they believe the reference group is; and the anticipated reactions of others to compliance or noncompliance with the norm. We show how to recognize social norms and their change in ordinary conversation or in focus groups. We suggest ten (or fewer) simple questions intended to identify social norms and measure their change. They are open-ended questions to be asked in a focus group or informal conversation, but they can be quantified. We move on to DHS and MICS surveys, stating four simple indicators in such data that suggest the existence of a social norm. We cite the multi-level models of Storey and colleagues who use DHS data to identify social norms, and explicate another creative use of these data.

We introduce Fishbein and Ajzen's (2010) Reasoned Action Approach (RAA), a model of human behavior as determined by personal attutide, perceived social norm, and perceived behavioral control. RAA has been applied to behavior-change questions for over 40 years, in about a thousand studies, and its well-tested methods offer ideas for adaptation. The specific social-norms measurements we found in development studies tend to be partial borrowings from RAA. Next, for concreteness, we review a sophisticated and exemplary social-norms, social-network study, a field experiment on school harassment by Paluck and Shepherd (2012). The study gathered social network data to map the reference group, and measured empirical expectations, normative expectations, personal attitudes, and behavioral outcomes. Finally, we review a method intended to incentivize sincere answers to questions about beliefs about others in a population: the matching-game method. An appendix gives more details on the RAA, and another appendix systematically compares 16 different conceptions of social norms.

II. What are Social Norms?

The word *norm* has several meanings. A common meaning is that a norm is merely a *statistical regularity*: one notices that many people wear white in order to stay cool on a hot day. Another meaning is what people in a group believe to be typical and appropriate action in that group (Paluck and Ball 2010), such as when one sees in some group that brides wear white at wedding: a *social norm*. A third meaning is of a prescriptive or proscriptive rule with obligatory force regardless of social expectations, a *moral norm*: Thou shalt not kill! Finally, *norms* may be *legal*, and the set of international and national conventions, charters and laws are often referred to as *normative frameworks*. It's important to distinguish among these several different meanings of the word *norm.*

There are many different understandings of what *social norms* are, but they tend to converge on these elements (these are drawn from our analysis of 16 different definitions of social norms detailed in Appendix II):

- *Social Expectations*: A social norm is constructed by one's beliefs about what others do, and by one's beliefs about what others think one should do.

- The relevant others we call a *Reference Group* (and different norms may be relative to different reference groups); group members tend to hold the expectations of one another.

- A social norm is *Maintained by Social Influence*: approval, including positive sanctions, or disapproval, including negative sanctions; or by one's belief in the legitimacy of others' expectations; among enough members of the reference group.

These elements stand out in an early conceptual review by sociologist Gibbs (1965):

A norm…involves: (1) a collective evaluation of behavior in terms of what it ought to be; (2) a collective expectation as to what behavior will be; and/or (3) particular reactions to behavior, including attempts to apply sanctions or otherwise induce a particular kind of conduct.

Finally, most theorists observe that Social Norms are distinct from Legal Norms and from Personal Norms:

- *Legal Norms* are formal and commanded by states, and can be enforced by coercion. Social norms are informal, and are more maintained by approval and disapproval.

- A *Personal Norm* (including Moral Norm) or a Personal Attitude is internally motivated and is distinct from a Social Norm which is, one way or another, externally motivated.

A **personal attitude** differs from a social norm. The bride may not want to wear a white wedding gown but, knowing expectations in the relevant reference group, will nevertheless comply with the social norm of wearing white. Her personal attitude does not determine her action. A boy may not want to hit his girlfriend for flirting with another boy, but does so because the members of the boy's peer group do so and he believes they would belittle him for not doing so. His personal attitude does not determine his action.

A social norm is held in place by the reciprocal expectations among the people in a **reference group**.[2] A reference group is those people whose expectations matter to a given individual in the situation, those to whom the individual refers; such an individual is called a *referent* by some analysts. The interdependency of beliefs and actions within a reference group means that a social norm can be quite resistant to change, and can persist even among those who would rather not follow the norm.

Shared nonsocial beliefs, for example, how to grow the best millet, or how bodies work and what causes disease, differ from the shared *social* beliefs – social expectations – that constitute a social norm. A harmful social practice can be caused by shared nonsocial beliefs, by social norms, or both. Shared nonsocial beliefs are learned one from another, what we will call **one-way dependence**, and can change one person at a time. In contrast, social norms require the coordination of change by many in the reference group, what we will call **many-way interdependence.**

Because of interdependence within the reference group, a program that aims to support the establishment of a beneficial new social norm, or a shift from a harmful old norm to a beneficial new one, must help change reciprocal expectations among enough of the people in the reference group. A program that engages with individuals only as individuals could change their personal attitudes towards the behavior regulated by a harmful or a beneficial social norm, but not change their behavior, not bring about the beneficial social norm.

Some actions are largely **independent** of the actions of others, for example, for one person to row a boat. Suppose that it would be safer for a rower to be going west, but instead she is going north not knowing that this leads to a dangerous waterfall. A program would engage with the single rower about changing her personal attitude and behavior such that she shifts from north to west.

Other human actions are **interdependent**, for example, when several people work together to row a boat going north. Here, if a change agent engaged a single rower about shifting to the west, the single rower could come to prefer going west over going north. Her *personal attitude* would change, but her *behavior* would not change. That is because she believes that if she rows west while the others in her reference group row north, chaos

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[2] We are *not* talking here about the norm of reciprocity: to return like with like. Rather, we mean that among the people in the reference group each has certain expectations of others, and others have the same expectations of one: the expectations are reciprocal among many in the group.

would result, and some of the others would rebuke her for causing it. An external change agent, unaware of the interdependence of beliefs and actions among the rowers, might be puzzled by the discrepancy between a rower's attitude favoring going west and her behavior of going north.

Independent Action   **Interdependent Action**

How do we change an interdependent action? When several people work together to row a boat, a program could succeed at changing the personal attitude of each rower, such that each would prefer going west rather than going north. Would this be enough to change the direction of the group to the west? No, it is not enough on its own. For the group to change direction to the west requires a change in social expectations, such that enough of its members come to believe:

- that enough other rowers would approve of others going west
- that enough other rowers would coordinate on going west
- that enough rowers do coordinate on going west

In an example made extreme in order to illustrate a point, each rower could hold a personal attitude preferring to go west, but, because each believes that others in the group are going north and would approve of going north, she instead would go north. In the norms literature, this is called *pluralistic ignorance:* when many privately reject an extant social norm but wrongly believe that many do accept it (Prentice and Miller 1993). Here, private personal attitudes are divorced from public social expectations (Kuran 1997).

A study of responses to a year of group listening to and discussion of radio dramas on ethnic violence in Rwanda supports the idea that change in social expectations is important to bring about a new social norm. Paluck (2009) found that, contrary to the program's intention, people became less likely to believe that ethnic intermarriage brings peace. Yet,

the same people were much more likely to endorse the social norm that ethnic intermarriage should be allowed in one's family. Her general conclusion was that group discussion of the messages of the violence reduction program did not change participants' personal beliefs about violence, but did change their social norms about violence and did increase behavior in conformity with the new social norms (see Paluck and Shepherd 2012 and Zou et al. 2009 for similar findings). The lesson is, to change an interdependent action, although it helps to change personal attitudes, it is necessary to change social expectations.

In working to bring about a change in social expectations in a group, normally the change agent would also strive to bring about changes in the personal attitudes of group members. And a new norm would be more strong and stable if it were held in place by new social expectations as well as new personal attitudes. In summary:

- To change the independent action of an individual, work to change the personal attitude and behavior of the individual
- To change an action interdependent among members of a group, also work to change the social expectations of enough group members, thereby promoting the coordinated behavioral change among them.

Interdependent human action can – and sometimes must – change rapidly

Sweden's change from the social convention of driving on the left to driving on the right in 1967 provides an example of strong interdependence of action. It vividly illustrates how in a case of interdependence of action, bringing about a change – such as shifting from driving on the left to driving on the right -- requires a change in the reciprocal expectations of all individuals at the same time in the reference group. In this case, the reference group is all the people who would use the highways in Sweden.

A common remark is that culture is deeply entrenched and takes generations to change. Swedish humorists at the time joked that, because this is such a big change, it should be phased in gradually: first bicycles, a few months later trucks, sometime after that buses, later cars. Each person in Sweden could have wanted to change to driving on the right, but would not do so unless she believed that a) everyone else wants to do so if everyone else does so, and b) everyone confidently expects others to change to driving on the left at the same time. Precisely because of the reasons for its deep entrenchment, this interdependent action could only change by achieving simultaneous change in practice by all individuals in the reference group.

The keep-right convention is extremely interdependent – nearly all must comply or risk mayhem. Changing from a convention of ignoring traffic signs to a convention of obeying them is somewhat less interdependent. We benefit even if many rather than all shift. Here, for a stable trajectory of change, enough people must believe that enough people are starting to obey traffic signs.

For a beneficial new norm to come into existence, enough members of the group must believe that enough of its members are adopting the new norm. If the interdependent rowers were able to credibly communicate and commit amongst themselves they could organize a shift to the west by changing social expectations, changing their beliefs about others. They would need to have good reasons for changing those beliefs. Values deliberations about what one should do and what others should do can begin in a small core group, and diffuse in an organized fashion through the remainder of the reference group, until enough are ready to change. A way must be found to make visible to enough people that enough others are changing. One way of doing this can be through a public celebration of commitment (Mackie 1996; Mackie 2010; UNICEF 2010; Cislaghi, Gillespie, and Mackie 2014).

In the rowboat example everyone in the boat has to coordinate in the same instant on the new social norm for it to be effective. It is at one extreme, of strongest interdependence. In other circumstances, of weaker interdependence, an effective change would require a large enough subset of the reference group and the coordination would take place over a period of time. Strength of interdependence depends on two factors:

- People's beliefs about the bad consequences of being among those who try but fail to bring about adoption of a new social norm
  - Child marriage – daughter marries poorly or not at all, risk of dishonor
  - Community sanitation – wasted effort, ridicule
  - Washing hands with soap – teasing

- People's beliefs about how much effort is needed to get enough people for effective adoption of a new social norm
  - Almost everyone – community sanitation (otherwise some are still spreading disease in the community)
  - Most people – condom usage
  - Household and near neighbors – washing hands with soap

Suppose that the circumstances are of weaker interdependence and that each person in the reference group has the same threshold of adoption: each would follow the norm if she believed that 60% of the population is following the norm. As soon as 60% of the population believes that at least 60% of the population is changing, the norm is effectively and stably adopted.   Next, more realistically, suppose that people in the reference group can have different thresholds of adoption, a different belief about how much of the group is enough to motivate her to join in (Granovetter 1978). For example, imagine that people in a group of 10 are distributed in the following fashion.

- Person #1 will change whether or not others do,
- person #2 will change if one other does,
- persons 3-4 will change if two others do,
- person 5 will change if four others do,
- persons 6 and 7 will change if five others do,

- persons 8 and 9 will change if seven others do,
- and person 10 will never change.

If the program reaches #1, she changes on her own. When #2 learns about #1, #2 changes. If #3 and #5 come to believe that #1 and #2 are changing; then #3 will change, but #5 will not, because #5 won't change unless she knows that four people are changing. Since #5 doesn't change, #6-9 won't change either, even though #2-#9 of the people would change if each believed that enough in the group are changing. If #4 were brought back in, #2-#9 would change. Notice also in this exaggerated example that if #1 were absent from the beginning then no one else in the community would change, even though most are willing to change if enough others do.

If, as is likely in many real settings, individuals differ in threshold of adoption, the best way to support change is initially to attract those most motivated to change but also to make highly public that many are changing in order to ensure that thresholds overlap in a way that optimal adoption is attained.


Interdependent Human Action

Human actions range from the highly independent, to the dependent, to the highly interdependent. Taking my purse as I go out the door in the morning is mostly *independent* of the beliefs and actions of others. Many global development and public health problems lie on the more independent side of the spectrum, and hundreds of millions of lives have been saved or improved by policies and programs intended to solve problems of independent action.[3] A default assumption is of an individual behavior that can be changed by some intervention. An individual needs better health, education, or physical security, for example, and a program provides information or other services that satisfy the need. Such interventions are of great importance. However, significant barriers exist to reaching the most deprived populations and many barriers, such as discrimination and exclusion, are of a social nature and are not fully resolved by the provision of services. Moreover, there are other problems such as the fear to report acts of sexual aggression that are almost purely of a social nature. Policies and programs that work well to resolve harmful independent human actions may not work well to resolve harmful interdependent human actions. These problems require attention to the actions and beliefs of most people in the reference group and can be more easily understood and more effectively addressed from a social-norms perspective.

Global development policy and programs are quite cognizant of one kind of *dependent* action: the *diffusion of innovations* (Rogers 2003). This line of research originated in the study of the diffusion of the adoption of hybrid corn in the state of Iowa in the USA during the 1930s. A few farmers were early adopters, many farmers were middle adopters, and a

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[3] Interventions such as outside agencies draining swamps and killing mosquitoes in order to control disease is a change in the nonsocial environment having little or nothing to do with either the independence or interdependence of choices by individuals among the benefitting population.

few farmers were later adopters. An early adopter plants new seed corn and gets good results. One of his neighbors observes that the first farmer got good results, tries it himself, and also gets good results. Further farmers observe those good results, and try it out themselves. Plotting cumulative adoption of the new corn over a dozen years yields the familiar S-Curve shown in the graph: adoption starts out slow, accelerates towards the middle, and then decelerates as adoption becomes widespread. The phenomenon is illustrated in a current news report on a USAID agricultural program in Malawi: "We saw others irrigate last year and were successful, while we didn't irrigate and went hungry….So, this year, we decided to irrigate" (Kristof, July 11, 2012). '
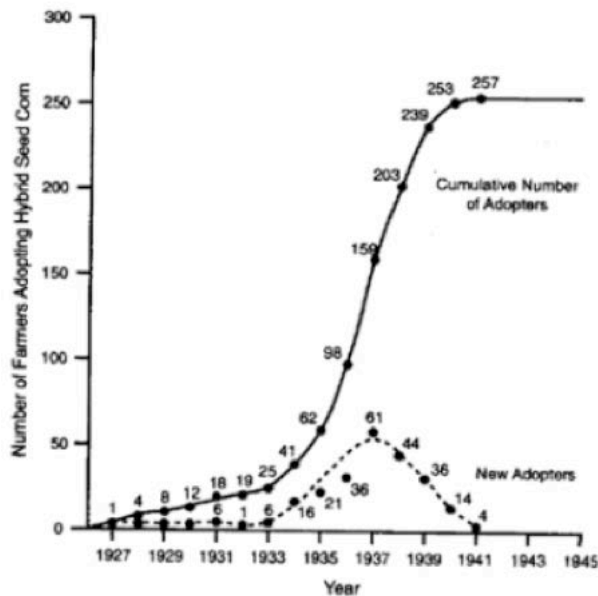
Source: Ryan and Gross (1943)

Adoption of hybrid corn is a matter of **one-way dependence**. My neighbor adopted hybrid corn. I saw that he got good results, so I tried it too. The neighbor did not adopt it *because* I adopted it. Since hybrid corn gets good results, I would not abandon the planting of hybrid corn if my pioneering neighbor stopped planting it. The diffusion of innovations approach is highly developed and widely applied, for good reason, but it almost always assumes one-way dependence.[4]

Compare adoption of hybrid corn to an example of **two-way interdependence**. If my friend and I benefit from meeting one another regularly, then we would want to coordinate the time and place of our meeting. Our practice is to meet for lunch the first Monday of every month at Arjun's Lassi Shop. I go to Arjun's every first Monday because I expect my friend to be there, and my friend goes because he expects me to be there. He goes because I go, I go because he goes. If he didn't show up at our monthly meeting, I'd be disappointed, and if he stopped going, I would stop going.

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[4] Another type of dependence was pointed out by Michie, Atkins, and West (2014, 30). If the goal is to promote healthy eating behavior, for example, a change agent should take into account whether someone else shops for the food, or cooks the food, for the intended change client.

Many-way interdependence is illustrated by a local farmers' cooperative that has a fixed meeting every three months on the first Saturday, at its office, where matters important to business success are discussed and decided. Each farmer goes because he or she expects most others to go. The regular meeting could just as easily be held at some other time or place, and those could be changed, but for now the convention of every three months on the first Saturday at the office stands; that is what everyone expects.

We will further illustrate the distinction between more independent and more interdependent action with two stylized development examples (the point is not to make empirical claims, please just accept the stipulations). The adoption of a better child nutrition regime in postwar Vietnam is an example of more independent action (Pascale, Sternin, and Sternin 2010). In basic outline, individuals over time gained knowledge of a better child nutrition regime, came to favor it, and put it into practice. More generally, one observes that one's neighbor adopted a new practice and it worked well, or hears from credible public health workers that it's a good idea, or finds media messages about its beneficial consequences believable, and adopts it. I might learn a beneficial practice from a neighbor and adopt it. But the neighbor adopted it in the first place because she found it beneficial, she does not practice it now because I practice it now.

In the next Figure, we show the cumulative change in attitude towards a better child nutrition regime, and the cumulative change in practice. Attitude changes gradually in the group, and practice tends to trail attitude.
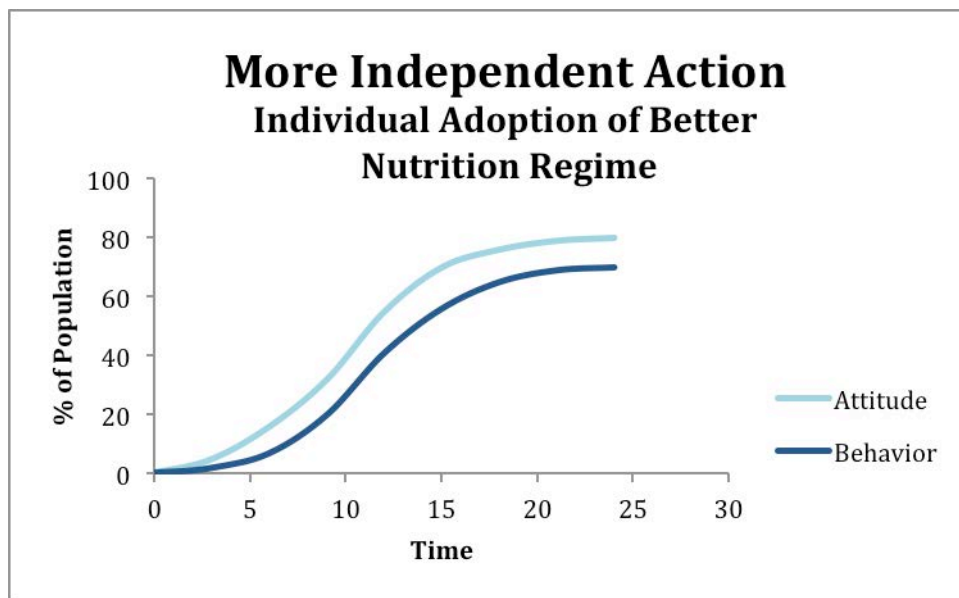
Community adoption of toilet usage to decrease the incidence of disease is a good example of strong many-way interdependence. Poor sanitation is recognized as a major human-rights problem that needlessly kills millions of people and in many places provision of and even of subsidies for using them, has not prompted wide-scale sustained uptake. Community-led total sanitation (CLTS, Kar and Chambers 2008) and community action for

total sanitation (CATS, UNICEF 2009) are programs which mobilize whole communities to shift from a regularity where individuals defecate in the open, to a new social norm of community-wide use of toilets, by involving communities in discussion and decision, plan of action, and plan of enforcement.

Some attribute the dramatic successes of CLTS to the virtues of participatory method. Yet there are features of the situation – namely the **interdependent** nature of the problem – which have at least as much if not more to do with the dramatic change. Unless almost all in the community shift to consistent toilet usage, the benefits of disease and death reduction would not be realized. Any individual acting alone to build a toilet would incur a cost for no benefit; only if nearly all comply would each individual benefit, and if all were to comply the benefit to each individual in the group would be highest. Each individual may be materially tempted to let everyone but himself make the change. Thus, an individual must come to believe either that compliance with the new norm is a legitimate expectation of others who comply, or believe that some others in the community would punish noncompliance or reward compliance with the new norm. In addition, to be a lone adopter exposes one to the ridicule of others. If all adopt, then ridicule would shift to lone open-defecators.

Attitude towards community adoption of toilet usage might shift cumulatively over some period of time. Due to the necessity of coordinated shift however, the *behavior* of adopting toilet usage would be delayed until most are ready to change and most decide to change, and then would onset rapidly. Moreover, after the shift to a new social norm of using toilets and its associated sanctions, some with a negative attitude towards toilet usage may nevertheless adopt it.[5] This is shown in the following Figure.

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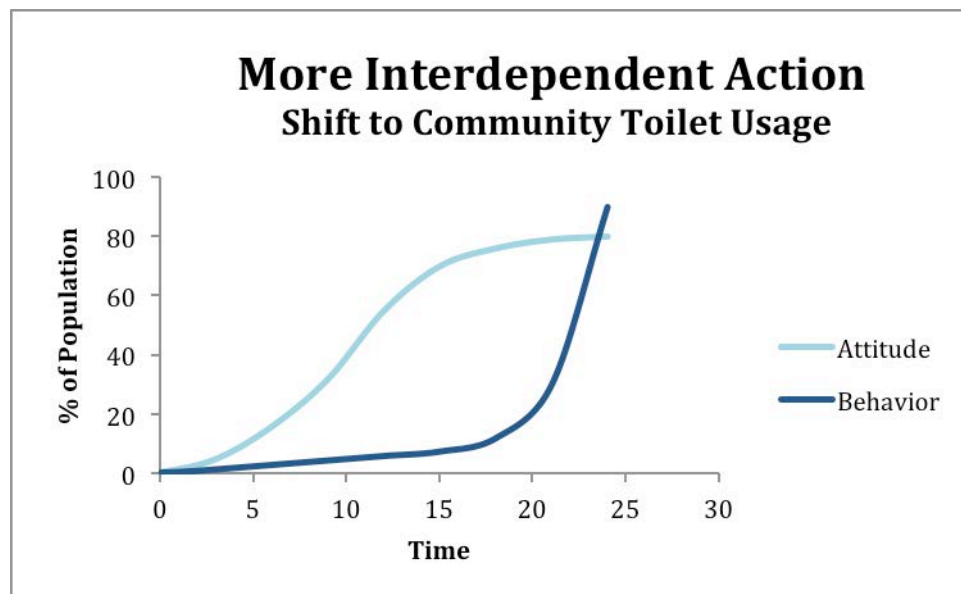
[5] As Janine Schooley of Project Concern International pointed out to Mackie.

Personal attitude differs from social norm and programs to address them need to have different characteristics. A program could aim to promote adoption of an independent type of action, that is, of an individual practice. One way to do that would be to persuade each individual to change her attitude and her practice. Another way to promote adoption of an individual practice, relying on the diffusion of innovation model, would be to persuade some individuals in a community to change their attitudes and practices on the expectation that others in the community would learn from influential early adopters.

An interdependent type of action, a social practice, requires a different program approach. In a community without toilets, an individual could gain new knowledge and form a favorable attitude towards their use yet lack the motivation to be the only one to adopt the social practice. Also, in a community with an effective social norm of toilet usage, an individual's personal attitude could be unfavorable to their use, yet because of the social norm he would nonetheless adopt the social practice. To reiterate, changing only personal attitudes is not sufficient for community toilet adoption. An engagement must also work to change the social expectations of enough group members culminating in a coordinated behavioral change among enough members of the group.

The Theory of Interdependent Action (Game Theory)

Game theory is a method to describe, understand, and explain interdependent human action. The choice made by one player depends on the choice of the second player, whose choice depends, in turn, on the choice of the first. In a larger group, the choice of each depends on the choice of all. The structure of such interdependence can be different in different situations.

Simple game theory systematizes and clarifies intuitions known to all humans about interdependent actions (Schelling 1960, Wydick 2008). Its apparatus can be initially unfamiliar and confusing. Once one becomes comfortable with this way of thinking, insights into social patterns are sharpened.

Game theory can distinguish among different structures of interdependent action, depending on how the several people involved rank the value of alternative actions. Game-theoretic analysis shows that in some circumstances interacting humans find themselves in an equilibrium state from which no individual has an incentive to deviate – even if that equilibrium state does not yield the best outcomes for the people involved. This is of great interest, because it helps us understand how a harmful practice can exist and be stable. It allows us to see that the practices that exist are not necessarily the best practices that could exist.

Here, two "games" of special interest will be explained in story terms. In a **coordination game**, it is in most people's interest to coordinate on one way of doing something or on another way of doing it (e.g., Schelling 1960). We can all coordinate on driving on the right-hand side of the road, or on driving on the left-hand side of the road. All-left and all-right are each a pure equilibrium, meaning that for those born into a country

where all drive on the left, there is no motivation for any individual acting alone to switch to driving on the right.

One faces the coordination problem anew each time one takes to the road, and as the problem is repeated, drivers rapidly come to expect others to coordinate on the same equilibrium as they did last time. A history of people in a reference group coming to expect its members to coordinate on one equilibrium over another in a repeated coordination game is called a **convention** (Lewis 1969). Conventions can be a matter of indifference, or one convention can be better for everyone than another worse convention, and people can be trapped by their history in the worse convention. This was so for the Swedes, who were trapped in the convention of driving on the left, even as transportation connections to the rest of right-driving continental Europe increased. Every Swede would be better off driving on the right, but they could only do so by all changing at once.

In a **social dilemma** the situation is different (e.g. Ostrom 1990). The so-called tragedy of the commons is an instance of a social dilemma (which is what we call the many-person version of the more familiar two-person prisoners' dilemma).[6] Suppose that we share a common fishery, and for the moment that we have no moral, social, or legal influence over one another. All are better off when each Cooperates on a limited catch, the total not exceeding the sustainable limits of the fishery. In the absence of any regulation, however, each is tempted to overfish, or to Defect. The one equilibrium choice in the game is for all to overfish. No individual would deviate from the equilibrium choice of Defect, but all would be better off if each Cooperated.

Another example, already discussed, is community adoption of toilet usage. Each is better off Cooperating on community-wide toilet usage. In the absence of any regulation, however, each is tempted not to install and not to use a toilet, that is, to Defect. The one equilibrium choice in the game is for all not to install and not to use. In overfishing, or in toilet adoption, when positive social sanctions make the cooperative choice worthwhile, or negative social sanctions make the temptation to defect not worthwhile, or a when there is the belief that choosing to Cooperate if others do is the right thing to do, the situation transforms into a coordination game, adding a new equilibrium of mutual Cooperation to coordinate upon.

It could be important for policy and program purposes to understand how these two types of interdependent action differ. In a situation that is originally a coordination game, change from an old convention in equilibrium to a new convention in equilibrium is stable with no further regulation. Once the Swedes switch to driving on the right, excepting some initial confusion, an individual has no reason to switch back to driving on the left. It is sustainable with no further effort. But in a situation that is originally a social dilemma, it is in each person's narrow interest not to take part in Cooperative choice. Thus, change to a

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[6] For information on the prisoners' dilemma, see the entry at en.wikipedia.org/wiki/Prisoner's_dilemma, and for more detail see the Stanford Encyclopedia of Philosophy entry at plato.stanford.edu/entries/prisoner-dilemma/.

better social outcome requires ongoing moral, social, or legal regulation to be sustained in equilibrium.

The Study of Social Norms

This subsection quickly reviews the history of the study of social norms, and briefly presents some contemporary theories of norms which development practitioners may have encountered in their training or work. These theories arose in different intellectual traditions and use different terminologies, but converge on the three elements we introduced earlier: social expectations (beliefs about what others do and beliefs about what others think one should do); in a reference group; maintained by social influence, chiefly the approval and disapproval of others. In Appendix II, we provide an extensive table comparing the social-norms definitions of 16 authorities in economics, law, philosophy, political science, public health, social psychology, and sociology, accompanied by discussion. Definitions vary greatly in terminology, but most surveyed refer to some or many of the same set of elements.

Social norms are mentioned throughout the historical record, beginning with the ancient Greeks. They distinguished between nature, *physis*, that which is common everywhere, and convention, *nomos*, that which varies from place to place. Montaigne's (1993/1592 122-139) 16th-century essay on custom reports that,

> There are countries…where womanhood is rated so low that they kill the girls who are born there and buy women from their neighbors when they need them;…where it is the men who carry things on their heads and the women who carry them on their shoulders;…where the women wear copper shin-guards on their legs;…where they circumcise females;…where they let all their hair grow on the left of the their body and keep all the other side shaven;….For the Rule of rules, and the Law of laws, is that each should observe those of the place wherein he lives.

In the mid-20th century sociologist Talcott Parsons (1951) dominated social science. His theory conceived of societies as if they were individual organisms which function to survive and reproduce. He assumed that all social norms function for the benefit of society, and he explained observed social regularities as being due to social norms, with little explanation of what social norms are, how they work, and how they change. His structural-functionalist theory fell into disuse.

A new approach to social norms emerged from economist Thomas Schelling's reorientation of game theory (1960, 1978), which generated bounteous hypotheses for the explanation of regularities in human action. Peyton Young (2008) summarizes the approach as follows: "*Social norms* are customary rules of behavior that coordinate our interactions with others. Once a particular way of doing things becomes established as a rule, it continues in force because we prefer to conform to the rule given the expectation that others are going to conform (Schelling, 1960; Lewis, 1969)." This school of thought

blossomed at the University of Chicago in the 1990s.[7] Gerry Mackie (1996), a graduate student at Chicago, applied Schelling's ideas to the harmful practices of footbinding in China and female genital mutilation/cutting in Africa, arguing that what worked to end footbinding could be adapted to help end FGM/C.

 Social-psychology carries on an independent tradition of the investigation of conformity, including social norms. Cialdini (and Trost 1998) is a leading social-psychological researcher of social norms. His investigations greatly enriched our understanding of the distinction between **descriptive norms** and **injunctive norms**. Humans have the goal of effective action, say Cialdini and Trost. One important way to do this is to rely on social proof, that is, in novel, ambiguous, or uncertain situations: *do what others do* (descriptive norm). When in Rome, do as the Romans do, the saying goes. Humans also have the goal of building and maintaining social relationships. Injunctive norms are constructed from one's belief about what most people approve or disapprove of: *do what others think one should do*. Additionally, humans have the goal of managing self-concept, according to Cialdini and Trost. They follow **personal norms**, internally motivated, and consistent with one's sense of self-worth.

Further, his **focus theory of normative conduct** hypothesizes that a norm – descriptive, injunctive, or moral – does not direct behavior unless made salient in the situation. According to Cialdini, norms activate behavior when they are salient, and if applicable norms conflict then the more salient norm governs. For example (among many other findings) making someone more self-aware reduces littering by people who have a strong personal norm against littering (by making the personal norm more salient); or hearing stories of people being sanctioned for littering reduced actual littering among those with either a strong or weak personal norm against littering (by making the injunctive norm more salient) (Cialdini, Kallgren, and Reno 1991).

Ajzen and Fishbein in 1980 originated a theory of human action, including a theory of social norms, meant to account for the oft-observed gap between attitude and behavior. They revised it over decades, culminating in the Reasoned Action Approach (2010). A positive or negative personal attitude towards a behavior (**attitude**), a belief that relevant others believe one should or should not perform the behavior (**subjective norm**), and a belief that it is possible to perform it (**perceived behavioral control**) each make it more likely that the **intention** and then the **behavior** will occur. Originally, their subjective norm had only injunctive content, but in their latest work (2010), the subjective norm is split into a descriptive aspect and injunctive aspect, incorporating Cialdini's insights.

Most conceptions of social norms include the idea that they have to do with one's beliefs about others in the reference group. We called them *social expectations*. Fishbein and Ajzen's *subjective norm*, for example, is perceived pressure to perform or not perform a given behavior (2010, 130); or "the total set of accessible normative beliefs concerning the

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[7] Scholars in this tradition who advanced the study of social norms include: philosopher David Lewis (1969), philosopher Edna Ullman-Margalit (1977), sociologist James Coleman (1994), political theorist Jon Elster (1989), legal theorist Cass Sunstein (1996), Richard McAdams (1997), economist Geoffrey Brennan and philosopher Phillip Pettit (2004), and economist Peyton Young (2008).

expectations of important referents**" (http://people.umass.edu/aizen/sn.html). It is a subjective belief, in that one could mistakenly believe that others do perform a behavior or would approve or disapprove of it.

Indeed, another line of thought and practice from social psychology is based on the concept of **pluralistic ignorance** (Prentice and Miller 1993). Pluralistic ignorance means that many privately reject a group norm but mistakenly believe that many others accept the norm. Thus the norm is persistent and even publicly favored even though privately opposed. Pluralistic ignorance is a striking and memorable concept, but we caution against unthinking generalization. More typically in development settings harmful norms persist because people correctly believe that most others accept the norm. Pluralistic ignorance is most likely to be found in eras and settings of high mobility or rapid social change.

The "social norms approach" and pluralistic ignorance

Perkins and Berkowitz (1986) found that American college students believe that their peers drink alcohol more frequently and in greater amounts than they actually do, and that their peers are more tolerant of alcohol abuse than they actually are. They suggested that if an alcohol education program credibly corrected such pluralistic ignorance, average consumption would decline in the reference group. Thus was born what its creators call the "social norms approach" to campus binge drinking (and other health and justice issues). The education program presents accurate information about the frequency of alcohol use among peers and about their attitudes to abuse; predicting that corrected perception of the descriptive norm would motivate lowered consumption. Results are mixed (Wechsler et al., 2003; DeJong et al. 2006). Schultz et al. (2007) suggest an explanation for instances of no program effect: over-reliance on descriptive norm. They did a study which showed that providing true information about average household electricity use in the community caused those above the descriptive norm to use less, but those below the norm to use more, yielding no net change in community use. Adding an injunctive message (a smiley face for low users and frowny face for high users) to the descriptive message did work to lower community energy usage.

In public health, Lipinski and Rimal (2005) offer the construct **perceived norm**, roughly the same as what we call *social expectations* or what Fishbein and Ajzen call a *subjective norm*. *Perceived norm*, they say, is made up of subjective beliefs about prevalence of a norm (which they call a *descriptive norm*) and subjective beliefs about pressure to comply (which they call an *injunctive norm*). Storey and Schoemaker (2006) adapted and modified Lipinski and Rimal in an applied analysis of DHS data on contraception in Egypt. The perceived norm is operationalized as 1) **collective behavioral norm** (a proxy for perceived descriptive norm), the prevalence of a behavior as aggregated from individual reports and 2) **collective attitudinal norm** (a proxy for perceived injunctive norm), the prevalence of personal attitudes, aggregated from individual reports. Aggregating individual behaviors and attitudes is not the same as aggregating what subjects believe about others, but it could be a useful proxy when, as with the DHS, norms data are limited.

Resemblance of Some Social Norms Theories Mentioned in Development Literature

Social Norm: Theorist:	One's beliefs about others in the reference group	
	What they do	What they approve of
Cialdini	Descriptive norm	Injunctive norm
Ajzen & Fishbein	Subjective norm	
	Descriptive norm	Injunctive norm
Lipiniski & Rimal; Storey & Schoemaker	Perceived norm	
	Collective behavioral norm	Collective attitudinal norm
Bicchieri	Social expectations	
	Empirical expectations	Normative expectations

Sugden (2000), in the economics and game-theoretic tradition of inquiry, called the reciprocal expectations in a group about what one does and others do *empirical expectations* (an actually chosen equilibrium in a game). He said that for one to defy empirical expectations (deviate from the equilibrium) would set back others in the group and cause a negative reaction from them. Anticipating those negative reactions from others, that is, others' *normative expectations*, is a reason for one to comply with what is done in the group. In short: others do it, believe one will do it, would be disappointed with one if one didn't do it, which is a reason for one to do it.

Bicchieri (2006) synthesized a theory of social norms, combining her original contributions, ideas such as Sugden's from the economic approach, ideas such as Cialdini's descriptive and injunctive norms from the social-psychological approach, and other elements, in a unified architecture. Bicchieri (formal, in 2006, 11; informal and quoted below, 2014, ch. 2) offers a definition of a social norm based on conditional preferences, empirical expectations, and normative expectations. Bicchieri's (2006, 11) approach places the distinction between empirical expectations and normative expectations against the distinction between descriptive and injunctive norms. The expectations reformulations make it more vivid that a social norm is constructed from beliefs and desires of individuals in the reference group**.** One prefers to conform to a social norm conditional on empirical expectations and normative expectations. Bicchieri says that,

    A norm is a behavioral rule that:
        1. is known to exist and apply to a class of situations
        2. is followed by individuals in a population if
                a. it is believed that sufficiently many others follow it
                (empirical expectations)

b. it is believed that sufficiently many others believe the rule should be followed, and/or may be willing to sanction deviations from it (normative expectations)

Cialdini's *descriptive norm* has to do with what we earlier called *one-way dependence* and will later explicate here as *social proof*, as in the example of adoption of hybrid seed corn in Iowa, USA. Bicchieri's *empirical expectations* includes *social proof*, but also *social convention* (earlier called many-way interdependence, such as driving on the right side of the road).

Bicchieri's *normative expectations* differ somewhat from Cialdini's *injunctive norm*. According to her definition, an individual believes that others have a right to expect conformity and the individual an obligation to conform, or an individual believes that some others in the reference group would sanction conformity and nonconformity. In contrast, Cialdini's injunctive norm is indicated by one's "perception of what most people approve or disapprove" (Cialdini, Kallgren, Reno 1991). The possibility that a social norm can be held in place by beliefs about the legitimacy of others' expectations of conformity is often omitted in both the economic and social-psychological traditions. Bicchieri believes that her definition of social norm in terms of empirical expectations, normative expectations, and conditional preference is more operational and more testable than alternative approaches.

An aside on social norms of group demarcation

Group identity is frequently offered as an explanatory cause for the presence and force of social practices. This would mean that one engages in practice *X* because one identifies with group *Y*. Identification is some kind of cognitive or affective oneness with other members of the group.

But we must be careful not to confuse description with explanation. Someone speaking Italian is much more likely to be Italian than German. However, do Italians speak Italian because they want to mark themselves as different from the Germans, or do they speak Italian because they want to communicate and normally the people adjacent to them expect them to speak in Italian? Speaking Italian happens to serve as an ethnic marker, but normally that is not its purpose. Italian did not emerge and is usually not maintained for demarcation purposes.

In contrast, the markers of an American outlaw motorcycle gang -- the colors and other signs -- are adopted for the purpose of group demarcation. They are costly to obtain, and anyone who tried to fake them would be severely punished by group members. The markers declare a member's loyalty to the group, and by group reputation declare to outsiders that harm to a marked member can be retaliated by other members of the group (adapted from Bicchieri 2006). To avoid confusion: One is *frequently* able to distinguish social groups by the obvious compliance of their members with one or more norms; however, one should not automatically *assume* that group demarcation is *the reason* for either the origin or maintenance of the norm.

Social Approval and Disapproval, and Other Social Influence

Approval or disapproval within a reference group often maintains a social norm. Facial expressions are a simple form of social approval or disapproval. Recall that in Schultz et al.'s (2007) study a smiley face for low usage and a frowny face for high usage on the household electric bill reduced people's energy consumption. From simple facial expressions we can move inward or outward. Moving outward, approval and disapproval become more conspicuous, including multiple modalities of expression – stance, gesture, emotion, utterance – and multiple modalities of action (and forebearance). The term **sanction** refers to both positive and negative expressions and actions, and includes admiration or contempt, verbal approval or disapproval, praise or rebuke, compliment or insult, prize or fine, promises of physical reward or threats of physical punishment, actual physical reward or punishment, and in the extreme threats of death or actual death, among other things. Those who do not comply can, for example, be gossiped about; can be forbidden from handling food or gathering firewood, denied adult status in the community; or can be considered impure or untouchable. Approval could rank an individual or a group above others and disapproval rank an individual or group below others; or could be an act of acceptance including someone equally in a group or an act of rejection excluding someone from a group of equals.

Compliance follows not so much from application of sanctions but more from anticipation of them. For example, one is motivated to comply if one *believes* that others will negatively sanction noncompliance; notice that in this situation one would comply even if one's beliefs were false. If what a social norm commands is quite clear, and if each believes that negative sanctions would be quite strong, then we would never observe application of negative sanctions in the group: the norm is maintained by what people believe would happen if one did not comply although everyone in fact complies. Thus a social norm can exist and have force even when not behaviorally indicated by the application of sanctions.

An ethnographic study of a group of Bushmen found social norms, transgressions of those norms, and sanctions among them (Wiessner 2005). Praise or criticism of others was found in two-thirds of conversations; but 40% of criticisms were met with no visible response. Criticism was often initiated as joking, and "those who punished too easily or too harshly gained negative reputations." Surprisingly, known slackers were not much subject to verbal punishment, but instead experienced "low social regard, fewer marriage opportunities, or fewer exchange partnerships." This suggests that much social-normative regulation is subtle, shifting from light approval to light disapproval and back, or in quiet avoidance of future relationships with transgressors.

Moving inward, one could believe, even in the absence of overt *sanctions* by others, that others form covert *attitudes* of approval or disapproval towards one, and these beliefs about others could motivate one's compliance with a social norm.[8] Economists sometimes

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[8] Here we are adapting with our own terminology ideas on *esteem* developed by Brennan and Pettit (2005), and McAdams (1997).

model norm compliance as instrumentally valued reputation: one values others' approval (even covert) in the present because that approval will maintain or create benefit from cooperative transactions with them in the future.

However, it is not unusual for one also to value intrinsically the approval or disapproval of certain others: not just those one knows face to face, but, for example, and depending on context, strangers generally, people like oneself, or one's ancestors, deceased parents, or future generations. Intrinsic valuation of approval or disapproval can motivate one to comply even when there are no overt sanctions and no prospect of any relationship with referents in the future.

One could also accept that the expectations of others in the reference group are legitimate, for example that, if they comply, then compliance is due to them. A person could believe that a social obligation is owed to specific others who abide by the social obligation, but is not owed to others who do not abide by it. A strictly moral obligation is different: it is an action required regardless of what others expect or do.

Typology of Reasons for Behavioral Regularities

Overview. Understanding how observed regularities of action in a group differ from one another in their structure helps us understand how a practice works. If we better understand how practices work, we are better able to propose ways to change harmful ones, or to strengthen or create beneficial ones. The following table by Mackie, borrowing from prior literature including Bicchieri's (2006) work, displays types of reasons for behavioral regularities.

Of course, reality is much fuzzier than this typology, especially because a specific human action may be motivated by more than one of these reasons. Nonetheless, these focused distinctions provide a useful starting point for categorizing observed regularities in human populations.

TYPOLOGY OF REASONS FOR BEHAVIORAL REGULARITIES			
Not Social	*Weakly Social*	*Strongly Social*	*Institutional*
Personal Attitude One's favorable or unfavorable response to an object (independent of other's expectations). *My favorite flavor of ice cream is chocolate.* **Population Regularity** Individual response to a nonsocial constraint, or selection by a force outside the population. *On a hot sunny day, I stand in the shade, you stand in the shade, she stands in the shade.* **Moral Norm** Motivated by an inner conviction of right and wrong (moral norms are much less conditional on what others do or think one should do than are social norms). *I do not injure others because I believe that is morally wrong, no matter what others do or say.*	**Social Proof** Following a rule because others do; typically because one believes they know better what they are doing (one-way empirical). *As a tourist in London, when I exit the underground train I follow the locals to the exit.*	**Social Norm…** Following a rule because one believes others do (and others likely believe one does); and because one believes others think one should follow it. Many-way empirical and many-way normative. **…Of Coordination** *I follow the rule of driving to the right because it is in my interest, and because others who would be harmed by my noncompliance would disapprove of me for putting them at risk.* **…Of Cooperation** *I cooperate in helping keep the village clean, even though tempted to shirk, because others join in the cleaning too, and others who would be harmed by my noncompliance would disapprove of me for not helping when others do.*	**Legal Norm** Legal norms are commanded by the state, formal, often explicit, and legitimately enforceable by coercion. *I do not rob petrol stations, because I respect the law, or I believe I may be punished by the state for doing so.*

    Personal Attitude. A *personal attitude* is a latent disposition to respond favorably or unfavorably to some object (Fishbein and Ajzen 2010, p. 76), including one's own action.

One's personal attitude towards one's action can be independent of important others' favorable or unfavorable responses. However, the contrary may be true. For example, one may favor an action, but refrain from doing it if it would be negatively sanctioned by others: personal inclination can be outweighed by social expectation. **There are many theories of individual attitude and behavior change and they are widely applied.**

Personal attitude versus social norm

Often one's personal attitude, say about an action one favors, coincides with the social norm, what others in the group do and approve of one doing. A person might not even notice this coincidence unless, for some reason, she changes her personal attitude and discovers that she is constrained by a social norm that prevents the change in behavior she desires to undertake. Alternatively, a social norm could be adopted by a group, for example, fierce disapproval of drunk driving, that someone complies with even though he'd personally prefer the convenience of continuing to drive while drunk. A paucity of explanations for attitude-behavior discrepancy motivated Fishbein and Ajzen (1975) to theorize and measure both personal attitude and social norm. This was once a controversial distinction among psychologists. However, an accumulation of evidence, including experimental evidence, more supports the view that attitude and norm are distinct entities. For example, it has been shown that some behaviors are more influenced by personal attitude, and other behaviors more influenced by social norm. The evidence is summarized by Trafimow (1998).

A recent study in cross-cultural psychology (Zou et al. 2009) provides evidence for the view that cultural consensus of a group is more a matter of what its members believe that others in the group believe than a matter of one's personal attitude towards items in the cultural consensus. For example, Poles believed that Polish cultural values were more collectivist and Americans that theirs were less collectivist, although there was no difference between Poles and Americans in their relevant personal attitudes. And complying with a social norm activates different parts of the brain than does choosing according to personal attitude (Lieberman 2013, 85).

The term *personal norm* (Schwartz 1977) is one's own judgment about whether one should or should not perform an action. It can include a prudential personal rule such as always to decline tequila (one's own well-being) or a moral personal rule such as not to steal from others (the well-being of others). A personal norm is internally motivated, not externally motivated by the approval or disapproval of others (others may happen to approve or disapprove, but that is not what drives one's action). A personal prudential rule includes such things as taking one's purse in the morning, or not relaxing until one's chores are done. Some personal rules or habits not influenced by social expectations in a reference group, for example, a harmful health practice such as a personal rule always to accept an offer of tequila may be of interest to change agents, but a social-norms perspective has nothing to add to our understanding of behavior driven largely by personal

attitude. A moral personal norm we call a *moral norm*, which will be treated separately below.

Population Regularity. One usage of the word *norm* is to refer to a statistical regularity, such as the average height of maize plants in Guatemala in 1949. Looking at human populations, we shall call it a *population regularity*. A regularity is observed in some population, but it has little or nothing to do with the dependence of one individual's beliefs and actions on the beliefs and actions of others.

The regularity is due to some *cause external to the population*. For example, wherever one goes in the world, in the hot sun people seek shelter in the shade. Because each is observed seeking shade does not mean that each seeks shade because others do. A *selection mechanism* can also cause a population regularity not caused by dependence within the group. Students the India Institute of Technology study lots of mathematics. Mostly, they do not do so *because* their fellow students do so (although they may be happy to be among their own kind). It is mostly because the admissions committee had reason to select students of this type.

In program contexts, many regularities observed in a population may be due to causes external to it that relate to something in the larger political, economic, or physical environment. For example, in an area where maternal health services are distant and costly, we may observe that the poorer stratum of the population gives birth at home rather than in the health center. The primary reasons for this may be the distance of the health center, or the cost of the transportation or of the health service. As is done by most programs, **changing those regularities requires addressing these causes external to the population of interest.**

A social cause could also be relevant. Perhaps important people in the community believe that birth should continue to take place at home with traditional birth attendants and would negatively sanction those who would seek to give birth in the health center. Perhaps people in the poorer stratum believe they would be given poor or no treatment if they sought care at the health center. Then, we would also seek to change the cause internal to the population.

Social Proof (One-Way Empirical). This is a one-way dependent action, as in our earlier discussion of the diffusion of innovations, like the adoption by families of a better child nutrition regime. A tourist to London, using the underground train, doesn't need to know what route to take to exit the station. She can just follow everyone else, on the assumption that they know where they're going. Some people are part of a regularity because each expects some others to do so (the tourists, relying on the locals), but some of those others are part of it for reasons other than expecting others to do so (the locals, who already know which way to go).

Why would a person do what others do? We are not proposing a general disposition to conform, or some instinct to imitate. Humans do imitate, better than do other animals including their ape cousins, but from an early age they imitate *selectively* (Hurley and

Chater 2005). When a person does what others do, we should always look for the reasons. Cialdini (and Trost 1998, 152) calls one kind of reason a *social proof*: in a novel, ambiguous, or uncertain situation, do what others do. For example, the aggregation of many opinions may be more accurate than a single expert opinion. On the television game show, *Who Wants to be a Millionaire?*, a stumped contestant can choose to consult either an expert friend or the audience. Friends are right two-thirds of the time, the audience is right nine out of ten times (Page 2007, 182).

Depending on the context, one might copy those in proximity, those in similar situations, those with similar characteristics, or similar in some other relevant way; and one might copy the most frequent action, or copy the most successful actors (Boyd and Richerson 2005, 58-97). Many social practices of interest to development policy and programs are of this type. The theory, techniques, measurement methods, and program experiences of the diffusion of innovations approach apply (Rogers 2003).

This type of behavioral regularity is made in part by the one-way empirical expectations of some of its members and is thus weakly social. **To change that regularity, one would seek to credibly provide better information to individuals in the group**; often, for the sake of efficiency, one would provide that information to early adopters of innovation who would trigger its diffusion further through the group. The *positive deviance* approach works to make beneficial innovators in the group salient to the remainder of the group (Pascale, Sternin, and Sternin 2010).

In social-proof circumstances, change in attitude and behavior can be gradual through the group. Next, we turn to more strongly social practices, usually more resistant to behavioral change.

Social Norm of Coordination (Many-Way Empirical and Many-Way Normative). Social proof is one-way dependent.   A social convention is multi-way interdependent. In Thailand one drives on the left *because* one believes others will drive on the left, and others drive on the left *because* they believe one will drive on the left.   A reason why someone would do what others do is if they all had a sufficiently common interest, such as to avoid collision. Usually, there is more than one way to pursue a common interest. By coordinating with one another on one way of pursuing that common interest, each does better than if they fail to coordinate. Recall that the history of people in a group coming to expect its members to coordinate on one equilibrium over another in a repeated coordination game is called a *convention*.

If people have an interest in communicating with one another, they can satisfy that interest by coordinating on speaking the same language. We could call the furry creature that catches mice either *a cat* or *un gatto*, so long as we coordinate on the name. If we don't coordinate on a name we fail to communicate. We can coordinate on U.S. dollars or on dentalium shells as a medium of exchange; if we can't coordinate on a currency, then we are worse off, having to engage in less efficient barter in order to exchange goods. In these examples, it's in each individual's interest to comply. At first glance, there seems to be no normative component to these social conventions.   Some authorities (e.g., Brennan et al.

2013) sharply distinguish social conventions from social norms, on the grounds that a convention is about what others do (descriptive, empirical), and not about what others approve of (injunctive, normative). We agree with Burke and Young (2011) that, "there are numerous gradations and levels of response to norm violation that make this dichotomy problematic." Thus, we invoke and expand on Ullman-Margalit's (1977) distinction between social norms of coordination and social norms of cooperation.

Keeping to the left or keeping to the right when driving is the most commonly discussed example of a social convention. One has a strong interest in doing what others do in order to avoid one's injury or death. The usual discussion omits the social and moral aspects of this rule, however. If the convention is to drive to the right, then driving on the left endangers both the self *and others*. Surely, many individuals would believe it is legitimate for others to expect them to avoid endangering others, and also many would disapprove and some would negatively sanction someone endangering others by driving on the left for no good reason. Breaching a social convention of mutual interest provokes social and moral reactions as two conditions apply:

- The more regular the convention is, within and between people, the more one is reasonably entitled to rely on it.

- The greater the expected value of loss to others from failing to follow the convention.

Further, although the ideal model assumes for convenience that all in the reference group have a perfect interest to coordinate on an expected convention, in reality some individuals defy the convention. Their failure could be due to weakness of will, negligence, perversity, ignorance of the convention, or even not sharing in the common purpose. Such individuals could be persuaded to comply by the disapproval of others including negative sanctions. In Mackie's hometown, a well-known business person was convicted for driving north for 38 miles in the southbound lanes of the freeway; he was legally sanctioned but he was also the object of public contempt and social ostracism.[9]

Sometimes one way of pursuing a common purpose is as good as any other way. Sometimes one way of doing it is better for almost everyone than another way of doing it. Sweden was the only country in continental Europe to drive on the left. Over time, road, bridge, and ferry connections increased with the rest of Europe. Before the increase in connections, whether Sweden had a convention of driving on the left or driving on the right was a matter of indifference: either would do. After the increase in connections, it would be a better convention for all to drive on the right. **To shift from an old convention to a new one, enough members of the group must believe that enough members of the group will coordinate on the new convention.** As the change from left to right becomes more socially feasible, the more people accept the legitimacy of a proposed convention

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[9] "____ found guilty on driving charges," *Eugene Register-Guard* (Oregon, USA), June 18, 1982. http://news.google.com/newspapers?nid=1310&dat=19820618&id=hvVVAAAAIBAJ&sjid=W-IDAAAAIBAJ&pg=4737,4301702, accessed 29 September 2014.

shift, and the more people would have reason to approve of those who are ready to change to driving on the right, and disapprove of those not ready to make a change. Additionally, upon the convention shift from left to right, there would be moral and social reactions to those who fail to keep to the new right-driving convention.

Just as speech and writing has conventional meaning, an action can have a conventional meaning. Suppose an important person invited you to dinner and it is now time to depart. In one community (Fiske 2004), you show respect by preceding your host out the door (symbolizing that you would fight in the street to protect his person), but in another community you show respect by following your host out the door (so as not to show him your backside). When an action has conventional meaning to others in the reference group, standing for something valued by those in the group, such as politeness, virginity, marriageability, equal respect, or courage; not to perform the action *means* impoliteness, harlotry, unmarriageability, disrespect, or cowardice, regardless of the nonperformer's intention or the truth about her. One failing to comply with a convention that stands for something valuable in the reference group conveys a meaning that would elicit disapproval including negative sanctions from others.

Social conventions are often social norms of coordination: when others rely on the convention and noncompliance would harm them, when shifting to a better convention, and when an action stands for something that is valuable to the group.

Social Norm of Cooperation (Many-Way Empirical and Many-Way Normative). Another reason why one would do what others do is if one has reason to reciprocate positive action with positive action or negative action with negative action. In some interdependent situations (exemplified by the social dilemma) one may cooperate if and only if one expects enough others to cooperate, or cooperate now in response to others' past acts of cooperation. One would do one's fair share if one believes others would. My cooperation is conditional on yours, yours is conditional on mine.

In the social dilemma, the original interests of the parties are such that each is motivated to Defect even though all would be better off to Cooperate. The empirical expectations and normative expectations that compose a social norm can be sufficient to motivate a cooperative choice by all. One expects that a) enough others Cooperate, and b) that enough others believe that one should Cooperate (and that their expectations are legitimate, that others would sanction, or both). This transforms the game from a social dilemma to a coordination game (Bicchieri 2006, 26). In the resulting coordination game there is now a better equilibrium (All Cooperate) and a worse one (All Defect).

This type of behavioral regularity is made up of normative and empirical expectations among many members of the group. It is strongly social and it is a social norm. Suppose that in a community there is a social norm of using violence to discipline children. Most individuals do use corporal punishment, and most individuals believe one should use it to discipline children. **To change that social norm, one would seek to change the normative and empirical expectations among enough members of the community.** They would need to believe that enough members of the community now believe that one

should not use violence to discipline children (because it is right, there are positive sanctions for compliance and negative sanctions for noncompliance, or both), and that enough members of the community do use non-violent forms of discipline.

Legal Norms. Social norms exist relative to some reference group, are informal, often implicit, and enforceable by approval and disapproval. Legal norms are commanded by the state, formal, often explicit, and legitimately enforceable by coercion. Important reasons for obeying a legal command are belief in the legitimacy of the authority (respect for the law), and the authority's negative sanctions such as fines and imprisonment.

The literature mostly neglects that in a country there can be strong *social* norms of general or particular legal obedience, or strong *social* norms of general or particular legal disobedience (Mackie 2015). For example, political corruption can be a strong social norm practiced in defiance of the legal norms that forbid corruption. Most individuals in a reference group act corruptly because they believe that most individuals in the group act corruptly: a social norm. Many individuals could be morally opposed to corruption, but be driven to engage in it anyway because corruption is the only way to obtain the necessities of life in circumstances where most people expect transactions involving the state to be corrupt. The **change of legal norms** by citizens, elites, or international organizations is outside the scope of this essay. How to **better enforce** legal norms can have social aspects, which we discuss in the subsection below on harmonization of norms.

Moral Norms. When is an attitude a personal norm and when is it a moral norm? Appiah (2006, 21) informally contrasts a *taste*, what one wants, with a *value*, what one wants and wants everyone else to want. One might have a taste for ski vacations, and value governments that uphold the rights of their citizens. One follows a moral norm because one believes it is right to do so, conscience requires it. Social norms are more conditional on the beliefs and actions of others and moral norms are much less conditional. One tends to follow a moral norm regardless of one's beliefs about what others do or think one should do. Nado, Kelly and Stich (2009) summarize the views of Turiel and his coworkers, on the difference between the moral and what we here call the social, as follows:

- Moral rules are held to have an objective, prescriptive force; they are not dependent on the authority of any individual or institution.
- Moral rules are taken to hold generally, not just locally; they not only proscribe behavior here and now, but also in other countries and at other times in history.
- Violations of moral rules involve a victim who has been harmed, whose rights have been violated, or who has been subject to an injustice.
- Violations of moral rules are typically more serious than violations of social rules.

Yes, one learns many moral norms socially: through doing what others do and through wanting the approval of others. And the action commanded by a moral norm is usually one that is done by others and is approved of by others. One is internally motivated to comply with a moral norm, however, even if others do not comply or even if others are indifferent or disapproving of compliance. In a neural imaging study of people hearing vignettes of moral and social transgressions, a strong neural response to a moral transgression was

present whether or not an audience was imagined, but a strong response to a social transgression was present only when an audience was imagined (Finger et al. 2006). Turiel (2002) studied schoolchildren who, for example, said it was impermissible to pull a schoolmate's hair whether or not that act was against the school rules (moral); but impermissible to chew gum in a school with a rule against it and permissible to chew gum in a school with no rule against it (social).

Changing a harmful moral norm is not easy. One way is to show that an action thought to fall under a reigning moral norm actually does not. Footbinding in China fulfilled the moral norm *always do best for one's child* when the population expected the social norm of footbinding to mean that a girl is suitable for marriage. After it was discovered that an intramarrying group could coordinate on abandonment of footbinding, to do so retained both the girl's marriageability and her natural feet, which would do even better for one's child.   Another way is to show that a harmful moral norm is outweighed by a more important moral norm or larger web of such norms. For example, suppose there is a moral norm that prohibits husband violence against the wife unless it is for the good of the family. Perhaps new understandings in the community of peace, security, and equality would motivate revision of the norm so as to prohibit violence altogether (Cislaghi, Gillespie, and Mackie 2014).

Religious Norms. Religious norms are distinctive because of their reference to divine command, but otherwise they function as social, legal, or moral norms. A religious norm can be a social norm, held in place by empirical and normative expectations and informally enforced; or can be a legal norm, held in place by the formal enforcement of a religious or state authority; or can be a moral norm motivated by conscience.

Harmonization of Moral, Social, and Legal Norms. Carefully distinguishing among moral, social, and legal norms can be important for program design and measurement. For example, a baseline survey carried out by Project Concern International for USAID in Western Cape and KwaZulu-Natal, South Africa (Parker and Makhubele, 2010) disclosed the following moral norms. Only a small percentage of male and female respondents think it is okay for a husband to hit his wife over a disagreement; most think this would be bad for the children to see, and there are further findings showing that people report the belief that such violence is morally wrong. There are empirical expectations of normality, however: about half of respondents say that men in this community often hit their girlfriends. If the data correctly reflect reality, the challenge here is social, not moral. A program engagement could appeal to widely held moral beliefs in order to motivate creation of new social norms supporting community regulation of spousal violence. This would be the harmonization of an existing moral norm with a new social norm that would better realize the moral norm.

In Senegal, a legal norm prohibiting FGM/C is not strong enough on its own to end the practice, but strengthens the new social norm of no cutting adopted by some communities (UNFPA-UNICEF, 2010, Shell-Duncan 2013). Where this happens, legal norm and social norm are in harmony.

In the 1990s Bogotá, Colombia was one of the most violent cities in the world. An innovative municipal administration, led by mayor Antanas Mockus, designed a Citizenship Culture program based in large part on the idea of the harmonization of moral, social, and legal norms. Mockus distinguishes three regulatory systems, and the main reasons to obey in each. The following table is an adaptation of his scheme (e.g., Mockus 2002).

	Legal Norms	**Moral Norms**	**Social Norms**
Positive Reasons	Legitimacy of authority, respect for the law	Good conscience	Approval
Negative Reasons	Authority's penalties	Bad conscience	Disapproval
A typical emotion in a violator	Fear	Guilt	Shame

The idea is to agree, under conditions of political pluralism, on a few basic moral norms. For enhancing citizen culture in Bogotá it was: human life is sacred. Legal norms should reflect the moral norms; that is their main purpose. Social norms should support correct moral and legal norms. For example, in Bogotá, many did not obey traffic laws, and in part of the population there was a social norm of legal disobedience: one should not follow the law and those who did were looked down upon. In that context, adopting harsher legal penalties for traffic violations would have made no difference. Instead the city government made vivid to the public that traffic regulation is meant to reduce injury and death (moral conscience). In the city center, a corps of mimes ridiculed traffic violators (social disapproval). Hundreds of thousands of thumbs-up (social approval) and thumbs-down (social disapproval) cards were distributed to drivers who used them to manifest their approval or disapproval of the actions of other drivers. Normative expectations about traffic compliance changed, and as they did, injuries and fatalities went down. As injuries and fatalities went down, the city publicized the fact, changing empirical expectations in the population, leading to further decline. Due to a number of such initiatives respect for the law increased. Compliance with law generally and with specific laws can be motivated by moral and social reasons, as well as by anticipation of the state's material rewards and punishments.

Other Shared Beliefs

A harmful social practice is held in place by a web of beliefs, attitudes, social expectations, and actions, within the individual and within her group. Schema theory in psychology seeks to describe and explain these webs (themselves strongly, weakly, or not at all connected to other schemas, for example, as FGM/C is connected to female gender). Schemas are called *cultural models* or *personal constructs* in other research traditions.

Schemas organize one's knowledge about objects and events, other people, and oneself. People have three kinds of beliefs (Adolphs 2009), about:

- the nonsocial environment, objective beliefs, for example, that a tree exists or the sky is blue, how to grow the best millet, or how bodies work and what causes disease

- the social environment, intersubjective beliefs, what one believes about the minds of others, their beliefs, desires, and their actions

- the self, subjective beliefs, what one believes about one's own mind, one's own beliefs, desires, intentions, and one's conception of oneself

A harmful social practice can be caused, in whole or in part, by harmful false beliefs about the nonsocial world. FGM/C, for example, is in part maintained by such beliefs: immediate health harms of cutting are caused by bad spirits, uncut girls would become promiscuous and disobedient, uncut girls would not be able to bear children, would become both unmarried and pregnant, would end up prostitutes, or would have a bad odor, or that to mention the practice would bring death (Mackie 2009).

Beliefs are formed roughly in one of three ways:[10]

- by personal *experience*, direct perception, observation

- by *reflection*, forms of inference such as deduction, induction, analogy, dissonance reduction

- by *testimony*, social proof (as an information shortcut to believe what others believe), inherited tradition, credible authority, divine revelation

The elements of a schema are more or less coherent, and schemas are more or less in networks of coherence with one another. Coherence, or dissonance reduction, is one source of belief formation and maintenance. Testimony is another.

Because it is a comparatively immediate source of knowledge checkable by others we tend to think that most of our beliefs about the nonsocial world are based on direct experience. But many of those beliefs are based on the testimony of others: the height of Mt. Everest, the Milky Way is made of stars, viruses cause colds. Very few of us have made the observations or worked through the inferences that establish such beliefs; instead we accept as credible the testimony of certain individuals, institutions or just people in general. One knows by direct experience her immediate environment, but beyond that no one has the resources to investigate every question anew. Thus, much knowledge is

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[10] Collating similar categories from traditional Hindu epistemology (Rajah 2014); the Anglo-American philosophy of belief (Steup 2005); the sociology of belief formation, Rydgren (2009); and the social psychology of Fishbein and Ajzen (2010, 221-222).

acquired by social proof: one believes what others believe, one does what others do, and one inherits the beliefs and practices of one's cultural settings. Relying on social proof is rational in novel, ambiguous, or uncertain situations (Cialdini and Trost 1998).

In our highly simplified model, **a belief about the nonsocial world upheld by social proof and coherence can be overcome only by direct experience, more credible testimony, or both.** The story of the positive deviance approach as first applied to child malnutrition in Vietnam is a good example of both. Foreign food aid was not a sustainable solution to the postwar malnutrition crisis. The Sternins recruited the participation of the whole community in weighing children under three, and found that two-thirds were underweight. Newly formed village health committees of self-selected members conducted focus groups throughout the area, but more importantly visited and observed the practices of very poor families with better-nourished children. These families did not well know what they did differently, but the committee investigators saw what they did differently. They added locally inappropriate foods to rice (sweet potato leaves, shrimp and crabs from the paddies), washed children's hands more frequently, and fed three to four times a day rather than the traditional two. This minority deviated from local practices but in a beneficial (positive) way. The observed actions of a local minority were more credible to the larger community than the messages of an external change agent.

The Sternins encouraged community members to design a program that would help families with malnourished children form groups to learn the new practices. The Sternins later summarized this experience with the principle: "*It's easier to act your way into a new way of thinking, than to think your way into new way of acting.*" Another important factor in attaining sustained change was for people to see the results of their new behaviors. Every two weeks the members of a learning group would together weigh their babies and chart their growth; and village-wide weight-monitoring sessions were held every two months. Credible testimony and direct experience, in the framework of public action and discussion, overcame past practices that had contributed to malnutrition in a time of food shortage. One of the peasants remarked, "*A thousand hearings aren't worth one seeing, and a thousand seeings aren't worth one doing.*"

Beliefs about the nonsocial environment originating in social proof are resistant to change because it's reasonable to believe that what many people believe is more likely to be true than what a few people believe. The social-proof presumption can be overcome, however, by credible testimony or direct experience; and an individual can change a belief on her own. Also, harmful false beliefs held in place by social proof can be changed from one person to the next through the group as people see the benefits of a change. Social norms are even more resistant to change because it can be quite difficult for any one individual to abandon an interdependent social norm on her own.

Harmful practices, we said at the beginning of the essay, originated in and are maintained by many causes. Among them are beliefs about the nonsocial world; beliefs about the social world – about what others do and approve of – that constitute social norms; and beliefs about the self. A crucial belief about the self is individual self-efficacy or collective self-efficacy: whether I have or we have the capacity and autonomy to enact

change. In order to change harmful nonsocial beliefs or social norms people have to believe that they can do so. Increased self-efficacy is often a program goal and its change is often measured.

## Social Norms and Power Relations

A norm is maintained by the social expectations of individuals of one another in a reference group. To abandon a harmful old norm or establish a beneficial new norm requires that enough people in the reference group change their social expectations. In any group, members range from strongly influential on others to barely influential on others. It is possible that a small number of highly influential people can more easily bring about change through a whole community than a larger number of less influential people. This is one way that unequal power is relevant to social norms change.   Power takes many forms; some can liberate and some can dominate.

Some social norms are oppressive to women or other subordinated groups. They invite the hypotheses that social norms originate, are maintained, or are changed by power struggles. That can be true, but we should also be open to consideration of alternative hypotheses.

Our standard model of a social norm assumes that those who sanction, and those who are sanctioned, belong to the same reference group of people. James Coleman (1994) calls this a *conjoint norm*. At the other extreme, the members of a dominant group can be the ones who enforce a social norm applicable only to the members of a subordinate group. Coleman calls this a *disjoint norm.* A likely conjecture is that caste subordination originates in harsh exercises of unequal power such as intimidation and violence by one group against another.

However, after well established, a caste norm can also be enforced by members of the subordinated group sanctioning one another to comply. For example, Anne Moody (1968), an African-American raised under the humiliating racial "etiquette" of the segregationist U.S. South, reports that her mother rebuked her for sneaking into the white section of the movie theater and in adolescence inculcated the rules about how to behave around whites. This does not mean that her mother internalized that humiliation, rather, she was teaching her daughter how to survive under circumstances they did not choose and could not alter. After several generations of extreme subordination combined with destitution choking off options, values of subordination might be internalized among the subordinated.

A *caste norm*, we propose, is a mixture of conjoint and disjoint norm. Members of the dominant group sanction both the subordinated and sometimes those in the dominant group who fail to sanction the subordinated. Members of the subordinate group are sanctioned by the dominant group and by some of those in the subordinated group.

Conjoint Norm   Disjoint Norm   "Caste Norm"
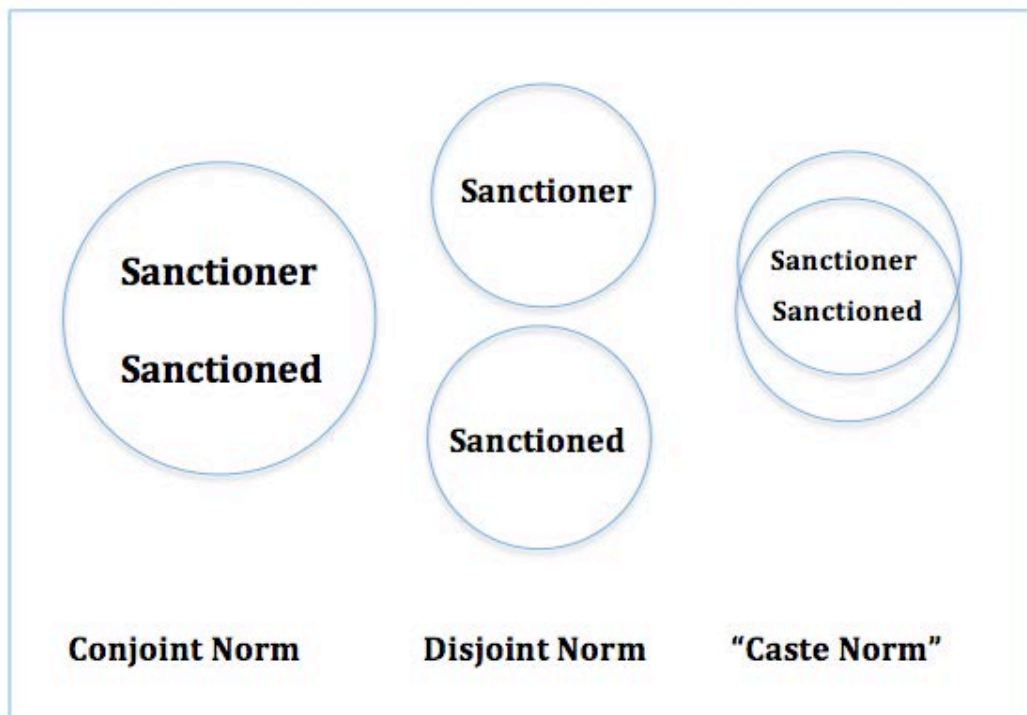
However, many oppressive norms are for the most part conjoint. For example, the continuation of female genital mutilation/cutting generally is supported by both women and men. (UNICEF 2013, 62). Whatever its violent origins, it is maintained in the present by the social expectations of the whole community, and in places is associated with honor and decency. Interpartner violence in some groups is endorsed both by perpetrators and victims. In its maintenance such a norm disadvantages the subordinated even though no one in the group presently intends the disadvantage. The harmful norm operates now behind people's backs, even without their knowledge. The assumption that unequal power maintains a harmful norm in the present may not always be correct and could mislead program design: distant laws could be targeted at apparent oppressors, or the apparently oppressed could be encouraged to damage social relations, when in fact for engagement of the whole population with the moral and social aspects of the problem would better reduce harm.

There are several constructs of power that are appealing to development specialists, summarized at www.powercube.net. [11] One is the four expressions of power.[12]

- *Power over* is when one or more people act to constrain significantly the choices of one or more other people (it includes oppressive domination, but also includes the

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[11] As with social norms, scholars debate competing typologies attempting to elucidate the same underlying realities. The typology we report is found useful by practitioners.

[12] *Power to* was distinguished from *power over* by Pitkin (1972, 276). *Power with* was added by Allen (1998) and *power within* by Rowlands (1997).

nonarbitrary exercise of authority for the benefit of others, such as child-rearing, teaching, or enforcement of morally legitimate law).
- o "Run, hit, and kill – that is power" (Ernesto, 20-year old man, Mirador, Colombia). Pritchett and Kapoor 2009, 139.

The remaining three are forms of *empowerment*.

- *Power within* has to do with individual agency, beliefs about oneself: the capacity to aspire, self-efficacy, self-worth, autonomy, resolve.
    - o "Power is in having and being. Some people see power as only having. Some people see power as something internal, my values, my abilities" (Ernesto again). Pritchett and Kapoor 2009, 131.

- *Power to* is for an individual to have the capacities and resources to attain valuable ends.
    - o "Our parents did not go to school, and so we are poor today. Education can change this" (youth, Dawaki, Nigeria). Narayan et al. 2000, 240

- *Power with* is the collective agency of a group to attain valuable ends. It includes solidarity (and solidarity can be misused to pursue wrongful ends).
    - o "Only if we go together to the politicians, are we powerful. If we were to go alone nothing would have happened" (poor woman, New Delhi, India). Narayan-Parker 2005, 17.

These ideas about power intersect with the ideas we've presented about social norms in a number of ways. Authority relations – power over – can be inherited as social norms about who has the right to make decisions for others. If authority is oppressive, its social recognition can be abandoned by a shift in social expectations within the reference group. If some members of the group were empowered, they could motivate such a shift within the group. They could encourage a social norm of support for more equal *power within* and *power to* for individuals. They could also strive to establish a social norm supporting *power with*; of working together to enact beneficial public change.

Another construct taught by www.powercube.net is the three faces of power.

- *Visible power:* American political scientists studied the decision agendas of a city council (power of the city over its residents) and concluded that power was fairly exercised across all social groups. This is the first face of power.

- *Hidden Power:* Dissenting political scientists found that although visible decisions seemed to be distributed fairly, powerful actors outside the city council controlled what was allowed to be on the decision agenda. They were able to prevent public recognition of issues adverse to their private interests. An example in the development setting is when in traditional villages decisions are made only by male elders. The elders can make decisions fairly about issues raised among them, but the interests of women, children, and outcastes are neglected because they are

subject to a social norm of exclusion from decision-making about public affairs.

- *Invisible Power:* Observing that subordinated people often seem to act against their own interests, theorists proposed a third face of power, that namable individuals, now or in the past, act intentionally to shape the desires, aspirations, and beliefs of the subordinated so that they accept their powerless fate.
  - *Faceless Power:* An amendment to this view explains how social patterns inherited from prior generations can perpetrate systematic and unjust inequalities in the present and beyond, even though the harms are unintended by many of those involved in their perpetuation.

In a larger process of social norm change, an important early step could be to promote a decrease in hidden power. Erosion of the social norm of public silence by the subordinated enables them to come into the public sphere, their issues can enter the public agenda, and their participation can grow in processes of public deliberation and decision. Also, ideas about social norms can help explain the otherwise enigmatic phenomenon of faceless power. Understanding it as inherited social expectations within a group might prompt improved or new strategies of ousting faceless powers that perpetuate injustice.

Review

These points can be simplified. From the game-theoretic tradition, when we observe a regularity of action in a group, we know to ask whether an individual's action is:

- Independent of the beliefs, desires, and actions of others, or
- One-way dependent on the beliefs and actions of others, or
- Many-way interdependent with the beliefs, desires, and actions of others

From the social-psychological tradition we know to ask:

- What are the descriptive (empirical) aspects of a norm? (What do others do?)
- What are the injunctive (normative) aspects of a norm? (What do others approve or disapprove of)

From the philosophical elaborations of the game-theoretic tradition, we know to ask:

- What are an individual's beliefs about what others in the reference group do (empirical) and her beliefs about what others believe one should do (normative)?

From norms-change efforts at large scale, we know to ask:

- How do moral, social, and legal norms influence the individual? Are the different regulatory systems in harmony or conflict?

From social epistemology we know to ask:

- Is a social practice maintained by shared beliefs in the group about the nonsocial world?
- Is it maintained by shared social expectations in the social world, a social norm?
- Is it maintained by people's beliefs about individual or collective lack of efficacy to change the practice?

From a power standpoint, we know to ask:

- Is the social norm conjoint or disjoint?
- How can empowerments help change harmful social norms?

Measurement of change in individuals' independent actions could be as simple as counting up how many engage in the harmful behavior before and after the program intervention. To identify interdependent social norms and measure the progress of their change, however, requires inquiry into an individual's desires and their beliefs about others, a more demanding task. In the next section we offer ideas on how to do so.

III. How to Measure Social Norms

Introduction

How to identify an individual's attitude and behavior and their change with respect to an independent action is easier and much more well established than how to measure individuals' changes in social expectations with respect to interdependent change within a group. It is difficult to identify social norms and measure change in them from behavioral observations alone. Rather, we have to measure beliefs, individuals' beliefs about who the reference group is, beliefs about what others do, and beliefs about what others approve of.

Behavioral Observations. Generally, for purposes of measurement, observations of actual behaviors are preferable to individuals' reports of their own and others' desires and beliefs. To answer the question, "Has a beneficial new social norm been adopted in a reference group?" observations of behavior consistent with the new norm across most individuals in the group would be strong evidence of norm adoption. For example, Schultz, et al. (2007) compared household responses to a descriptive-norm treatment and a descriptive-injunctive-norm treatment by comparing metered rates of water use, rather than relying on respondent self-reports. In Bogotá, the city's Citizenship Culture program measured response to social-norm efforts to reduce water consumption by aggregate city-wide water usage – and it publicized declining aggregate consumption in the daily weather reports to let enough people know that enough people were changing.

However, it is difficult to infer from behavioral observations alone that a social norm is in place or that a process of social-norms change is underway in a reference group. There are three different reasons for this. First, as Bicchieri (2006, 8) points out, some norms are proscriptive, they tell us what *not* to do, and it is difficult to observe what people do not do.

Second, a social norm can be held in place by the beliefs of individuals within a reference group that one would face negative sanctions for not complying. If the threat of negative sanctions is credible then one would rarely *observe* what happens in the event of noncompliance. In other words, anticipation of sanctions can motivate compliance just as actual sanctions do.

Third, earlier we observed that people can be motivated to comply, not just by beliefs about the prospect of overt sanctions, but also by beliefs about the covert attitudes of approval or disapproval by others. One could care about the covert attitudes of others in a reference group instrumentally, in order to benefit from future relations with them, for example, to be invited to the best social events. Or one could care about the attitudes of others intrinsically, for example because one considers them important or wise. The covert attitudes of others are not behaviorally observable. Additionally, one could comply in the absence of overt sanctions because one believes the normative expectations of others are legitimate, a belief that is not easy to infer from behavioral evidence.

Identifying a Social Norm. Much program evaluation practice, due to ease of collection or conceptual habit, inquires into personal attitude and personal behavior, as if one were studying the actions of an independent rower going west. But suppose we are studying the actions of what turns out to be an interdependent team of rowers going west. At the beginning of our investigation, at a minimum we would want to know:

- Who is the reference group?
  - The rowers.
- Is rowing west typical in the group? (empirical/descriptive)
  - Yes.
- Is rowing west approved of in the group? (normative/injunctive)
  - Yes.

If an individual in a reference group believes that her action is approved of by enough members of the group, and is done by enough of them, then she is guided by a social norm.[13]

If data were limited or difficult to obtain, we could,

- Externally identify a distinct group, for example, by ethnicity or territory
- Aggregate reports of individual personal attitudes towards the behavior
- Aggregate reports of individual performance of the behavior

Storey and colleagues, working with limited DHS data, do just that. For example, Storey and Kaggwa (2009) use DHS sample clusters as a proxy for reference groups. Within each cluster they aggregate individual reports about personal attitude into what they call a *collective attitudinal norm* and individual reports about personal behavior into a *collective behavioral norm*. They are able to usefully show social-normative influence (empirical and normative) on contraceptive use, in addition to influence by personal attitude and by exposure to mass media family planning messages, controlled for other factors. The 2009 study considered the 1995, 2000, and 2005 DHSs, and thus was able to track change from 1995-2000 and 2000-2005.

This is a creative and appropriate way to infer social norms from such data. The studies are clear, however, that the measures devised are imperfect approximations of the underlying constructs. Why? The researchers were constrained first, to count the DHS cluster sample as the reference group, and second to count each respondent as equally influential within the group. Third, a social norm is constructed by an individual's subjective (that is, possibly mistaken) beliefs about what others in the reference group do and would approve of (recall that many scholars emphasize the "perceived" or "subjective" nature of social norms). The method, however, reports objective counts of what people in the group do and what they approve of. Earlier, we pointed out that one can feel compelled

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[13] For simplicity of exposition we talk about an action that is approved of. Of course, a social norm can also be about an action that is disapproved of.

to act in accord with a social norm that is contrary to one's personal attitude. What if many people in a group complied with a social norm contrary to their personal attitude because they wrongly believed that others expected them to do so? If we tallied up respondents' personal attitudes towards the action we would mistakenly conclude that the respondents are not guided by a social norm when in fact they are. This is not merely a logical possibility; earlier we discussed the idea of pluralistic ignorance, which describes this very situation.

Depending on research goals and available resources, investigators may want to more exactly identify a social norm. Such investigators might ask:

- Who does she believe to be her reference group?
- What does she believe about how much others in the group do the behavior? (empirical/descriptive)
- What does she believe about how much others approve of compliance? (normative/injunctive)

Measuring Change in a Social Norm. Next, measuring change in an independent action differs from measuring change in an interdependent action. If a single rower would be better off to change from going west to going north, a program would want to know an individual's:

- Personal attitude, how much she favors or disfavors the old behavior and the new behavior
- Personal behavior, how much she performs the old behavior and the new behavior
- How her attitudes and behaviors change over time

What would a program want to know about an interdependent group of rowers who would be better off to change from going west to going north? In addition to personal attitude and personal behavior, it would want to know what individuals believe about:

- Who is the reference group?
    - o In relevant contexts: Do some individuals over time shift to another reference group or form a new one?
- The social expectations of others in the reference group
    - o Empirical expectations with respect to the old behavior and the new behavior
    - o Normative expectations with respect to the old behavior and the new behavior
    - o How social expectations change over time

A program would also seek to devise objective measures of the old behavior and new behavior in the reference group.

Often the reference group will remain much the same over the duration of a program engagement. But sometimes a beneficial new norm is established by people shifting into a new reference group, and this is when measurement of change in the reference group is relevant. For example, in India, to reject the practice of dowry can damage one's marriage prospects. There are now websites where families who reject dowry seek mates from one another (idontwantdowry.com, SimpleNikah.com). These families have left old reference groups that require dowry for marriage formation and entered a new one that eschews it.

A simple way to measure the change in social expectations might be to inquire:

- Over time is the harmful action less approved of in the group?
- Over time is the harmful action less typical in the group?
- Over time is the beneficial action more approved of in the group?
- Over time is the beneficial action more typical in the group?

An extremely simple way to measure successful norm adoption is to ask whether the social norm has changed here (see the box titled "Why focus on *others'* change").

Social Desirability Bias and Social Norms Measurement. It is well known that respondents may be inclined to give the answer they think the questioner wants to hear, rather than providing a true reflection of their belief or behavior. This inclination to give the socially desirable answer may be driven by a general desire to please, a desire to impress prestigious or powerful outsiders, a desire to continue or attract beneficial programs, fear of legal punishment, or a reluctance to share attitudes or behavior that run counter to the locally prevailing social norm.

Cloward (2014) shows how social desirability bias can affect results. In a survey experiment, she asked respondents about their perceptions of FGM/C and girl child marriage. Questions were identical except that respondents were randomly assigned to one of two frames – they were informed that the study's results would be shared either with a local audience or with a remote international audience. Those believing that the audience was international were 11% less likely to state that they plan to circumcise a daughter in the future, and 18% less likely to admit having a married daughter under 18. However, there were no meaningful differences across the two conditions in people's reports about their attitudes towards or experiences with the two practices. Across both conditions there was much more reported practice of each behavior than reported attitudinal support of it (probably indicating social norm). Qualitative interviews suggest that the treatment effect was due to ease of misrepresentation, desire to please (including a sincere desire to please) the international audience, and desire for material support.

The finding suggests several reflections. It vividly illustrates how responses can be biased by social desirability. It also may show the power of shifting the believed reference group, for example, through exposure to edutainment and parasocial expansion of the reference group. Finally, it raises a conceptual issue in social-norms measurement. A norms engagement seeks to shift beliefs about what is socially desirable, and we have seen that social expectations can change in advance of personal attitudes. We would want to

avoid response bias that seeks to please those outside the reference group such as researchers or donors, but we want to be attentive to responses intended to please the reference group as these indicate compliance to a social norm.

Preview. In the remainder of this section we examine:

- General considerations on measuring social norms
- Noticing social norms and their change in ordinary conversation
- Ten simple questions to ask about social norms
- Identifying social norms by simple inspection of DHS and MICS data
- The Reasoned Action Approach and its norms-measurement methods
- An exemplary social-norms, social-network study
- Adapting KAP stages-of-change to social-norms measurement
- A community-level stages-of-model: Community Readiness
- The matching game method of identifying social norms
- Future research

General Considerations in Measuring Social Norms

A social norm has to do with what one believes others do and with what one believes others approve of; in some reference group; maintained by approval or disapproval. Thus, to measure social norms and their change we would investigate these three elements.

Beliefs About Others. Suppose that use of contraception is a social norm in some group. Standard survey research would develop a measure of contraceptive use, perhaps self-report in a survey, or some more objective measure. From that the researchers would make a population-level estimate of the prevalence of contraceptive use. The social-norms researcher has an additional interest: What does the respondent believe is typical? Does she believe that hereabouts none, few, some, many, or all use contraception? Namely, what are the respondent's empirical expectations?

 Standard survey research would probably also ask what the respondent's attitude is towards contraception. The social-norms researcher, however, wants to know: What does she believe about how many others in the reference group would approve of her use of contraception? Namely, what are the respondent's normative expectations?

For the social norms researcher, the accuracy of the respondents' estimates about what others do and what they approve is not the point. The purpose is to uncover what the respondent *believes* about the social expectations of others in her reference group with regard to contraceptive use. If the respondent believes, rightly or wrongly, that many do use contraception and that many approve of doing so (and prefers to comply with such empirical and normative expectations), then she is under the influence of a social norm.

For the measurement of *empirical expectations* and their change over time, the number of others she believes engage in the behavior of interest, the frequency with which she believes they engage in the behavior, and the salience or importance of each of those others to the individual being surveyed could be relevant. For *normative expectations* and their change over time, the number of others that she believes expect her to comply, the importance of each one of those others to the individual being surveyed, and the individual's expectations regarding the strength of those others' expectations of her could be relevant. Paluck and Shepherd (2012), discussed below, use social network analysis to identify more influential and less influential members of the reference group. Simple measures, however, would often be both more practical and sufficient for useful results.

Measuring personal attitude and behavior differs from measuring empirical and normative expectations. The tables below illustrate the difference.

Table 1: Standard Measure of Behavior and Attitude

What Self Believes About:			
	Self	**Others**	**What Others Believe About Self**
Empirical	What I do		
Normative	What I think I should do		

Table 2: Social Expectations

What Self Believes About:			
	Self	**Others**	**What Others Believe About Self**
Empirical		What others do	
Normative			What others think I should do

Should we ask "should" questions to identify social norms?

Social norms theorists sometimes describe the normative/injunctive aspect of social norms as one's beliefs about what others think one *should* do (Cialdini and Trost 1998, 157; Fishbein and Ajzen 1975; Fishbein and Ajzen 2010, 131, 133; Bicchieri 2006, 10). This is a conveniently brief description, but it requires immediate qualification because it might mislead research design. It is important not to confuse the prudential *should*, the social *should*, and the *moral* should (Bicchieri 2006, 14, 31, distinguishes between the prudential *should* and a normative *should*). The *prudential* is what I should do in order to pursue my own best interests and perhaps those of my family and friends. I can say, "I shouldn't have eaten that huge dessert," a friend could say, "for your own good, you should quit smoking," and a nurse could inform, "if you care for your daughter's future, you should get her vaccinated." The *moral* is what is owed to all humans regardless of what group they're in, such as, "you shouldn't kill or injure people without an acceptable reason." The *social* is what is expected by others in one's group, "around here, you should not drink from the fingerbowl at dinner," "we marry our girls here around age 15."

If a researcher asks and a respondent replies that others in her group believe she *should* vaccinate her baby, the question and answer are ambiguous among the prudential (if someone wants her child to be healthy she should get her vaccinated), the social (others in the group approve of families here getting their children vaccinated and disapprove of those who don't), and the moral (of course everyone in the world believes that no parent should harm her child, it would be morally wrong to forego vaccination). It may be better to distinguish the *social should* with less ambiguous formulations, for example, whether others in the group socially approve or socially disapprove of one for doing the action, whether there are social sanctions, and the like.

Identify the Reference Group. The reference group includes everyone who matters to an individual in a certain situation. Some people can matter more than others. It could be those with whom one has repeated face-to-face relations, as in a women's microfinance group. More likely than not it also includes indirect relations, friends of friends so to speak. It could include everyone whom one might encounter in a town. For anyone in Thailand, the reference group for the practice of driving on the left-hand side of the road would include all those whom one would expect to encounter on the roadways of Thailand. It could include fictional characters from stories, live skits, radio dramas or telenovelas (so long as the audience finds them sufficiently relevant in culture and context), so-called parasocial interactions. As we said above, it could include one's beloved ancestors, a dead parent, total strangers, or future generations. It could be as small as one's household, depending on the practice.

The structure of ties in a network, and possibly their strength, shape the course of a change. With the advance of social network analysis, we are able to describe exact social relations among individuals, how the structures of relations vary, how the diffusion of

social learning or social influence varies in different structures, what counts as a group, and more. Mackie (2000), for example, found that the spread of FGM/C abandonment in Senegal from village to village was catalyzed by overlapping horizons of marriageability between villages. Social network analysis can be used to indicate the reference group; or identify who is most influentially located in the group; or help track the process of change in a group.

The simplest and most informal type of network analysis is just asking people who relates to whom with respect to a particular practice. For example, if supporting the organization of a community to shift to a new social norm of universal toilet usage, one can ask people in a village, Who defecates where? and Where does contamination spread? In total sanitation programs those inquiries are usually collaborative and quick. If one's interest is to identify opinion leaders who would most efficiently catalyze change, Valente and Pumpuang (2007) list ten methods of doing so, roughly in order of least effort to most effort. For more advanced ideas on network intervention, see Valente (2012).

For more formal research Valente (2010, 41-60) outlines the basic types of network data, and the methods by which they can be collected. The most elementary level, a simple survey method, can be utilized within any basic quantitative survey by simply asking with whom respondents have recently interacted, discussed a specific topic, or received some sort of assistance (Valente 2010). See Valente (2012) for detail about types of network intervention.

**Simple survey method for basic reference group information**

A study by USAID Guinea wanted to know the reference group for the FGM/C decision among urban Guineans (CRDH 2008). The study was a simple survey of people in the major cities of Guinea, gathering descriptive data, and it asked whom the respondent consults about more important issues. They found that lower-income individuals lived in ethnically homogeneous neighborhoods, that for more important decisions the respondent was oriented to the rural community of origin and its notables, and they were less exposed to communications media. Higher-income individuals lived in ethnically mixed neighborhoods away from extended families; for more important decisions were oriented to friends, coworkers, media figures, and house of worship; and were much more exposed to media messages. Thus, in urban Guinea, a FGM/C abandonment program should be oriented to one kind of reference group for lower-income individuals and another kind of reference group for higher-income individuals.

Valente also details other levels of social network analysis, listed here in order, starting from less costly and insightful to progressively more costly, but also more insightful: egocentric data collection, asking about the relationships of a single respondent; snowball collection, starting from one person follow the network nominations of individuals across a network; and sociocentric or complete data collection from everyone in a group.

There is a less exact but less expensive method, however, that can be used if one is trying to identify the most central people in the network. This "friends of friends" method capitalizes on an interesting social phenomenon that has been noted in network research: for any random person chosen from a network, that person's friends on average will have more friends than the original respondent (Feld 1991; Christakis and Fowler 2010). This is the logical result of the fact that the people with more friends make up a larger proportion of the overall friends of those in the network. A recent randomized controlled trial authored by Fowler among others did a simple intervention on 5% of each village's population across three different conditions: 1) on individuals with the most social ties, or 2) on a random sample of individuals, or 3) on friends nominated by each individual in a random sample. The intervention was most effective in the third, friends-of-friends condition (Kim et al. 2015).

Simple methods of reference-group identification are appropriate in many practical settings. However, more comprehensive social-network analysis, where feasible, can considerably advance our concrete understanding of social norms. In a particular community we can better understand the structure of reciprocal expectations and who influences whom in the network as social norms change. An accumulation of such studies across practices, communities, and cultures will inform useful generalizations about social norms and their change under varying conditions.

To illustrate, a study of the social network predictors of toilet ownership in rural India by Shakya, Christakis, and Fowler (2014) applied social network analysis to identify normative reference groups. They applied a *community detection algorithm* (rather than respondents' subjective reports) to detect sub-groups of people within villages who were connected together beyond the direct friendship ties that were measured in the study. Their result showed that these sub-groups were strong predictors of toilet ownership. They also found that when the density of connections in these sub-groups was high, individuals were less likely to own toilets. This suggests that these sub-groups were acting as normative reference groups for toilet ownership, and that toilet ownership within these
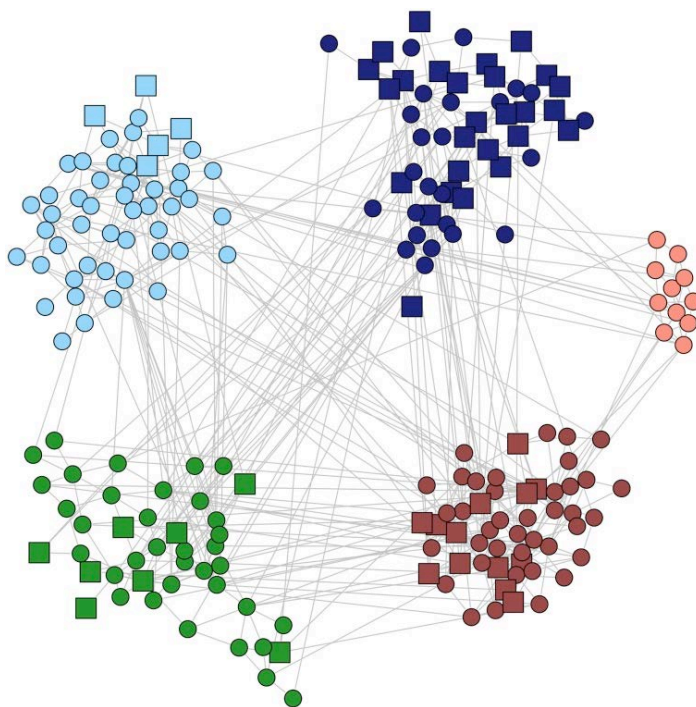
communities was not normatively endorsed. Tightly connected social groups will often have more deeply entrenched norms. The more closely connected the people are within a group, the more powerfully the group norm will inhibit individual adoption of behaviors that are not normatively reinforced.

The figure shows a network depiction of one village in the dataset. Network subgroups are differentiated by color. Those who own latrines are depicted with squares and those who do not own toilets are depicted with circles. Note both the clustering of individuals and the varying distribution of toilet ownership by community. For instance, the pink community near the right side of the figure has no one with a toilet. In the dark blue community towards the top, however, about half the individuals own a toilet. If toilet ownership within the community was determined solely by geography, we would expect the distribution of toilets to be uniform throughout the communities.

Anticipated Reactions of Others in the Reference Group. Strictly speaking, the anticipated reaction of others is included in the *normative expectations* construct. But thinking in greater detail about the content of those reactions can inform research design. A social norm is maintained by social approval, including positive sanctions; or social disapproval, including negative sanctions; or, in some instances by one's belief in the legitimacy of others' normative expectations. One might propose that we identify social norms and measure their change by behavioral observations of overt sanctions. But, as we have seen, measuring only this is incomplete and could be misleading. In addition, we should ask people what they believe about the anticipated reactions of others in the reference group.

When people are asked by outsiders why they do something, especially, when asked about a social practice, they often say: that's the tradition, that's our custom, that's how we do things around here. But what matters for compliance with a social norm is not just the believed consequences of what would happen if one were to comply, but especially the believed consequences of what would happen if one were *not* to comply.[14]

If a social norm is effective and thus all or most comply, then what happens to someone who complies is plain to the observer. However, anticipated reactions to noncompliance may be clear to the insider, but be much more obscure to the outsider. This is because the more effective the norm is, the less the outsider sees or hears about what happens to occasional deviators; or because the insider is motivated by what she believes to be the covert attitudes of others. If we only ask *why* a family marries the daughter at age 15, we would be likely to hear many explanations in the appreciation-of-tradition category. However if we ask *what would happen* (specifically for a social norm, *how would referents react*) if the family were to delay marriage of the daughter until she reached age 18, a more complete picture emerges.

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[14] In earlier presentations we called this idea "investigating counterfactuals in order to discern causality." "Anticipated reactions of others in the reference group" refers to the same idea, but is easier to understand. For a friendly exposition and applications to real examples of social action, see Tetlock and Belkin (1996).

Someone could answer, "She would marry at an older age, and nothing else," and if this answer were common, one would tend to the conclusion that there is little social about the practice. Similarly, a response of, "She would suffer materially because there are no education or employment opportunities outside of marriage," highlights reasons that are not directly related to the behavior or beliefs of others but are more of a political-economic nature. Likewise, a response of, "She might get pregnant and burden our family with an unplanned addition," indicates a practical family concern, not a social one.

The responses "She would be seen as undesirable, the worst girls are married the latest, we may not find a husband for her," and, "We would have to pay a higher dowry if she were older," suggest that the reasons for the practice are social. Both imply an interdependent interest insofar as they relate directly to the behavior or beliefs of others in the group. It is worth noting that with both these reasons, if everyone in the group shifted the behavior – no girls were married before 18 - the objection would no longer apply.

"She might get pregnant and bring shame to the family," also indicates social motivations: anticipation of negative social sanctions from other group members. "People here would think poorly of us for doing so" demonstrates sensitivity to normative expectations. Such concerns would fade upon shift to a new social norm of marriage at age 18 and eventually vanish. The example illustrates that people can be motivated to comply with a social norm because they intrinsically value the covert attitudes of approval and disapproval of others in their reference group. The belief that others would think poorly of us can motivate compliance even if not overtly expressed by others, and even if it is false that others would have that covert reaction. There are also likely combinations of the foregoing motivations.

Since direct questions put the respondent on the spot, indirect questions about how referents would react to someone who did (or did not) do the action of interest could elicit more informative responses. Some individuals and populations may not usefully respond to questions about anticipated reactions. An alternative may be to tell a culturally compatible story about someone who had transgressed a local norm and faced a consequence, and to ask if the same thing would happen here.

Social approval and social disapproval can be useful indicators of social norms. The terms include both overt sanctions and covert attitudes. They are also simpler to inquire about than one's belief about what others believe one should do.

Simple Inquiries

A simple way to identify social norms could be to focus on social approval. We don't want to ask respondents what others merely approve of, because one can approve of one's own prudential action, approve of another's moral action, of a work of art, or an argument. Rather, we should ask them what is *socially* approved or disapproved of, here in the context of this reference group. Alternatively, one could ask the whether an action is *socially*

appropriate or inappropriate, or leads to *social* acceptance or rejection in the reference group.

In surveys offering structured lists of possible reasons for continuing or discontinuing a practice, include *social approval* (or as appropriate, *social disapproval*) as one of the reasons. That approximates the injunctive norm or normative expectation. Also consider asking about reasons that approximate the descriptive norm or empirical expectation, for example, *that's what we do*, or *that's what others whom I know do*. Most surveys will already gather data on one's own attitude and one's own behavior. An aggregation of responses to the question on one's own behavior, or some more objective measure, could be a proxy for empirical expectation.

A repeated survey would show change over time. For an action interdependent among members of a reference group, we predict that change in beliefs about social approval would tend to precede actual change in group behavior. Thus declining social approval for a harmful old behavior, increasing social approval for a beneficial new behavior, or both, short of actual behavioral change, can indicate real progress towards eventual behavioral change. This inference would be stronger if, with respect to the practice under study, there were prior evidence from elsewhere that cumulative change in social approval by individuals in the group culminated in eventual behavioral change among them.

As appropriate, one could ask open-ended questions such as these (Shell-Duncan et al. 2010):

> 1. Who is it important to consider when thinking or talking about whether or not to do (target behavior)? [Reference Group]

> 2. Is (target behavior) typical among them? [Descriptive/Empirical]

> 3. Is (target behavior) socially approved of among them? [Injunctive/Normative]

> 4. What do people say are the advantages of (target behavior)? [Reasons, Context]

> 5. What do people say are the disadvantages of (target behavior)? [Reasons, Context]

If of research interest, ask about individual self-efficacy, collective self-efficacy, or both. [15]

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[15] We borrowed ideas and questions from Shell-Duncan et al., and added a few. In a later revision we noticed Fishbein and Ajzen's (2010, 327) recommended list of questions for qualitative formative research: advantages and disadvantages; approval and disapproval; what makes it easier or more difficult to do the behavior. Their list prompted us to add questions 6-7.

6. How easy or how difficult would it be for an individual to abandon/adopt (<u>target behavior</u>)? [Self-efficacy]

7. How easy or how difficult would it be for the reference group to abandon/adopt (<u>target behavior</u>) [Self-efficacy][16]

If a respondent answers #1 with something like *No One*, then the behavior lacks a social component. If someone says *Yes* to #2, the typicality question, but *No* to #3, the social approval question, that means that the person believes there is a population regularity, social proof, or social convention. To determine which, the researcher would consider the reasons offered by the respondent in answers to questions #4 and #5 – advantages and disadvantages.

If someone answers *Yes* to #2, the typicality question, and *Yes* to #3, the social approval question, that means the person believes there is a social norm. To check further whether it is a social norm, the researcher would consider the reasons offered in answers to questions in #4 and #5. Answers to questions #6 and #7 might, in addition to information on self-efficacy, provide information on whether the practice is individual or social in nature.

8. Is (<u>target behavior</u>) performed mostly by people like those in our reference group or is it performed by most people in the world? [Social or Moral]

A behavior could be done by many and approved by many in the reference group, yet be a moral norm rather than a social norm. If respondents believe that the practice is more local than global that suggests it is a social norm. However, in traditional settings where people know of little variation in human ways, respondents could mistakenly infer that their local norm is a global one.

Questions #2-#7, and as appropriate also #1 and #8, can be repeated over time to track changes. Again, changing social approval in the group can predict eventual behavioral change in the group. Change can be further monitored and understood by repeating questions #6 and #7 about the ease and difficulty of change, and with these questions:

9. Do others still do (<u>target behavior</u>)? Why? [Change & Reasons for It]

10. Have others stopped doing (<u>target behavior</u>)? Why? [Change & Reasons for It]

Questions #9 and #10 are simple ways to determine if a harmful social norm is being abandoned or a beneficial social norm is being adopted as a result of program

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[16] These questions might be more informative for program design by further breaking them down into a SWOT inquiry: strengths and weaknesses (capability) and obstacles and threats (opportunity)

engagements. It is probably more effective to ask whether others have changed than if the respondent has changed.

> **Why focus on *others'* change?**
>
> UNICEF Ethiopia commissioned a research team to do qualitative and quantitative evaluations of four different organizations using a community dialogue approach to bring about the end of female genital mutilation/cutting and other harmful practices (studies cited in UNICEF 2010). From the entirety of evidence, two of the programs were judged quite effective, and two were judged much less effective. Most respondents in all four programs were aware of a new criminal prohibition of FGM/C, and in each of the four programs most individual respondents said that the respondent's family had abandoned the practice.
>
> In response to more indirect questions, however, the most effective program differed sharply from the two least effective programs. In the most effective program, individual respondents reported cessation of negative community sanctions for going uncut, that cutters mostly no longer cut, and most importantly that others in their group no longer practice FGM/C. In the least effective programs, respondents reported that negative community sanctions for going uncut continued, that cutters still cut, and that a good number others in their group still practice FGM/C. This experience suggests a lesson on the measurement of norms change in a community. Respondents' answers to queries about their own action will be less informative than their answers about the actions of others in the community and their answers about the cessation or continuation of negative sanctions in the community.
>
> Finally, one simple question – has the social norm of FGM/C changed here? – seems to capture most of the variation in the effectiveness of the programs, and may yield as much information as all the other inferences put together.

Identifying Social Norms and their Change in Conversations

In qualitative research, reference to social norms and their change is quite identifiable in response to open-ended questions, and also in everyday conversation if one is alert to what to listen for. We report the results of one qualitative study (Cislaghi, Gillespie, and Mackie 2014) to illustrate the point. The example also shows that although social-norms terminologies can seem obscure, the elements of the concept quite naturally appear in human interactions.

The researchers studied the content of human rights education sessions that are part of the West African NGO Tostan's Community Empowerment Program, and the content of post-session interviews. They found that the phrase "everyone agrees" occurred with regularity, and that about 80% of the time the phrase flags social norms.

A statement of "everyone agrees" is associated with statements about what other people do (empirical expectations) and what other people think one should do (normative expectations). In our terminology, it indicates a belief that the speaker believes enough people in the relevant reference group hold such expectations. A stark change in social norms related to gender roles among participants in a Tostan class can be seen between Session 3 and Session 13. In Session 3 "everyone agrees" that women work in the domestic sphere and that is at should be, and in Session 13 everyone agrees that women should be treated equally and women can do anything a man can do.

Tostan's education program goes through the basic human rights. The pedagogy includes skits where small groups rehearse and present about a village human rights issue. Conversations were most vivid about these skits. To replicate that catalyst one might arrange for the group of research interest to observe or hear recorded or live dramas, or present culturally appropriate vignettes. Although people are not accustomed to originating abstract principles, on specific issues in social context, participants are quite familiar, or rapidly become familiar, with what considerations apply. For example, participants act out a quarrel in which a man says that a woman is not doing enough work in the house, and she counters him. When asked what was most memorable about the session, respondents frequently mention one of the skits. After Session 3, a participant recalling a memorable skit, reports:

- "Another woman said **her job is** to cook and clean and **she accepts that**. **Everyone agreed** because **that is what women do**."

    o Her role is to cook and clean, and she accepts that expectation of others as legitimate (normative expectation). Everyone agrees (enough others in the reference group). That is what women do (empirical expectation).

- "One woman said her job was to have babies and nurture. We **all agreed** with what she said because **everyone appreciated how she accepted** what she was in life."

    o All agreed (enough others in the reference group). She accepts (normative expectations of others are legitimate) and everyone (enough others) appreciates that (would positively sanction).

Ten sessions later, after Session 13, a participant, recalling a memorable skit reports:

- "One woman said it is **important** for women to work hard and strive to do anything a man can do. The **whole class agrees with this**." And a man thinks it memorable that, "One woman said, **the best thing** for a man to do is treat his women equally. **Everyone agrees with this**."

    o Important, best thing (normative expectation, legitimate, positively sanctionable). The whole class agrees, everyone agrees (enough others in the reference group).

These reports suggest a pronounced change in gender role expectations among class participants (although a change among the class is not sufficient, initially, to shift expectations in the village beyond).

The Tostan CEP also supports participants' aspirations to become public actors, and helps them learn ways to do so effectively. Preparing and performing skits are part of that learning. The following remarks come after Sessions 13 and 14. Over time we see that people go from concern with personal and family bad habits to concern also with community bad habits (social norms).

- A woman resolves to stop **her own bad habits**: "I have talked about all the habits I have had and I will stop those habits from this day forward."

- Another woman talks about working to end **our bad habits**: "We talked about our good and bad habits and solutions to our bad habits. We are learning the best way to live our lives and be honest, healthy, and happy"

They also go from acting alone to change those bad habits, to acting together to do so. Notice the commitments to sanction others, and the indication of a social norm among class members to bring about norm reform in the larger community.

- A man says: "**My role** in the village is to be honest and if I see someone doing bad things **I will tell them to stop**."

- A man says that **we** will do the same: "We are not afraid to tell people the truth**, if they do something that is good we will say so and if they do something wrong we will tell them also**."

- Everyone in the class expects that others should work to promote abandonment of bad habits, an emerging social norm: "*N* said the women should **work hard and work together** and if they had any bad habits drop them. **Everyone agrees** with what he said."

Notice that these remarks indicate the emergence of a social norm among the class members of working together to end harmful social norms in the community.

## Simple Indicators in DHS or MICS Suggesting the Presence of a Social Norm

Most research surveys have not collected data specific to social norms, requiring researchers to attempt to identify and measure them by creative adaptation of data gathered for other purposes. Ongoing conversations among those working with UNICEF on social norms have identified some simple indicators suggesting that social norms may be present. They are based on inspection of Demographic and Health Surveys, and of UNICEF's parallel Multiple Indicator Cluster Surveys. These indicators do not establish the presence of a social norm. Rather, they suggest that a more rigorous inquiry be undertaken. A more formal way to use DHS and MICS data to measure social norms is

multilevel modeling, discussed below. Also, we report on new ways to use old data to investigate social norms.

The suggestive indicators are: High spatial or ethnic variation in a practice (reference group), high discrepancy between behavior and attitude (social norm prevailing over personal attitude), comparative persistence of the practice or comparatively rapid shift in the practice (highly interdependent action).

1. High spatial or ethnic variation in the practice. If prevalence of a practice is very high in one place or ethnic group, and very low in another one "nearby," that suggests the possibility of a social norm. The more fine-grained the data, the more suggestive the indication.

DHS and MICS collect data on the location and ethnicity of respondents, but not data about social relations. Colocation and ethnicity are rough proxies for actual social relations among people. In the Figure below, we see subnational prevalence of female genital mutilation/cutting in Africa, and subnational prevalence of child marriage in India.
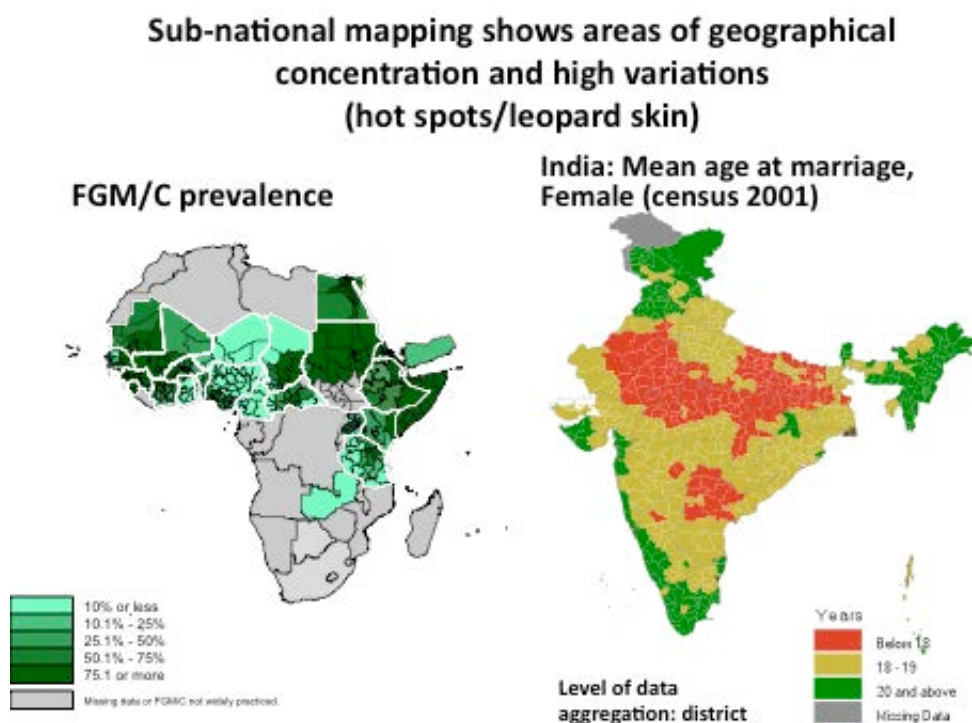
**Source: Statistics and Monitoring Section, Child Protection, UNICEF**

Again, these results are not intended as scientific measures. Data at this meso level are hardly a proxy for the actual relationships of people at the micro level in reference groups of reciprocal expectation. The variations observed could easily be due to any number of other factors: climate, political economy, income, education, and so on.

2. High Discrepancy Between Attitude and Behavior. If many people personally oppose a practice, but nevertheless follow it, that suggests the possibility of a social norm.

For example, a UNICEF study on child disciplinary practices suggests the presence of a social norm of inflicting physical punishment on children. It shows that in the preceding month anywhere from about 55% in Kazakhstan to 95% in Algeria of mothers or primary care-givers who support physical punishment of children used physical or psychological violence to punish a child aged 2-14 (the median across countries is about 85%). For them attitude and behavior are consistent. However, it also shows that among caregivers *opposed* to physical punishment, 20% to 90% (the median across countries is about 50%) nevertheless use physical punishment to discipline children. For them attitude and behavior are inconsistent.
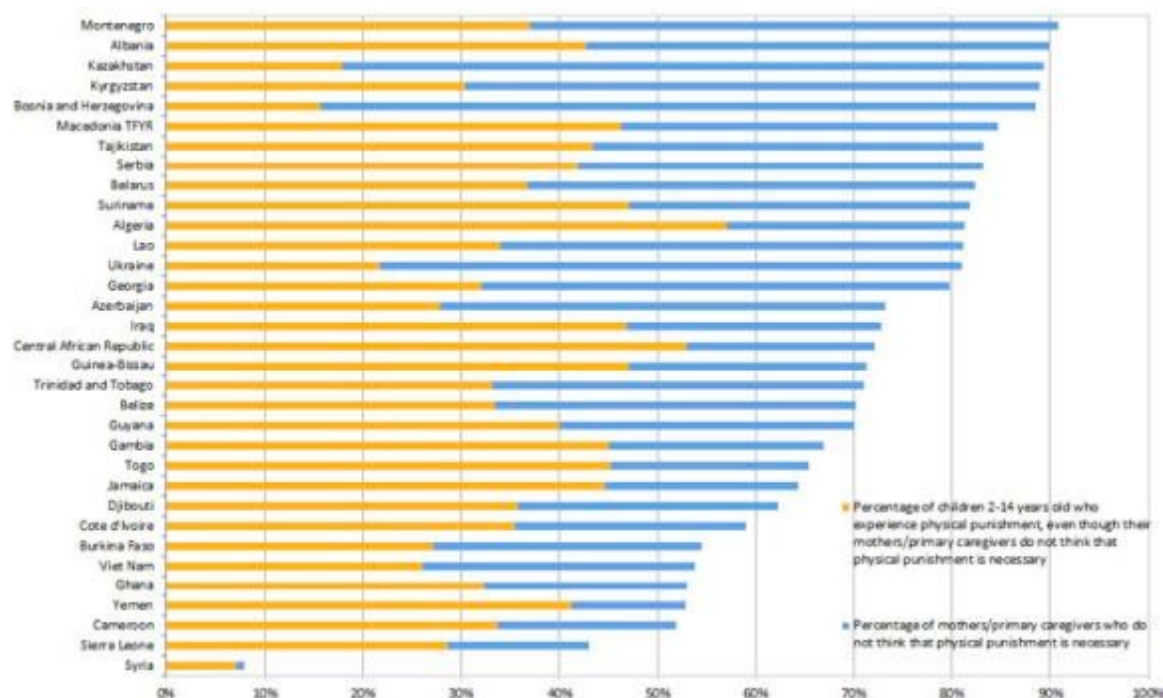
Source: http://www.childinfo.org/discipline.html (accessed 9 June 2012)

Attitude-behavior discrepancies are frequently observed, and could be the result of any number of causes. Respondents may want to give an answer that pleases researchers. The discrepancy could also be due to any number of other reasons explored in the social psychology literature (detailed by Fishbein and Ajzen 2010, 53-63). One possibility is that individuals engage in the behavior because they see others engage in it (empirical expectations) and think that others believe they should engage in the behavior (normative expectations). They do so even though they personally are against the behavior and would stop if the expectations were absent. If this is the case, a social norm is the cause of the discrepancy.

3. Comparative Persistence of the Practice. Lengthy persistence of a practice can also be determined by simple inspection of DHS and MICS. Longer persistence could be defined by comparison to the shorter persistence of other practices, especially those which normally change rapidly with other "modernization" variables. For example, the 1995 Demographic Survey of Egypt shows no meaningful variation in the prevalence of female genital mutilation/cutting among ever-married women across seven 5-year age cohorts from 15-19 to 45-49: prevalence trembles between 96% and 98% (171). In contrast, the prevalence of no education among household females across seven 5-year age cohorts from 15-19 to 45-49 increases positively with age cohort, from 19.4% to 54.7% (20). Again, this contrast could be due to many other factors (maybe the government worked to expand education, but not to discourage FGM/C), and this finding is merely suggestive.

4. Comparatively Rapid Shift of Practice. Footbinding in China lasted for almost a thousand years, but ended in a single generation, at the beginning of the 20th Century, and never revived. This pattern indicates strong reciprocal expectations, causing both sturdy maintenance and rapid demise. Again, DHS and MICS data may indicate both lengthy persistence and a sudden shift. For example, data indicating a rapid increase in the percentage of population using improved sanitation in certain districts suggests that a social norm of ending open defecation may have been established there.

Multilevel Modeling. Researchers who would like to understand to what degree community level norms are associated with individual level outcomes are increasingly using multilevel modeling. Answers to questions reflecting the norms of interest are aggregated at a community level reflecting the mean value for that community (Storey & Kaggwa, 2009). These measures are then included in statistical regression models, with the addition of cluster level random intercepts for each cluster in the analysis. If the community level variables are significant in the model, then there is support for the fact that a community effect is actually correlated with the outcome of interest.

Multilevel modeling of social-normative influence based on DHS and MICS data has been used in a variety of studies, spanning outcomes as diverse as female genital mutilation/cutting (Hayford, 2005), domestic violence (Boyle et al., 2009), sexual violence against women (Peterman, Palermo, and Bredenkamp 2011), youth aggression (Bernburg & Thorlindsson, 2005), alcohol abuse (Barrientos-Gutierrez et al., 2007), and adolescent smoking (Wiium et al., 2006).

Aggregate measures of attitudes and behaviors are created from which social norms are inferred. This use of DHS and MICS data to identify and measure social norms is limited in several ways, including the absence of standard questions measuring the respondent's beliefs about what others do and what others think one should do, and the definition of community units for the analysis that may not coincide with actual communities of reciprocal expectation. Nevertheless, it is a good way to deal with the limitations of existing data, and the results of such analyses might prompt more targeted investigations.

New Indicators in Existing Data. Finally, potential social norms indicators may be lurking in existing survey data, even though they previously have not been used as such.

One theory of adverse gender outcomes is that they arise at the individual and household level. The more bargaining resources a woman has (income, education, age, etc.), the more bargaining power she has, and the better is her well-being. If this theory is correct, then the way to more equitable outcomes is by increasing resources at the individual/household level. But, women's bargaining power is not fully explained by individual and household variables; for example, sometimes an increase in women's income or assets leads to a decrease in her bargaining power and well-being. Mabsout and Van Staveren (2011), in a study based on the 2005 Ethiopia DHS, add analysis of an institutional level of variation: more equal and less equal social norms of gender by ethnic group. The measures used had to do with: whether a woman agrees with her husband's attitude on wife beating, whether a man thinks women should have fewer rights, and support for continuation of the practice of FGM/C. In a multi-level model they show that adding an institutional level (a proxy for social norms) explains more variation in bargaining power than do individual-household variables. In other words, where social norms of gender are less equal, increasing individual/household-level bargaining resources such as female age or income do little or nothing to increase a woman's bargaining power and well-being.

Lessons from the Reasoned Action Approach

Fishbein and Ajzen (1975) have long theorized and measured the relationships among belief, attitude, social norm, intention and behavior. Their first model was called the *Theory of Reasoned Action*, and sought to account for the oft-observed discrepancy between attitude and behavior. The second iteration by Ajzen (1985) was called the *Theory of Planned Behavior*, presently the most common label for these ideas, which added the concept of *perceived behavioral control*, an adaptation of Bandura's (1997) concept of perceived *self-efficacy*. Leading behavioral theorists including Fishbein and Bandura in 1991 collaborated on uniting their theories in an *Integrated Behavioral Model* (Head and Noar 2014, 37). Finally, Fishbein and Ajzen joined forces again, building on the IBM to create the *Reasoned Action Approach* (RAA, 2010). The RAA and its forebears are the leading conceptual framework in health behavior research and are still used by the majority of researchers (Schwarzer 2014). The theories have been applied over 40 years by multiple researchers in around a thousand studies about a wide variety of behaviors in health and beyond.[17] The approach is firmly in mainstream social psychology and psychometrics, has been repeatedly tested and refined in application, provides immediate guidance, and is a promising source of ideas about how to measure social norms and social-norms change. Generous background material including on questionnaire design and intervention design is available at Ajzen's website.[18] The details of the theory, its justifications, its methods, and measurement and intervention advice are available in their 500-page *magnum opus* (Fishbein and Ajzen 2010).

The theory describes the main determinants that drive the decision of an individual to engage in a certain behavior. Three determinants influence *intention* towards a behavior:

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[17] Many listed at http://people.umass.edu/aizen/tpbrefs.html
[18] http://people.umass.edu/aizen/index.html

attitude towards it, *perceived norm*, and *perceived behavioral control.* Attitudes are a function of an individuals' *behavioral beliefs* about the outcomes of an action and about her evaluation of those various outcomes. Perceived norms are a function of *normative beliefs*, that is, how much one believes others want one to perform the action (injunctive norm) and now much one believes others do the action (descriptive norm). Perceived behavioral control in turn is the result of *control* beliefs. The aim of the theory is to be able to use the measurement of these determinants to successfully predict behavior. The theory predicts that if behavioral, normative, and control beliefs were to sufficiently change, then behavior would change.

Reasoned Action Approach.[19]
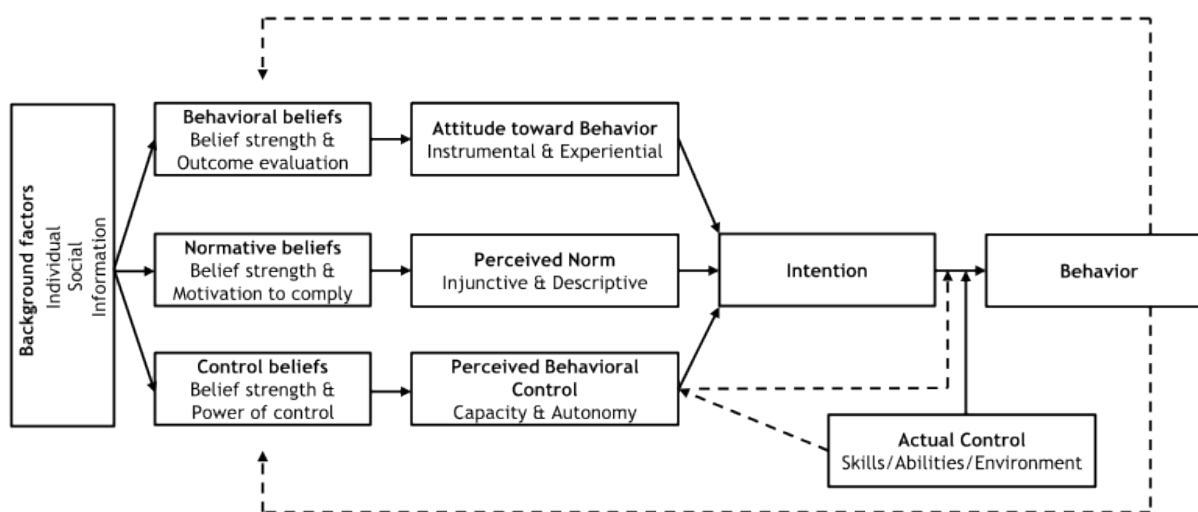
The approach has been long-theorized by its authors and widely applied in diverse settings by many scholars. It has an accumulated record of use and a community of interest, and as a result has been scrutinized by well-informed critics. We do a summary review of critical evaluations in Appendix I, and add our own. We think the RAA is worthy of close study and adaptation. Our main reservations are that in its present form it does not adequately distinguish independent action from interdependent action, and that its survey question design is too individualistic, perhaps leading to the under-identification of social norms. Here, we report some of their ideas about how to measure reference group, descriptive norm, and injunctive norm.

Measuring the Reference Group. Here we evaluate two options offered by RAA. First, is to ask respondents what they believe about other "people who are important to me," either generally, or with respect to the specific practice. A problem with this strategy is that the researcher does not know how each respondent conceptualizes "people who are important

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[19] Source: Wikimedia Commons, accessed 25 September 2014, http://commons.wikimedia.org/wiki/File:Reasoned_action_approach_text_as_paths.svg

to me," obscuring comparisons between individuals. However, if our primary research interest is how strongly a social norm exists, if at all, in sampled respondents then there is no problem.

Second, is to ask respondents what they believe about named individuals or role occupants. Fishbein and Ajzen suggest a pretest to find out modal beliefs about referents: [20]

> If you considered [target behavior] in the next two weeks, there might be individuals or groups who would think you should not perform this behavior. If any such individuals come to mind when you think about [target behavior], please list them below. (135)

Recall our worry that *should* questions are ambiguous among the prudential, social, and moral meanings of the terms. Fishbein and Ajzen also suggest questions that avoid the use of "should": all those who would approve of [target behavior], or all those who would disapprove, or all those one might want to talk to about it.

A problem with asking respondents for named individuals is that it could severely underestimate the reference group, because only a few individuals stand out to the respondents but the reference group for a social norm can include not only named individuals, but deceased ancestors, role occupants, fictional characters in popular narratives, and a generalized other. The list of influential role occupants can be supplied by the researcher based on formative research or can be supplied by each respondent.

Fishbein and Ajzen (2010) say that results using the two methods are about the same and that the "people who are important to me" strategy is more streamlined, but other researchers have emphasized the importance of anchoring these questions using specific roles or people in the reference group. Pre-testing might help to decide what is best in a given context.

Measuring the Injunctive Norm (Normative Expectation). To measure a woman's injunctive norm with respect to getting a mammogram in the next few weeks, (Fishbein and Ajzen, 2010, 131-148) suggest exploring the question as follows, using a seven-point scale (the leftmost dash means *most* and the rightmost dash means *least*, they can be filled in with terms like *very much, some,* or *not at all.)*:

Most people who are important to me think
I should :____:____:____:____:____:____:____: I should not
get a mammogram in the next few weeks.

We could also ask, whether *most people important to me want me to get a mammogram…"* , or *most people whose opinions I value think that it is*

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[20] *Mean, median,* and *mode* are measures of central tendency. The *mode* is the most frequent value in a data set.

appropriate/inappropriate…", or *most people whom I respect and admire would support/oppose…"*.

We add that for any of the questions mentioned here, we could use pictograms rather than words to represent points on the chosen scale. Also for simplicity we could reduce the scale to two points, *should* and *should not,* or *do* and *do not*.

Next, the motivation to comply is measured:

I want to do :____:____:____:____:____:____:____: I don't want to do
what most people important to me think I should do.

Responses are tallied to identify modal normative beliefs. Injunctive norm is the product of the extent to which I believe others want me to perform the action, times the degree to which I care about the opinion of those others. However, it has been found in practice that including motivation to comply adds almost no explanatory power (perhaps because the most salient referents are those already likely to motivate compliance, pp. 142-143). Thus, if the reference group is "most people who are important to me" *there would be little point in seeking information about motivation to comply*. In another context, the researcher might externally define the reference group as, for example, an ethnic or territorial group. If so, then it might make sense to ask whether the individual wants to do what most people in the externally defined group want her to do.

Measuring the Descriptive Norm (Empirical Expectation). To measure a descriptive norm, they suggest asking:

Most people who are important to me
do :____:____:____:____:____:____:____: do not
perform behavior X.

We could also ask, *how many people whom you respect and admire perform behavior X…"*, or *"most people like me perform behavior X…"*, or *"how many people similar to you perform behavior X…"*. Finally, as with injunctive norm, a measure about how many people in a reference group do the behavior in question is multiplied by a measure about how much one wants to do what people in the reference group do.

Measuring Personal Attitude. Most TPB research measures attitude directly with a semantic differential (for example, a seven-point scale from Favorable to Unfavorable). Fishbein and Ajzen also devised the expectancy-value approach to attitude, which elicits the salient beliefs about a behavior in order to better understand the determinants of the attitude. This more indirect measure of attitude consistent with their full model is detailed in their volume (2010, 75-125).

Measures Used in an Exemplary Social-Norms, Social-Network Study

Paluck and Shepherd (2012) conducted a "field experiment on collective norms and harassment behavior in a school social network." Harassment (sometimes termed *bullying)* can be pervasive in schools and can be the result of social norms deeming it typical and appropriate. Harassment behavior is not strongly related to students' personal attitudes towards it, and even those who oppose harassment engage in it, because of a belief that it is socially accepted and that to stand up to it would not be socially accepted. The researchers examined the effects of an intervention program that, among other things, involved salient social referents in a skit performed at a school assembly illustrating the adverse consequences of the practice, reinforced by some follow-up events later in the school year.

The researchers were able to do full-school surveys, repeated in three waves over time, collecting data on demographic characteristics, social networks, injunctive (normative) social norm, descriptive (empirical) social norm, personal beliefs and experiences, and cognitive salience and endorsement of the program. Paluck and Shepherd did a complete social network analysis of students at the school, and distinguished between two types of referents: those nominated as high status in the school (school wide influence) and those who are leader of a clique (local influence). They hypothesized that the mechanism of influence was frequent and personally motivated interaction with salient social referents. Among the salient social referents they identified, they were able to randomly assign a subset to the intervention and assign another to control.

Paluck and Shepherd identified the salient social referents in the reference group by asking six social network questions. Four had to do with behavior indicating friendship ties, for example, "With whom did you spend time in the last week?", and two had to do with high status, those "who you really respect" and "who you think are most popular." High status and clique leaders were identified from social network data matrices.

These are the questions they asked about perceptions of descriptive norms, or the student's empirical expectations: How often do students:

- spread rumors about students at [school]?
- forward or send emails, IMs, or texts to other students to gossip about or threaten someone?
- threaten [one another] with physical violence
- act as a negotiator to calm down a conflict or break up a fight?
- stand up for someone when they are being insulted or harassed?

The descriptive-norms questions had a four-point scale, from Never to Several Times a Week.

Here are the questions they asked about perceptions of injunctive norms, or the students' normative expectations (note: in American high school English, *normal* is more an evaluative than descriptive term). How many students at [school]:

- believe it's normal for students to start drama or any other kind of conflict with other students?
- believe it's wrong, or would criticize you,
    - if you tried to stop other students from starting drama?
    - if you did not defend your friends when someone else was making drama for them?
    - if you ignored rumors about you, rather than defending yourself?
- believe it's normal to mind your own business when other students are starting drama for people
- believe it's important to defend your friends when someone is making drama for them?

For "how many," the questionnaire offered a collection of pictograms of six outlined stick figures, with one, two, three, four, five, or six filled in; for example, zero filled-in figures indicating almost none, three filled-in indicating about half, and six filled-in indicating almost everyone.

The researchers also asked about personal beliefs (attitudes). Do you:
- think that there is a problem of too many students gossiping, spreading rumors, or making drama for you?
- personally have a problem of too many students gossiping, spreading rumors, or making drama for you?
- think that students are seriously emotionally affected when people gossip or spread rumors about them or when people make drama for them?

The personal belief questions had a four-point scale.

They also independently measured behavioral outcomes, whether a student was:
- nominated by teachers as one who defends others from harassment or as one who does not harass
- formally disciplined by the school for harassment
- purchased an anti-harassment wristband

The reference groups studied were the whole student population (well-bounded) and local cliques of friends (identified by social network data). Empirical expectations, normative expectations, personal attitudes, and other items were measured at three points in time; and behavioral outcomes were independently measured. Salient social referents were randomly assigned to the intervention. The research effort was well endowed, and took place in field conditions less strenuous than the typical development setting. But the underlying principles of the study can be applied elsewhere.

Adapting Individual-Level Stages-of-Change to a Social-Norms Context

The stages of change, or transtheoretical, model (Prochaska and DiClemente 1984) is widely applied in behavior change programs, especially those concerned with health. Kok and Ruiter (2014) state that the transtheoretical model has declined in popularity, many researchers suggesting that there are only two stages of change: motivation and action, citing Brug et al. (2005). One of its attractions is that the stages – precontemplation, contemplation, preparation, action, and maintenance – allow for periodic monitoring, showing progress on the way to final behavior change, thereby justifying continuation of program effort. The stages of change model, however, almost always assumes independent individual action; the stages are described entirely in terms of individual deliberation and action. Yet some researchers, programmers, and surveyors involved in behavior change are familiar with its precepts, and may find it comfortable to adapt the model to interdependent actions among members of a group. If this were possible, their data collection on changing of independent individual action and changing of interdependent group action would be more unified. A preliminary step in such a scheme might be to determine whether the behavior of interest is that of an independent individual or an interdependent group.

Shell-Duncan et al. (2010) adapted the stages-of-change model to social-norms change in their study of the practice of FGM/C in Senegal and The Gambia. The scheme they used, or something like it, could be useful for measuring social-norms change in other settings. Personal attitude or preference can differ from social-norm compliance or behavior. Hence, categories are needed which cross three states of attitude (supportive of FGM/C, ambivalent, opposes FGM/C) with three states of being (practitioner, undecided, abandoner).

Behavior	Preference Supportive	Ambivalent	Opposed
Practitioner	Supporters	Contemplators	Reluctant Practitioners
Undecided			Willing Abandoners
Abandoner	Reluctant Abandoners		

Assigned stage of change algorithm for categorizing stage of change among Senegambian respondents. Source: Shell Duncan et al. (2010, p. 38)

This yields five meaningful stages of change:

- Willing practitioner (and noncontemplator)
- Contemplator
- Reluctant practitioner (no behavior change but attitude change)
- Reluctant abandoner (behavior change but no attitude change)

- Willing abandoner (behavior change and attitude change)

This was a mixed methods study, integrated in three phases over a three year period. Following initial ethnographic research, survey questions were designed and tested. Three survey questions were agree/disagree statements indicating Support of FGM/C, another three indicating Ambivalence, and another three indicating Opposition. Three survey questions were about behavior, whether uncircumcised girls in the immediate family will be circumcised in the future: Yes, Not Sure, No. Researchers used answers to these questions to assign a respondent to one of the five stages of change. Also respondents were asked to assign themselves to one of the five stages. There was high concordance between the assigned and self-described stages of change. The original transtheoretical change model posited a progressive sequence through the stages of change. Shell-Duncan et al. suggest that their respondents may move back and forth between stages.

We saw that with a one-way dependent practice, change in individuals' behavior tends to follow changes in their attitudes. But with a strongly interdependent practice, individual attitudes can accumulate without much behavioral change until enough people in the population are ready to make the change. An adapted stages-of-change model (devised by research assistant on this project, Elaine Denny) could track change in a social norm across time with a few standard KAP questions roughly along the following lines:

- Are you aware of the new behavior?
- Do you practice the new behavior? The old behavior?
- Do you approve of the new behavior? The old behavior?

If one considers the primary dimensions of change to be shifts in attitude and behavior, these stages of change can be mapped according to the following matrix:[21]

	OLD ATTITUDE			NEW ATTITUDE
OLD ACTION	Non-contemplation (unaware and support old)	Non-contemplation (aware and support old)	CONTEMPLATION	Reluctant practitioner (aware and support new)
	CONTEMPLATION			
NEW ACTION	Reluctant abandonment (unaware and support old)*	Reluctant abandonment (aware and support old)		Willing abandonment (aware and support new)

*may not occur often; involves unthinking mimicry of other abandoners in network

Change in attitude and behavior may not be progressive, and may follow different pathways depending on context and timing. Attitude may change before behavior, behavior may change before attitude, and periods of contemplation may indicate higher

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[21] This scheme was devised by PCA Research Assistant Elaine Denny.

likelihood of transition or possibility for backsliding. The figure below illustrates two primary pathways of social norms change:

	OLD ATTITUDE			NEW ATTITUDE
OLD ACTION	Non-contemplation (unaware and support old)	Non-contemplation (aware and support old)		Reluctant practitioner (aware and support new)
	CONTEMPLATION			
NEW ACTION	Reluctant abandonment (unaware and support old)*	Reluctant abandonment (aware and support old)		Willing abandonment (aware and support new)
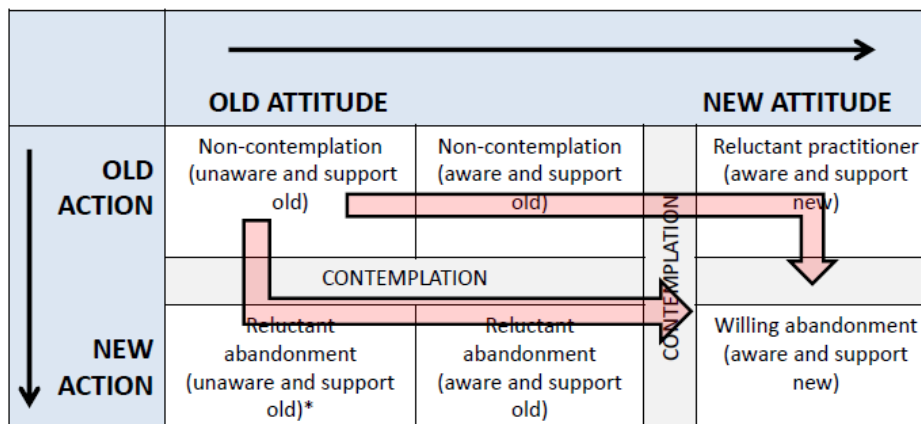
*may not occur often; involves unthinking mimicry of other abandoners in network

Progress towards change would be indicated by increases in the number of respondents in the matrix cells along either arrow. Maintenance of a new social norm would be indicated by the greater part of the population being willing abandoners for a sustained period of time. This simple method relies on personal attitude to approximate change in social norm over time rather than on a more exacting measure of empirical and normative expectations.

Community-Level Stages of Change: The Community Readiness Model

The Community Readiness Model (CRM) assesses a community's readiness to change.[22] It was developed by the Tri-Ethnic Center for Prevention Research at Colorado State University by researchers and practitioners with active experience in supporting community action to prevent substance abuse, violence, and victimization in the American Indian, Anglo, and Mexican-American populations (Edwards et al. 2000). The Center's view is that, "Efforts by *local* people are likely to have the greatest and most sustainable impact in solving *local* problems and in setting *local* norms" (292). An original research motive of the CRM was to match treatment and control communities in experimental interventions such that they were at the same level of readiness to change. At one point the Center trained teams from ten communities in drug abuse prevention, but when programs were implemented there was high variation in the progress of change across the ten communities. The researchers wanted to find a way to describe and explain that variation. They were aware of Prochaska and DiClemente's (1984) model of stages of individual readiness to change. However, that model was only suggestive, because individual processes of change are different in kind from group processes of change. They wrote up many descriptions of critical incidents and events having to do with change of attitudes and behavior at the community level, and in a disciplined process of evaluation sorted them into five dimensions and eight stages of readiness. They also consulted with community

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[22] The CRM was brought to our attention by Hazel Barrett, REPLACE2, University of Coventry.

members about the scheme which resulted in the addition of an additional dimension and an additional stage. Next, a disciplined process using expert raters selected anchor statements descriptive of each stage, a key element of the CRM scoring procedure.

The CRM process provides guidance in identifying the issue, defining the community, conducting key respondent interviews, scoring of readiness levels, and developing strategies appropriate to each readiness level. A complete manual is on line at http://triethniccenter.colostate.edu/docs/CR_Handbook_2014.pdf; theoretical background can be found in Edwards et al. (2000) and other references listed at the Center website. The CRM asks a set of 36 (20 of them essential) semi-structured questions, taking 20-60 minutes to administer, to about 4 to 12 key respondents from different elements of the community. The semi-structured questions are grouped to elicit information relevant to evaluating readiness to change in each of six dimensions, which are:

- Community Efforts
- Community Knowledge of the Efforts
- Leadership
- Community Climate
- Community Knowledge of the Issue
- Resources Related to the Issue

At least two researchers study each transcribed interview and independently rate it according to readiness of change on each of the six dimensions. Next, they discuss their scores of a given interview per dimension until consensus is reached on each. There are nine stages of community readiness, scored 1 to 9:

- No Awareness
- Denial/Resistance
- Vague Awareness
- Preplanning
- Preparation
- Initiation
- Stabilization
- Expansion/Confirmation
- Community Ownership

Raters are provided an anchored rating scale for each dimension, for example, for Community Knowledge of Current Efforts, if "Some community members have at least heard about local efforts, but know little about them," that would be rated 4. The raters' consensus score of each interview, per dimension, is averaged. This is the readiness to change score for that dimension. For example, if the average of scores is 6 on the Leadership dimension it means that, "Leadership plays a key role in planning, developing and/or implementing new, modified, or increased efforts…" Finally, the average score for each of the six dimensions is averaged for an Overall Community Readiness score.

A community's scores may differ across dimensions, and a program should direct attention to those dimensions with lower readiness scores. Each dimensional readiness score and the overall readiness score can guide a program to the most appropriate response. For example, if the community is at the Stabilization stage, the goal is to support stabilization, perhaps to: plan community events to maintain support, conduct training sessions for community professionals and members, introduce program evaluation, increase media exposure, hold recognition events for active supporters and volunteers.

FGM/C : COMMUNITY READINESS TO CHANGE INDEX REPLACE 2

stages	Community Readiness to End FMG/C
1	**NO COMMUNITY AWARNESS**: FGM/C PRACTICE IS SOCIAL NORM
2	**COMMUNITY DENIAL/RESISTANCE:** SOME COMMUNITY MEMBERS RECOGNISE FGM/C IS AN ISSUE
3	**VAGUE COMMUNITY AWARNESS**: MANY HAVE CONCERNS ABOUT FGM/C BUT NO COMMUNITY MOTIVATION TO CHANGE
4	**PREPLANNING**: COMMUNITY RECOGNITION THAT SOMETHING MUST BE DONE ABOUT FGM/C, BUT EFFORTS LACK FOCUS
5	**PREPARATION**: COMMUNITY LEADERS BEGIN PLANNING IN EARNEST TO END FGM/C IN THE COMMUNITY
6	**INITIATION**: COMMUNITY ACTIVITIES & INTERVENTIONS UNDERWAY TO END FGM/C
7	**STABILISATION**:COMMUNITY LEADERS SUPPORT ENDING FGM/C IN THEIR COMMUNITY
8	**EXPANSION**: COMMUNITY MEMBERS FEEL COMFORTABLE WITH ENDING FGM/C
9	**COMMUNITY OWNERSHIP**: HIGH LEVEL OF COMMUNITY BUY-IN TO END FGM/C WHICH BECOMES THE SOCIAL NORM

	Dimensions of Community Readiness
A	Community Knowledge concerning FGM/C
B	Community belief systems and attitudes towards FGM/C
C	Community efforts to ending FGM/C
D	Community knowledge of the efforts to end FGM/C
E	Community leaders' and influential peoples' attitudes to ending FGM/C
F	Community resources available to support efforts to end FGM/C

Source : H. Barrett

REPLACE 2 is a is a European Commission Daphne III funded consortium led by Professor Hazel Barrett and Dr. Katherine Brown at University of Coventry and involves six other partner organizations in the European Union. The REPLACE 2 program integrates individual behavior change with a participatory community-based approach to the abandonment of female genital mutilation/cutting among diasporal communities in the EU (http://www.replacefgm2.eu/). It seeks to investigate social beliefs and social norms among practicing communities, to understand obstacles to change and mechanisms for changing social norms (Barrett 2014). REPLACE 2 adapted the Community Readiness Model to the problem of FGM/C and the communities they work with, and are refining the approach. One community they found to be at CRM stage 2, community denial/resistance, and in response they started a project to form community groups to raise awareness of the issue; another community is at CRM stage 4 – preplanning and a sense that something should be done – and in response they developed teaching materials for Koranic school

teachers on Islam and FGM/C (Barrett 2014). REPLACE 2 says that the CRM helps target interventions and to track change, and could be a proxy measure of the progress of FGM/C abandonment.

The Community Readiness Model was devised by researchers and practitioners organizing community change of social norms. The Tri-Ethnic Center and REPLACE 2 each say that the method is easy and affordable to use. The readiness assessment is not a blunt tool: readiness can differ across six dimensions and the interviews with key respondents can be consulted for further detail. It is a useful guide to assist the design of program content and sequencing so that it is matched to the readiness of a given community. REPLACE 2 is trialing and refining its application to the social norm of FGM/C, a new setting for the model. For program evaluation it would be desirable to add a behavioral measure of the valued change, or to document that in comparable circumstances reaching a stage increases the probability of reaching the next stage and ultimately the valued outcome. A recent review essay declares that the measurement of collective readiness to change constructs is in its infancy (Casteñada et al. 2012); and critical insights from additional theoretical perspectives and new settings would be welcome.

The Matching-Game Method of Identifying Social Norms

This might be a simple and practical method to identify social norms in the field. Response bias occurs when a respondent gives an answer she thinks the investigators want to hear rather than reporting her true beliefs, and is always a concern when collecting self-report data from respondents. Krupka and coworkers (Krupka, Weber, and Croson No Date; Krupka and Weber 2008; Burks and Krupka 2011) propose what might be a more incentive-compatible method for identifying social norms. Despite its apparent appeal, it might be unsuitable in a program evaluation context.

Krupka, Weber, and Croson (No Date) recruited University of Pennsylvania students for the following exercise.[23] The subjects read a scenario, in which two students agree to meet in the library, and the first student arrives either exactly on time or 20 minutes late. Subjects rate each action as Very Socially Inappropriate, Socially Inappropriate, Socially Appropriate, or Very Socially Appropriate. Subjects are told that if their ratings match that of another randomly selected student at the university, they will be paid extra. Thus, each respondent has an incentive to report her belief about what others believe. Then, the subject is asked to report her own personal rating, with no incentive. In another rating, subjects were asked to match their responses with another randomly selected student from the same country, and again they would be paid extra for an exact match.   Another scenario is about a person tipping for a $10 meal. The subject rates the appropriateness of leaving no tip, 5%, 10%, 12% 15%, and 20%, again attempting to match either other students, or someone from the same country. Again, she is asked her own personal rating as well. The researchers find that the subjects can accurately match appropriateness

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[23] This is an unpublished paper that we use as illustration because the design is easy to understand. One should turn to the published papers of Krupka, Weber, and coauthors for full and accurate understanding of the approach.

ratings, that matching ratings differ according to reference group (student-student or same country-same country), that matching ratings differ from personal ratings, and that personal ratings do not vary by country.

Any number of respondents can be queried. So that the respondent believes she has a chance of winning the coordination game, one would reward her based on whether her estimate matches the estimate of another randomly drawn respondent. The method could be used to elicit both empirical and normative expectations, and also perhaps to disclose pluralistic ignorance. A respondent could take part in a matching game about whether, with respect to the appropriate reference group, people believe that almost none, some, many, or almost everyone *does X*, and separately whether the respondent does *X*. The respondent could be asked whether people believe that almost none, some, many, almost everyone approves of one doing *X,* and separately whether the respondent approves of doing *X*. The respondent could be asked whether others would positively sanction X or negatively sanction non-*X*. There are further possibilities. These matters require more thorough examination. Repetition of measures over time could track change in attitude, behavior, empirical expectations, and normative expectations.

Burks and Krupka (2011) adapted the method to the identification of norms in a large financial services firm. The study was about the reciprocal expectations among the rank-and-file financial advisers in the firm. But there was also research interest in the relationship between the actual practices of the financial advisers and the expectations that the corporate leaders above them had of the financial advisers. If theoretically clarified this variation might be of use in investigating social norms within and between dominant and subordinate groups, such as caste or gender hierarchies. The Krupka-Weber method has been applied in several settings and is actively under development.

A possibly fatal problem with the matching-game method is that if there is a community-level norms-change program, then there could be community-level response bias. That is, if there has been much attention to the behavior that the program rewards, then an actually unchanged individual could easily state that she has changed, accurately predict that another actually unchanged individual would *state* that he has changed, and collect the reward.

Conclusions and Future Research

We reviewed and summarized social-norms theory and its implications from a wide variety of viewpoints. Here are some highlights. Theories of change tend to overlook the crucial distinction between action interdependent among humans and independent action by individuals. Action motivated by social norm cannot be conceptualized and measured in the same way as action motivated by personal attitude. To explain human practices and design remedial engagements one needs to distinguish among mere population regularity, social proof or diffusion of innovation, social norm, moral norm, and legal norm. Social norms have both descriptive/empirical and injunctive/normative aspects.

We conducted a search of the development literature for instances of social-norms measurement, but no doubt we missed much, especially what was published in informal reports. We found that attitudes are routinely measured, but social expectations rarely are. When social expectations are measured, it is usually by means of partial borrowings from the Reasoned Action Approach.

Based on our pluralistic overview of social norms theory we proposed some general ideas about how to measure social norms, and some general considerations such as to measure one's beliefs about others in the reference group. We offered simple ways to recognize social norms in ordinary conversation, simple questions to ask in focus groups or adapt for surveys, and how to notice possible social norms by simple inspection of DHS and MICS data. We called attention to the leading Reasoned Action Approach, summarized concrete questions asked in an exemplary social-norms study, and described several other approaches to measurement.

As this report is disseminated, we hope to learn more about how people measure social norms, about how any of the ideas in this report have been tried and how that turned out, and new ideas about how to measure the constructs in various settings.

There are lessons to be learned from the Reasoned Action Approach and its history of applicationa. If adapted, it probably requires supplementation of theory and measurement about mechanisms, individual and especially collective, that close the gap between intention and behavior. Its several individualistic biases need strong corrections. Its cognitively demanding quantitative survey, especially if applying the full model, limits its use in routine development program evaluations or among traditional populations. Its exclusive use of self-report surveys is also a limitation.

Many of the measures we reviewed or proposed to measure the elements of social norms were self-report surveys. A high research priority is to develop methods beyond self-report survey and its well-known shortcomings. Survey experiments (e.g., Cloward 2014), measurement of behavioral outcomes (as in Paluck and Ball 2012), controlled behavioral experiments in the field intended to reveal normative beliefs and actions (Ensminger and Henrich 2014, Habyarimana et al. 2009), methods that reduce response bias (Graeme, Imai, Lyall, 2014), qualitative methods that better get at people's reasons for beliefs and actions (Cislaghi, Gillespie, and Mackie 2014), techniques of cultural analysis from cognitive anthropology, and even hormonal or neural methods (Lieberman 2013) are options to pursue. The more sophisticated understanding of reference groups available from social network analysis is important to integrate with social norms theory and to develop in field application; this work is being pioneered by Shakya and co-workers (e.g., 2014).

This study confined itself to measurement of social norms and their change, and did not report on how to change social norms by community action or by changing extrasocial influences. A larger research program would theorize not just coordinated adoption of social norms, but also precursors to adoption such as enhanced voice, agency, and inspiration. It would also consider features of the extrasocial environment, such as the

harmonization of legal, social and moral norms (Mackie 2015), and how social change communications can be revised to encourage community norms change. Dutta-Bergman (2005) objected that "behavior change" theories and programs mistakenly focus on isolated beliefs rather than the webs of beliefs that make up the culture in a community. We pointed out that social practices are upheld by complex schemas of individual beliefs, socially shared beliefs about the nonsocial world, reciprocal beliefs in a group about its social world, beliefs about the self including personal attitudes and self-efficacy, moral norms, actions, structural constraints. They are resistant to change and it is difficult to understand their dynamics without an accurate model of the causal forces that maintain them. A larger research program would expand from social norms to conceptualizing and measuring social schemas and their change.

Appendix I: Review of the Reasoned Action Approach

In the main text we outlined the Reasoned Action Approach (RAA). Here we consider some evaluative reviews of the RAA. Dutta-Bergman (2005), from an avowedly critical-theoretic perspective, reviews three leading theories of health communication campaigns, including Fishbein and Ajzen's Theory of Planned Behavior (TPB, the predecessor of RAA). We think most of his observations are apt, and agree with him further that his criticisms supplement and amend an approach like the TPB rather than negating it. The three theories, says Dutta-Bergman, have an individualistic bias, neglect structural determinants, ignore cultural context, are biased towards controlled cognition, and are external rather than internal to the community and its culture.

There is a tendency to overlook the interdependent, the social, in the TPB model. This is shown in TPB's more recent addition, perceived behavioral control (PBC), about the capacity and autonomy to act. PBC was adapted from Bandura's self-efficacy construct, which includes both individual self-efficacy (what I believe I can do) and collective self-efficacy (what we believe we can do). Although in 2005 Dutta-Morgan called for the inclusion of collective self-efficacy in the TPB, Fishbein and Ajzen continue (2010) to discuss PBC entirely in individualistic terms. The sample questions they offer measure perceived behavioral control only by first-person-singular questions. To change an interdependent action, however, an individual's self-efficacy is necessary but not sufficient. There is a further issue of collective self-efficacy, whether *we* have the capacity and autonomy to change an interdependent action. Similarly, the intention variable is measured only with first-person singular questions (e.g., "I will try to engage in the behavior," 38). One could have an intention, be ready to change an interdependent behavior, but the intention would not result in corresponding behavior unless enough other people in the interdependent reference group are ready to make the change as well. Fishbein and Ajzen (2010, 59-63) scrutinize the intention-behavior gap in detail (59-63), but the obstacles of coordinating on intentions with others on change, and coordinating with others to act on change, are unmentioned.

The TPB/RAA approach does have an individualistic bias, but we think that this bias is not intrinsic to the approach. The subjective norm has to do with one's beliefs about others in the reference group: that is a social theory, not an individualistic one. The approach can be amended to include the collective aspects of PBC, intention, and behavior. The individualistic bias in health program design also mistakenly biases program action against operating at the community level, Dutta-Bergman says, and we agree. He is right that community practices should be reviewed and changed with community-based and culturally friendly methods.

Dutta-Bergman continues that when the TPB is applied in health communication as a theory of change it can mistakenly focus on isolated beliefs rather than the web of beliefs that make up a culture. The full TPB model would elicit all salient beliefs associated with a

behavior, better than other survey approaches; but in practice it might elicit only a few, a defect of application not of theory. Nevertheless, the TPB does not consider how a series of behaviors and beliefs about them can interlock with one another. We also agree with Dutta-Bergman that the TPB as practiced obscures structural determinants of action. The TPB/RAA theorizes that structural factors determine behavior only through attitude, subjective norm, and perceived behavioral control, which even if it were wholly true would work to distract the researcher from investigation of structural factors (Fishbein and Ajzen 2010, 224-235, do urge researchers to consider structural variables).

The TPB/RAA in standard application relies on self-report surveys which neglect cultural context. But in part that is an error in application of the theory: Fishbein and Ajzen (2010, 326-331) urge thorough formative research, including the qualitative; Ajzen himself (2014, 4), says that few RAA investigators do sufficient formative research and "often take a rather cavalier approach, relying on intuition…" Nevertheless, in discussions with practitioners we heard repeatedly how difficult and even inaccurate it is to try to extract beliefs from traditional populations by means of cognitively demanding quantitative surveys. More culture-friendly methods, even when indirect, might yield more accurate inferences about beliefs.

A recent issue of the *Health Psychology Review* (Vol 8. No. 1, 2014) contains a critical symposium on the RAA from within social psychology. The lead editorial is titled, "Time to Retire the Theory of Planned Behavior" (Sniehotta, Presseau, and Araújo-Soares 2014). A lead article is a case study of RAA as a health theory, followed by eight vigorous commentaries on the editorial or lead article including one from Ajzen. Anyone planning to engage with the RAA can gain critical balance from this source. Our purpose is not to declare a global judgment on the approach, but rather to point readers to it as a resource, especially its long record of measuring social norms. Thus, we will mention only briefly a few illustrative points of controversy expressed in the symposium

As usually applied, the RAA is correlational, based on self-report, and is cross-sectional; rather than testing causal hypotheses by controlled experiment, seeking objective behavioral outcome data, and measuring over time (Schwarzer 2014); although these problems are shared with other major health behavior theories (Head and Noar 2014). It does well in predicting intentions, explaining 47% of variance in one meta-analysis, and somewhat less well in predicting behavior, explaining 27% of variance (Head and Noar 2014): there is an intention-behavior gap (Sniehotta, Presseau, and Araújo-Soares 2014). It may be a better theory of intention than of behavior (Kok and Ruiter 2014, Schwarzer 2014). It is imperfect at predicting behavior from intention, yet its claim to explanatory sufficiency discourages inclusion and testing of other possible determinants of behavior, especially those that would translate intention into behavior (Sniehotta, Presseau, and Araújo-Soares 2014). We observe that the RAA's neglect of the collective aspect of PBC, intention, and behavior could contribute to the intention-behavior gap. It is a theory of behavior prediction, relating change in attitudinal, normative, and control *beliefs* to changed behavior; but is not a theory of behavioral change, it does not advise how to change those beliefs (Kok and Ruiter 2014, acknowledged by Ajzen 2014). The fiercest critics, Sniehotta, Presseau, and Araújo-Soares (2014), say that intention, PBC, attitude, and

subjective norm should continue to play a role in understanding and changing behavior, but call for a broader theoretical approach. Thus, most of these worries about the RAA have little to do with its subjective-norm construct.

However, meta-analyses of the correlation between subjective norm and intentions have shown that this relationship is even less robust than that of intentions with attitudes or with perceived behavioral control (Rivis & Sheeran, 2003). A meta-analysis by Armitage and Conner found that the subjective norms construct was particularly weak, although this appeared to be the result of poor measurement (Armitage & Conner, 2001). Many of the studies they analyzed used only one question to assess subjective norms. When subjective norms were measured using multi-item scales, its predictive value considerably increased.

Literature on descriptive norms has suggested that a problem with the subjective norms-behavior correlation may also be because the subjective norm construct in the RAA was formerly limited to injunctive norms, and descriptive norms were long omitted. Later research by Ajzen and Fishbein, however, began to include descriptive norms as an important construct to be measured, with empirical evidence suggesting that the direct effect of descriptive norms on behavior may be stronger than that of injunctive norms (Manning, 2009; Rivis & Sheeran, 2003), as descriptive norms account for a significant proportion of the variance in intentions to perform a behavior (Rivis & Sheeran, 2003). Fishbein and Ajzen (2010, 185-190) themselves argue that predictive validity is improved by inclusion of descriptive norm and perceived behavioral control. They also say that many TPB studies are done only with simple belief indices rather than with the full model, and say that studies using the full model tend to have more predictive power.

Another issue, so far as we know not prominently discussed in its literature, is that the TPB seems often to be applied to decisions that are strongly influenced by personal attitude, what we called more independent decisions, where social influence is weak. For example, a sample injunctive norm question (2010, 133) concerns whether or not to get a mammogram. Interaction with important others on this question could result in pressure from them for one to comply; but it could also more have to do with revising behavioral beliefs that determine personal attitude towards an independent individual decision (which would be channeled through behavioral beliefs and corresponding attitudes). We would expect that the social-normative factor would be more powerful in TPB studies applied to more interdependent decisions, where social influence can be decisive. All behaviors of interest to change agents will be influenced by attitudes and with some variation by perceived behavioral control; yet only some behaviors – the more interdependent – will be importantly influenced by subjective norm. Additionally, social norms generally have more influence in "collective" societies where action is generally more interdependent than in "individualist" societies where action is generally less interdependent (Gelfand et al. 2011), and the RAA studies tallied in meta-analyses were more carried out in individualist societies.

Finally, we hypothesize that if an RAA application centers on *should* questions to identify subjective norms that could be an unreliable measure, because *should* may be ambiguous among prudential, social, and moral norms.

Appendix II: Comparing Different Conceptions of Social Norms

We examined 16 different definitions of social norms offered by scholars in economics, law, philosophy, political science, public health, social psychology, and sociology. The definitions are compared in tabular form following this discussion. It might help to review the table first.

Although terminologies differ, the understanding of social norms tends to converge on these elements:

- *Social Expectations*: A Social Norm is constructed by one's beliefs about what others do, and by one's beliefs about what others think one should do.

- The relevant others we call a *Reference Group* (and different norms may be relative to different reference groups).

- A social norm is *Maintained by Social Influence*: approval, including positive sanctions by others in the reference group, and disapproval, including negative sanctions, or, according to some, also by acceptance of the legitimacy of others' expectation.

These elements stand out in an early conceptual review by sociologist Gibbs (1965):

A norm…involves: (1) a collective evaluation of behavior in terms of what it ought to be; (2) a collective expectation as to what behavior will be; and/or (3) particular reactions to behavior, including attempts to apply sanctions or otherwise induce a particular kind of conduct.

Additionally,

- Most theorists consider a social norm to be a *Behavioral Rule,* although some consider it to be a regularity of behavior.

Finally, most theorists observe that Social Norms are distinct from Legal Norms or Personal Norms:

- *Legal Norms* are formal and commanded by states, and can be enforced by coercion. Social norms are informal, and are more maintained by approval and disapproval.

- A *Personal Norm* (including Moral Norm) or Personal Attitude is internally motivated and is distinct from a Social Norm that is, in one way or another, externally motivated.

Definitions of social norms in the theoretical and practical literatures vary greatly in terminology, but most of them refer to some or many of the same set of elements. For example, Ajzen and Fishbein, pioneering theorists of social norms, refer to the *subjective norm*, perceived social pressure to perform or not to perform a given behavior. Lipinski and Rimal (2005) and Storey and Schoemaker (2006) call this the *perceived norm*, again because it is about the subjective beliefs of an individual about others in the reference group. Bicchieri refers to *social expectations* when referring to beliefs about others. Generally speaking, the term *perception* in social psychology and public health is similar in meaning to the term *belief* in economics and philosophy.

Cialdini (and Trost 1998), another pioneering theorist of norms in social psychology, developed an earlier distinction between *informational influence* and *normative influence* (Deutsch and Girard 1955) in an experimental research program carried out over many years. Gibb (1965) called these, respectively, collective expectation as to what behavior will be, and collective evaluation of behavior in terms of what it ought to be. Cialdini called the first a *descriptive norm* and called the second an *injunctive norm*, and these terms are common across several literatures. Ajzen and Fishbein originally conceived of their *subjective norm* as having only what Cialdini dubbed *injunctive* content, but late in their careers Fishbein and Ajzen (2010) split *subjective norm* into *descriptive* and *injunctive* elements. Bicchieri names her somewhat different constructs *empirical expectations* (descriptive) and *normative expectations* (injunctive) and uses the term *social expectations* when discussing both empirical and normative expectations.

What we call here a *reference group*, is also called a *collective*, *group*, *referents*, *population*, *community*, *bounded group*, or *set of persons*.

Social norms are maintained by *social influence*, a wide concept that includes influence that has nothing to do with social norms. One aspect of social influence is the *approval* and *disapproval* of others for one's actions, probably the easiest way to understand and explain social norms. The motivator most often mentioned across accounts is *sanction*, which can be either positive (reward) or negative (punishment) or, better, anticipation of such sanctions. A few authors (Fishbein & Ajzen 2010, Bicchieri 2006) also, correctly in our view, posit that in some circumstances some individuals may be motivated to comply with a social norm because they believe it is *legitimate* for others to expect it of them, that there is a social obligation (rather than a moral obligation) to comply. The anticipation of approval or disapproval by others is a convenient indicator of social norms. More exactly, we would want to know one's beliefs about others, if one anticipated either overt sanctions or covert attitudes, or believed that social expectations of others are legitimate in this instance.

Fishbein & Ajzen's (2010) model of behavior influenced by a social norm is the most detailed model, and is the most tested and refined in many studies by them and their

followers (bibliography at http://people.umass.edu/aizen/tpbrefs.html). It may include inessential elements, or elements not needed in some practical applications. For example, these theorists used to measure how strongly a respondent was *motivated to comply* with what referents expect of them. They found across many studies, however, that this variable did not add explanatory power, probably because their definition of referents is *people who are important to me* (142-143). One would likely be motivated to comply with the expectations of those one picks out as important on the question. Rimal and Real (2003) in an empirical study found that stronger group identity (proxied as similarity to others in a group and wanting to be like them) was associated with stronger compliance with the descriptive norm.

The variation across theories in this element of norms conceptions may be largely due to differences in who the theorist counts as being in the reference group: if the reference group is defined as a distinctive group only some of whom actually influence one's action, then the researcher wants to know whether one is actually influenced by a given individual in the reference group. If the reference group is defined as a population all of whom actually influence one's action, then there is no need to inquire whether a given member of the reference group actually influences one's action. Which definition is appropriate depends on the research context. If one knows from the respondent who is important to them in deciding on and action regulated by the norm, then the reference group is identified. If the respondent is known to be part of a distinctive group, such as resident in a particular village, one might inquire how important the villagers' expectations are to the respondent. Bicchieri's *conditional preference* requirement is different: one prefers to conform if she has the requisite empirical and normative expectations. Elster intends something similar in his discussion of quasi-moral (social for Bicchieri) norms: in situations of reciprocity, some individuals would comply only if others would comply.

A social norm is called a *rule*, *behavioral rule*, *standard*, *perceived standard*, *definition*, *normative principle,* or *behavioral regularity* in the population. There is a split, more calling it a *behavioral rule* and some calling it a *behavioral regularity*. It is probably more apt to consider it a behavioral rule, since many can be aware of a behavioral rule that is only followed by a few in a population. Also, one cannot distinguish, solely by behavioral evidence, a social norm based on interdependent beliefs among people in a reference group from a mere population regularity of aggregated independent actions of individuals. In Coleman's analytic sociology, whose core assumptions are *actions* and *rights to control actions*; a social norm is a particular kind of *assignment of rights-to-control* in the population. For Young it is an *equilibrium* in a coordination game.

Many authors distinguish *personal norm*, *moral norm*, *personal attitude*, *personal evaluation of the outcome*, *ego involvement* from *social norm* (and *social convention*). The term *personal norm* typically includes a prudential personal rule such as always to decline tequila or a moral personal rule such as not to steal from others. A personal norm is internally motivated, not externally motivated by the approval or disapproval of others (others may happen to approve or disapprove, but that is not what determines one's action). A *personal attitude* is one's pro or con attitude towards one's own behavior; one's attitude independent of the expectations of others. One may favor an action, but refrain

from doing it if it would be negatively sanctioned by others: personal inclination can be outweighed by social expectation. Fewer authors, probably because the distinction is more obvious, emphasize that *legal norms* differ from social norms.

Some brief definitions of social norms are appealing, even though they do not include a wide range of elements, for example, Paluck's "Socially shared definitions of they way people do behave and should behave," or her "Individuals' perceptions about which attitudes and behaviors are typical or desirable in their community." One popular understanding of social norms is that they are complied with because of group identity. But of those reviewed in the table, only one definition of social norms, by Hogg and Reid (2006) attributes compliance primarily to group identification.

Comparison of Elements of 16 Different Conceptions of Social Norm

Elements: Theorists	One's beliefs about what others do	One's beliefs about what others think one should do	Others within some reference group (r.g.)		Maintained by social (dis)approval or other social influence within r.g.	Whether one is motivated by the social influence		Rule, behavior, etc.?	Personal Attitude, Personal Norm, Moral Norm: distinct from Social Norm	
Gibb (1965)	Collective expectation of what behavior will be	Collective evaluation of what behavior should be	Expectation or evaluation by collective		Reactions by others to one's behavior Sanctions or other social influence in response to it			Rules, conventions, morals, mores, law, customs		
Cialdini (& Trost, 1998)	Descriptive Norm: perception of what many others do	Injunctive Norm: perception of what most people approve or disapprove of	Understood by members of a group		Descriptive Norm- evidence of most effective action Injunctive Norm – desire to maintain social relationships			Rule or standard	Personal Norm: internally motivated - management of self-concept	
Fishbein & Ajzen (2010): 1) Personal Attitude, Subjective Norm, and Perceived Behavior Control (PBC) influence Intention 2) Intention and PBC influence Behavior	Subjective Norm: perceived social pressure to perform (or not) a given behavior		Referents: people who are important to one		Social Influence: 1. Positive sanction; 2. Negative sanction; 3. Legitimacy; 4. Expertise; 5. Identification	Motivation to comply with referents		Behavior	Personal Attitude: positive to negative	
	Descriptive: one's perception of behavior of others	Injunctive: one's perception of what others think one should do	Particular individuals	General society	4-5: Influence on Descriptive 1-5 Influence on Injunctive	More	Less		One's beliefs about outcomes of action	One's evaluation of the outcome

Elements: Theorists	One's beliefs about what others do	One's beliefs about what others think one should do	Others within some reference group (r.g.)	Maintained by social (dis)approval or other social influence within r.g.	Whether one is motivated by the social influence	Rule, behavior, etc.?	Personal Attitude, Personal Norm, Moral Norm: distinct from Social Norm
Bicchieri (2006)	Social Expectations		Social expectations about enough others in a population P	One considers others' normative expectations to be legitimate; or anticipates sanctions by some others	Conditional on conformity by others (on empirical and normative expectations)	Behavioral rule R (and one is aware of R)	Personal Norm
	Empirical Expectation: one believes that enough others do conform to behavioral rule R	Normative Expectation: one believes that enough others expect one to perform R, or prefer one to perform and would sanction behavior					
Rimal and Real (2003); Lipinski & Rimal (2005)	Perceived Norm - subjective beliefs about prevalence of norm and pressure to comply		Group or community	Perceived threats or benefits Maintained by communication in group	Strength of identity with reference group moderates descriptive norm		Ego involvement moderates influence of descriptive norm
	Descriptive	Injunctive norm moderates descriptive					
	Collective Norm – objective actual prevalence and pressure to comply						
	Descriptive	Injunctive					

Elements: Theorists	One's beliefs about what others do	One's beliefs about what others think one should do	Others within some reference group (r.g.)	Maintained by social (dis)approval or other social influence within r.g.	Whether one is motivated by the social influence	Rule, behavior, etc.?	Personal Attitude, Personal Norm, Moral Norm: distinct from Social Norm
Storey and Schoemaker (2006)	Perceived Norm		In bounded group	Prevalence of group communication (proxy)			Additional individual-level variables considered, including ideal family size (personal attitude)
	Collective behavioral norm – prevalence of behavior, aggregated from individual reports	Collective attitudinal norm – prevalence of personal attitudes, aggregated from individual reports					
Coleman (1990)	What actions are regarded as proper & correct (or not) Exists when socially defined right of action is held not by the actor but by others in the group		In a set of persons	Ordinarily enforced by sanctions: rewards or punishments		Patterned assignment of rights: e.g., those holding a norm claim a right to apply sanctions and recognize the right of others holding the norm to do so	Sanctions not absolute determinants but elements which affect one's decisions about what actions to carry out

Elements: Theorists	One's beliefs about what others do	One's beliefs about what others think one should do	Others within some reference group (r.g.)	Maintained by social (dis)approval or other social influence within r.g.	Whether one is motivated by the social influence	Rule, behavior, etc.?	Personal Attitude, Personal Norm, Moral Norm: distinct from Social Norm
Pettit (2010)	Known among most of the population and known that it's known, etc.			Sustained in a population by acceptance or approval of those who conform, or rejection or disapproval of those who don't		Behavior	
Elster (2009)	Quasi-moral norm of fairness: observing others comply motivates one to comply		Shared and known to be shared with others	Maintained by sanctions that others impose on norm violators Observer feels contempt, and sanctions violator, who feels shame		Not an equilibrium in a repeated game	Moral Norm, internally motivated by guilt
Burke & Young (2009)	A standard, customary, or ideal form of behavior to which individuals in a social group try to conform		The equilibrium holds at the population level, inducing common expectations and behaviors for an interaction that is repeated over time by members of a social group.	Three different mechanisms variably hold norms in place		A pure equilibrium of a coordination game; an equilibrium may involve punishments for deviation.	3. Some are sustained by internalization of proper norms of conduct Some people make choices that are warped away from the choices they would make if there were no norm
	1 Some are sustained by a pure coordination motive	2. Some are sustained by social disapproval or punishment for violations					

Elements: Theorists	One's beliefs about what others do	One's beliefs about what others think one should do	Others within some reference group (r.g.)	Maintained by social (dis)approval or other social influence within r.g.	Whether one is motivated by the social influence	Rule, behavior, etc.?	Personal Attitude, Personal Norm, Moral Norm: distinct from Social Norm
Paluck	Socially shared definitions of the way people do behave or should behave (Paluck 2009) Individuals' perceptions about which attitudes and behaviors are typical or desirable in their community (Paluck and Ball 2010)				Salient referents have more influence (Paluck & Shepherd 2012)	Shared definitions	Personal Beliefs (Paluck & Shepherd 2012)
Bendor & Swistak (2001)			Behavioral rules in a community backed by sanctions			Behavioral rules	
Ellickson (2001)			Rule governing an individual's behavior that is diffusely enforced by sanctions applied by third parties other than state agents			Rule	An internalized norm, enforced against oneself by negative and positive emotions
McAdams & Rasmusen (2007)	Behavioral regularities supported at least in part by normative attitudes; such regularities in the absence of normative attitudes are conventions					Behavioral regularity	
Hogg & Reid (2006)	Shared cognitive representations that characterize the behavior of members of relevant out-groups and describe and prescribe the behavior of in-group members including ourselves		No reference to others within a group, but identification with the group	Norms serve an internalized self-definitional function. They are known from interaction and communication within a group	Strength of group identification, centrality to group, etc.	Regularities in attitude and behavior	Only when the individual does not identify with the group
Brennan et al. (2013)	Can include expecting others to do *X*, or believing that others must do *X*, or that *X* is appropriate, or that others have the right to sanction one about *X*, or that one has the right to sanction others		A significant proportion of the group has normative attitudes about *X* and a significant proportion knows that a significant proportion has such attitudes.	One's (dis) approval of others' actions and others' (dis)approval of one's action.		A normative principle	A social norm creates accountability to a social group; a moral norm creates accountability to all humans

Works Cited

Adams, M. 2013. "The Gender Roles, Equality and Transformations (GREAT) Project," presented at the UNICEF Meeting on Social Norms, March 20.

Adolphs, Ralph. 2009. "The Social Brain: Neural Basis of Social Knowledge." *Annual Review of Psychology* 60:693-716.

Ajzen, Icek. 1985. *From Intentions to Actions: A Theory of Planned Behavior.* Berlin: Springer.

Ajzen, Icek. 2014. "The Theory of Planned Behaviour is Alive and Well, and not Ready to Retire: A Commentary on Sniehotta, Presseau, and Araújo-Soares." *Health Psychology Review* ahead-of-print (2014): 1-7.

Allen, Amy. 1998. "Rethinking power." *Hypatia* 13(1): 21-40.

Appiah, Kwame Anthony. 2010. *Cosmopolitanism: Ethics in a World of Strangers.* New York: WW Norton & Company.

Armitage, Christopher J. and Mark Conner." 2001. Efficacy of the Theory of Planned Behaviour: A Meta-Analytic Review." *British Journal of Social Psychology* 40,(4):471-499.

Bandura, Albert. 1997. *Self-Efficacy: The Exercise of Control.* Worth Publishers.

Barrett, Hazel. 2014. "The REPLACE Approach to Measuring Community-Based Behaviour Change." Presentation at DFID Girl Summit, July 22, 2014. London.

Barrientos-Gutierrez, Tonatiuh, David Gimeno, Thomas W. Mangione, Ronald B. Harrist, and Benjamin C. Amick. 2007. "Drinking Social Norms and Drinking Behaviours: A Multilevel Analysis of 137 Workgroups in 16 Worksites." *Occupational and Environmental Medicine* 64(9):602-608.

Bendor, Jonathan and Piotr Swistak. 2001. "The Evolution of Norms." *American Journal of Sociology* 106(6):1493-1545.

Bernburg, Jon Gunnar and Thorolfur Thorlindsson. 2005. "Violent Values, Conduct Norms, and Youth Aggression: A Multilevel Study in Iceland." *The Sociological Quarterly* 46(3): 457-478.

Bicchieri, Cristina. 2006. *The Grammar of Society: The Nature and Dynamics of Social Norms.* New York: Cambridge University Press.

Bicchieri, Cristina. 2012. " Norms, Conventions, and the Power of Expectations." In N. Cartwright and E. Montuschi, *Philosophy of Social Science*. New York: Oxford University Press.

Bicchieri, Cristina. 2014. *Norms in the Wild.* Manuscript.

Blair, Graeme and Kosuki Imai. 2012. " Statistical Analysis of List Experiments." *Political Analysis* 20(1):47-77.

Blair, Graeme, Kosuke Imai, and Jason Lyall. 2014. "Comparing and Combining List and Endorsement Experiments: Evidence from Afghanistan." *American Journal of Political Science.*

Boserup, Ester. 2007. *Woman's Role in Economic Development.* Earthscan, 2007.

Boudet, Ana María Muñoz, Patti Petesch, Carolyn Turk, and Angélica Thumala. 2013, *On Norms and Agency: Conversations about Gender Equality with Women and Men in 20 Countries.* Washington, D.C.: World Bank.

Boyd, Robert and Peter J. Richerson. 2005. *The Origin and Evolution of Cultures.* Oxford: Oxford University Press.

Boyle, Michael H., Katholiki Georgiades, John Cullen, and Yvonne Racine. 2009. "Community Influences on Intimate Partner Violence in India: Women's Education, Attitudes Towards Mistreatment and Standards Of Living." *Social Science and Medicine* 69(5):691-697

Brennan, Geoffrey and Philip Pettit. 2004. *The Economy of Esteem: An Essay on Civil and Political Society*. New York: Oxford University Press.

Brennan, Geoffrey, Lina Eriksson, Robert E. Goodin, and Nicholas Southwood. 2013. *Explaining Norms.* Oxford: Oxford University Press.

Bronfenbrenner, Uri. 2005. *Making Human Beings Human: Bioecological Perspectives on Human Development.* Thousand Oaks, CA: Sage Publications.

Brug, Johannes, Mark Conner, Niki Harre, Stef Kremers, Susan McKellar, and Sandy Whitelaw. 2005. "The Transtheoretical Model and Stages of Change: A Critique; Observations by Five Commentators on the Paper by Adams, J. and White, M. (2004) Why Don't Stage-Based Activity Promotion Interventions Work?." *Health Education Research* 20(2):244-258.

Burke, Mary A. and H. Peyton Young. 2010. "Social Norms." *Handbook of Social Economics*, Book 1A:311-336. North Holland.

Burks, Stephen V., and Erin L. Krupka. 2012. "A Multimethod Approach to Identifying Norms and Normative Expectations within a Corporate Hierarchy: Evidence from the Financial Services Industry." *Management Science* 58(1)203-217.

Castañeda, Sheila F., Jessica Holscher, Manpreet K. Mumman, Hugo Salgado, Katherine B. Keir, Pennie G. Foster-Fishman, and Gregory A. Talavera. 2012. "Dimensions of Community and Organizational Readiness for Change." *Progress in Community Health Partnerships: Research, Education, and Action* 6(2):219-226.

Christakis, Nicholas A. and James H. Fowler. 2010. *Connected: The Amazing Power of Social Networks and How They Shape Our Lives.* London: Harper Press.

Cialdini, Robert B., Carl A. Kallgren, and Raymond R. Reno. 1991. "A Focus Theory of Normative Conduct: A Theoretical Refinement and Reevaluation of the Role Of Norms in Human Behavior." *Advances in Experimental Social Psychology* 24(20):201-234.

 Cialdini, Robert B. and Melanie R. Trost. 1998. " Social Influence: Social Norms, Conformity and Compliance." In Daniel Gilbert, Susan T. Fiske, Gardner Lindzey, eds., *The Handbook of Social Psychology*, fourth edition, pp. 151-192.

Cislaghi, Ben, Diane Gillespie, and Gerry Mackie. 2014. *Values Deliberations and Collective Action in Rural Senegal: How Participants Respond in the Human Rights Sessions of the Tostan Community Empowerment Program.* Report for Wallace Global Fund and UNICEF. tinyurl.com/valdel, accessed 30 September 2014.

Cloward, Karisa. 2014. "False Commitments: Local Misrepresentation and the International Norms Against Female Genital Mutilation and Early Marriage." *International Organization* 68(3):495-526.

Coleman, James S. 1994. *Foundations of Social Theory.* Cambridge, MA: Belknap Press.

Collier, Jane Fishburne. 1997. *From Duty to Desire: Remaking Families in a Spanish Village.* Princeton: Princeton University Press.

CRDH, Statview, Division de la Statique de la République de Guinée. 2008. "Baseline Study on Urban Behaviors in Guinea: Conakry, Labe and Faranah." Conakry: USAID.

DeJong, William, Shari Kessel Schneider, Laura Gomberg Towvim, Melissa J. Murphy, Emily E. Doerr, Neal R. Simonsen, Karen E. Mason, and Richard A. Scribner. 2006. "A Multisite Randomized Trial of Social Norms Marketing Campaigns to Reduce College Student Drinking." *Journal of Studies on Alcohol and Drugs* 67(6):868.

Edwards, Ruth W., Pamela Jumper-Thurman, Barbara A. Plested, Eugene R. Oetting, and Louis Swanson. 2000. "Community Readiness: Research to Practice." *Journal of Community Psychology* 28(3):291-307.

Ellickson, Robert C. 2009. *Order without Law: How Neighbors Settle Disputes*. Cambridge: Harvard University Press.

Elster, Jon. 2009. "Norms." In Peter Hedström and Peter Bearman, eds., *The Oxford Handbook of Analytical Sociology*. Oxford: Oxford University Press.

Elster, Jon. 1989. *The Cement of Society: A Study of Social Order*. New York, Cambridge University Press.

Ensminger, Jean and Joseph Henrich, eds. 2014. *Experimenting with Social Norms: Fairness and Punishment in Cross-Cultural Perspective*. New York: Russell Sage Foundation.

Feld, Scott L. 1991. " Why Your Friends Have More Friends Than You Do." *American Journal of Sociology* 96(6):1464-1477.

Finger, Elizabeth C., Abigail A. Marsh, Niveen Kamel, Derek GV Mitchell, and James R. Blair. 2006. "Caught in the Act: The Impact of Audience on the Neural Response to Morally and Socially Inappropriate Behavior." *Neuroimage* 33(1):414-421.

Fishbein, Martin and Icek Ajzen. 1975. *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Reading: Addison-Wesley. Out of print and available at http://people.umass.edu/aizen/f&a1975.html, accessed on 28 September 2014.

Fishbein, Martin and Icek Ajzen. 2010. *Predicting and Changing Behavior: The Reasoned Action Approach.* New York: Psychology Press.

Fiske, Alan Page. 2004. "Four Modes of Constituting Relationships." In Nick Haslam, ed., *Relational Models Theory*. Mahwah, New Jersey: Lawrence Erlbaum and Associates.

Gelfand, Michele J., Jana L. Raver, Lisa Nishii, Lisa M. Leslie, Janetta Lun, Beng Chong Lim, Lili Duan, et al. 2011. "Differences between Tight and Loose Cultures: A 33-Nation Study." *Science* 332(6033):1100-1104.

Gibbs, Jack P. 1965. "Norms: The Problem of Definition and Classification." *American Journal of Sociology* 70(5):586-594.

Granovetter, Michael. 1978. "Threshold Models of Collective Behavior." *American Journal of Sociology* 83 (6): 1420–1443.

Guillot, Javier. 2012. "Citizenship Culture as Public Policy." PCI – Americas Leadership Conference, San Diego, February 6th, 2012. Center on Behavior and Culture, Corpovisionarios, Bogotá.

Habyarimana, James, Macartan Humphreys, Daniel N. Posner, and Jeremy M. Weinstein. *Coethnicity: diversity and the dilemmas of collective action*. Russell Sage

Foundation, 2009.Hayford, Sarah R. 2005. "Conformity and Change: Community Effects on Female Genital Cutting in Kenya." *Journal of Health and Social Behavior* 46(2):121-140.

Head, Katharine J. and Seth M. Noar. 2014. "Facilitating Progress in Health Behaviour Theory Development and Modification: The Reasoned Action Approach as a Case Study." *Health Psychology Review* 8(1):34-52.

Heise, Lori. 2011. *What Works to Prevent Partner Violence? An Evidence Overview*. London School of Hygiene and Tropical Medicine, http://www.oecd.org/derec/49872444.pdf, accessed 29 September 2014.

Hogg, Michael A. and Scott A. Reid. 2006. "Social Identity, Self-Categorization, and the Communication of Group Norms." *Communication Theory* 16(1):7-30.

Hurley, Susan. L. and Nick Chater. 2005. *Perspectives on Imitation : From Neuroscience to Social Science*. Cambridge, MA: MIT Press.

Kar, Kamal and Robert Chambers. 2008. "Handbook on Community-Led Total Sanitation." London: Plan International UK.

Kok, Gerjo, and Robert A.C. Ruiter. 2014. "Who Has the Authority to Change a Theory? Everyone! A Commentary on Head and Noar." *Health Psychology Review* 8(1):61-64.

Kristof, Nicholas. 2012. "Obama's Fantastic Boring Idea." *The New York Times*, July 11.

Krupka, Erin L. and Roberto Weber. 2008. "Why Does Dictator Game Sharing Vary? Identifying Social Norms in the Laboratory." Working Paper.

Krupka, Erin, Roberto Weber, and Rachel Croson. 2008. "When in Rome: Identifying Social Norms as a Group Phenomenon." Working Paper.

Kuran, Timur. 1997. *Private Truths, Public Lies: The Social Consequences of Preference Falsification*. Cambridge: Harvard University Press.

Lapinski, Maria Knight and Rajiv N. Rimal. 2005. "An Explication of Social Norms." *Communication Theory* 15(2):127-147.

Lewis, David K. 1969. *Convention: A Philosophical Study*. Cambridge: Harvard University Press.

Lieberman, Matthew D. 2013. *Social: Why our brains are wired to connect*. Oxford: Oxford University Press.

Mabsout, Ramzi, and Irene Van Staveren. 2010. "Disentangling Bargaining Power from Individual and Household Level to Institutions: Evidence on Women's Position in Ethiopia." *World Development* 38(5):783-796.

Mackie, Gerry. 1996. "Ending Footbinding and Infibulation: A Convention Account." *American Sociological Review* 61(6):999-1017.

Mackie, Gerry. 2000. "Female Genital Cutting: The Beginning of the End." In B. Shell-Duncan and Y. Hernlund, *Female Circumcision: Multidisciplinary Perspectives*. Boulder, CO: Lynne Reinner Publishers, 245-282.

Mackie, Gerry. 2009. "More Effective and Less Effective Programs to Abandon Harmful Practices in Five Countries." *UNICEF Innocenti Research Centre*, Florence Italy. http://www.polisci.ucsd.edu/~gmackie/documents/MoreEffectiveLessEffective.pdf accessed 30 September 2014.

Mackie, Gerry. 2015. "Effective Rule of Law Requires Construction of a Social Norm of Legal Obedience." In Carlo Tognato, ed., *Cultural Agency Reloaded: The Legacy of Antanas Mockus* (Cambridge: Harvard University Press).

Manning, Mark. 2009. "The Effects of Subjective Norms on Behaviour in the Theory of Planned Behaviour: A Meta-Analysis." *British Journal of Social Psychology* 48(4):649-705.

McAdams, Richard H. and Eric B. Rasmusen. 2007. "Norms and the Law." *Handbook of Law and Economics* 2:1573-1618.

McAdams, Richard. H. 1997. "The Origin, Development, and Regulation of Norms." *Michigan Law Review* 96(2):338-433.

Michie, Susan, Lou Atkins, and Robert West. 2014. *The Behaviour Change Wheel: A Guide to Designing Interventions.* Great Britain: Silverback Publishing.

Michie, Susan, Michelle Richardson, Marie Johnston, Charles Abraham, Jill Francis, Wendy Hardeman, Martin P. Eccles, James Cane, and Caroline E. Wood. 2013. "The Behavior Change Technique Taxonomy (V1) of 93 Hierarchically Clustered Techniques: Building an International Consensus for the Reporting of Behavior Change Interventions." *Annals of Behavioral Medicine* 46(1): 81-95.

Mockus, Antanas. 2002. " Co-Existence as Harmonization of Law, Morality and Culture." *Prospects* 32(1):19-37.

Montaigne, Michel. 1993. *The Complete Essays*, translated by M.A. Screech. London: Penguin Books.

Moody, Anne. 1968. *Coming of Age in Mississippi*. New York: Dial.

Nado, Jennifer, Daniel Kelly, and Stephen Stich. 2009. "Moral Judgment." *The Routledge Companion to Philosophy of Psychology.* Milton Park: Routledge.

Narayan, Deepa, Robert Chambers, Meera K. Shah, and Patti Petesch. 2000. *Voices of the Poor: Crying out for Change.* New York: Oxford University Press for the World Bank.

Narayan-Parker, Deepa, ed. 2005. *Measuring Empowerment: Cross-Disciplinary Perspectives.* Washington, D.C.: World Bank.

Page, Scott E. 2007. *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies.* Princeton: Princeton University Press.

Paluck, Elizabeth Levy and Hana Shepherd. 2012. "The Salience of Social Referents: A Field Experiment on Collective Norms and Harassment Behavior in a School Social Network." *Journal Of Personality And Social Psychology* 103(6):899.

Paluck, Elizabeth Levy and Laurie Ball. 2010. *Social Norms Marketing Aimed at Gender Based Violence: A Literature Review and Critical Assessment.* International Rescue Committee.

Paluck, Elizabeth Levy. 2009. "Reducing Intergroup Prejudice and Conflict Using the Media: A Field Experiment in Rwanda." *Journal of Personality And Social Psychology* 96(3):574.

Parker, W., & Makhubele, M.B. . 2010. "Threads of Violence against Women in South Africa: Findings from Community Surveys in the Western Cape and Kwazulu-Natal." Cape Town, SA: Project Concern International.

Parsons, Talcott. 1951. *The Social System.* Glencoe, Ill: Free Press.

Pascale, Richard T., Jerry Sternin, and Monique Sternin. 2010. *The Power of Positive Deviance: How Unlikely Innovators Solve the World's Toughest Problems.* Boston: Harvard Business Review Press.

Perkins, H. Wesley and Alan D. Berkowitz. 1986. "Perceiving the Community Norms of Alcohol Use Among Students: Some Research Implications For Campus Alcohol Education Programming." *Substance Use & Misuse* 21(9-10):961-976.

Peterman, Amber, Tia Palermo, and Caryn Bredenkamp. 2011. " Estimates and Determinants of Sexual Violence against Women in the Democratic Republic of Congo." *American Journal of Public Health* 101(6):1060.

Pettit, Philip. 2010. "How Norms Become Normative." In Peter Cane, ed., *The Hart-Fuller Debate in the Twenty-First Century.* Hart Publishers.

Pitkin, Hanna Fenichel. 1972. *Wittgenstein and Justice: On the Significance of Ludwig Wittgenstein for Social and Political Thought.*   Berkeley, CA: University of California Press.

Prentice, Deborah A. and Dale T. Miller. 1993. "Pluralistic Ignorance and Alcohol Use on Campus: Some Consequences of Misperceiving the Social Norm." *Journal Of Personality And Social Psychology* 64(2):243.

Pritchett, Lant, and Soumya Kapoor. 2009. *Moving Out of Poverty: Success from the Bottom Up*. Washington, D.C.: World Bank.

Prochaska, James and Carlo DiClemente (1984). *The Transtheoretical Approach: Crossing Traditional Boundaries of Therapy*. Homewood, Ill., Dow Jones-Irwin.

Rajah, Sangeetha. 2014. *"*Pramana*."* http://www.hindupedia.com/en/Pramana, accessed 11 May 2014.

Rimal, Rajiv N. and Kevin Real. 2005. "How Behaviors are Influenced by Perceived Norms: A Test of the Theory of Normative Social Behavior." *Communication Research* 32(3):389-414.

Rivis, Amanda and Paschal Sheeran. 2003. "Descriptive Norms as an Additional Predictor in the Theory Of Planned Behaviour: A Meta-Analysis." *Current Psychology* 22(3):218-233.

Rogers, Everett M. 2003. *Diffusion of Innovations*, fifth edition. New York, Free Press.

Rowlands, Jo. 1997. *Questioning Empowerment: Working with Women in Honduras*. Oxfam.

Ryan, Bryce and Neal Crasilneck Gross. 1950. *Acceptance and Diffusion of Hybrid Corn Seed in Two Iowa Communities*. Vol. 372. Agricultural Experiment Station, Iowa State College of Agriculture and Mechanic Arts.

Rydgren, Jens. 2009. "Beliefs" In *Oxford Handbook Analytic Sociology*, edited by Peter Hedström and Peter Bearman, 72-93. Oxford: Oxford University Press.

Schelling, Thomas C. 1960. The Strategy of Conflict. Cambridge: Harvard University Press.

Schelling, Thomas C. 1978. *Micromotives and Macrobehavior*. New York: Norton.

Schultz, P. Wesley, Jessica M. Nolan, Robert B. Cialdini, Noah J. Goldstein, and Vladas Griskevicius. 2007. "The Constructive, Destructive, and Reconstructive Power of Social Norms." *Psychological Science* 18(5):429-434.

Schwartz, Shalom H. 1977. "Normative influences on Altruism." *Advances in Experimental Social Psychology* 10:221-279.

Schwarzer, Ralf. 2014. "Life and Death of Health Behaviour Theories." *Health Psychology Review* 8(1):53-56.

Shakya, Holly B., Nicholas A. Christakis, and James H. Fowler. 2014. "Association Between Social Network Communities and Health Behavior: An Observational Sociocentric Network Study of Latrine Ownership in Rural India." *American Journal of Public Health* 104(5):930-937.

Shell-Duncan, Bettina, Ylva Hernlund, Katherine Wander, and Amadou Moreau. 2010. "Contingency and Change in the Practice of Female Genital Cutting: Dynamics of Decision Making in Senegambia: Summary Report." Geneva: World Health Organization.

Shell-Duncan, Bettina, Katherine Wander, Ylva Hernlund, and Amadou Moreau. 2013. "Legislating Change? Responses to Criminalizing Female Genital cutting in Senegal." *Law and Society Review* 47(4):803-835.

Sniehotta, Falko F. 2009. "Towards a Theory of Intentional Behaviour Change: Plans, Planning, And Self-Regulation." *British Journal of Health Psychology* 14(2): 61-273.

Sniehotta, Falko F., Justin Presseau, and Vera Araújo-Soares. 2014. "Time to Retire the Theory of Planned Behaviour." *Health Psychology Review* 8(1):1-7.

Steup, Matthias. 2005. "Epistemology." http://plato.stanford.edu/entries/epistemology/, accessed 11 May 2014.

Storey, Douglas and Juan Schoemaker. 2006. "Communication, Normative Influence And The Sustainability Of Health Behavior Over Time: A Multilevel Analysis Of Contraceptive Use In Indonesia, 1997-2003." In *Annual Meeting of the International Communication Association.*

Storey, J. D. and E. B. Kaggwa. 2009. "The Influence of Changes in Fertility Related Norms on Contraceptive Use in Egypt, 1995–2005." *Population Review* 48(1).

Sunstein, Cass R. 1996. " Social Norms and Social Roles." *Columbia Law Review* 96(4):903-968.

Tetlock, Philip E., and Aaron Belkin, eds. 1996. *Counterfactual Thought Experiments in World Politics: Logical, Methodological, and Psychological Perspectives.* Princeton: Princeton University Press.

Tostan. 2012. *The Path Forward: Tostan Strategic Plan, 2010 – 2015.* Retrieved 29 September 2014, from

http://www.tostan.org/sites/default/files/reports/tostan%20strategic%20plan%202010%20-%202015.pdf

Trafimow, David. 1998. "Attitudinal and Normative Processes in Health Behavior." *Psychology and Health* 13(2):307-317.

Turiel, Elliot. 2002. *The Culture of Morality: Social Development, Context, and Conflict*. Cambridge: Cambridge University Press.

Ullmann-Margalit, Edna. 1977. *The Emergence of Norms*. Oxford: Oxford University Press.

UNFPA-UNICEF Joint Programme on FGM/C. 2010. "Senegal: Human Rights Key to Ending FGM/C; Legislation Is Just One Aspect of an Effective Campaign." Retrieved 30 September 2012 from http://www.unfpa.org/gender/docs/fgmc_kit/LawSenegal.pdf.

UNICEF. 2009. "Community Approaches to Total Sanitation." UNICEF DPP Field Notes. Retrieved 30 September 2012 from http://www.unicef.org/innovations/files/CATS_field_note.pdf

UNICEF. 2010. *The Dynamics of Social Change: Towards the Abandonment of Female Genital Mutilation/Cutting in Five African Countries*. Florence: UNICEF Innocenti Research Centre.

UNICEF. 2012. "Early Recovery Scaling Up of Rural Sanitation in Flood Affected Districts", Monthly Monitoring Report, September. WASH Programme, UNICEF Pakistan.

UNICEF. 2013. *Female Genital Mutilation/Cutting: A Statistical Overview and Exploration of the Dynamics of Change*. New York: UNICEF.

Valente, Thomas W. 2010*. Social Networks and Health : Models, Methods, and Applications.* New York: Oxford University Press.

Valente, Thomas W. and Patchareeya Pumpuang. 2007. "Identifying Opinion Leaders to Promote Behavior Change." *Health Education & Behavior* 34(6):881-896.

Warner, Stanley L. 1965. "Randomized Response: A Survey Technique for Eliminating Evasive Answer Bias." *Journal of the American Statistical Association* 60(309): 63-69.

Wechsler, Henry, Toben F. Nelson, Jae Eun Lee, Mark Seibring, Catherine Lewis, and Richard P. Keeling. 2003. "Perception and Reality: A National Evaluation of Social Norms Marketing Interventions to Reduce College Students' Heavy Alcohol Use." *Journal of Studies on Alcohol and Drugs* 64(4):484.

Wiium, Nora, Torbjørn Torsheim, and Bente Wold. 2006. "Normative Processes and Adolescents' Smoking Behaviour in Norway: A Multilevel Analysis." *Social Science and Medicine* 62(7):1810-1818.

Wydick, Bruce. 2008. *Games in Economic Development.* New York: Cambridge University Press.

Zou, Xi, Kim-Pong Tam, Michael W. Morris, Sau-lai Lee, Ivy Yee-Man Lau, and Chi-yue Chiu. 2009. "Culture as Common Sense: Perceived Consensus versus Personal Beliefs as Mechanisms Of Cultural Influence." *Journal Of Personality and Social Psychology* 97(4):579.

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