COOPERATIVE BEHAVIOR ADOPTION GUIDE

Applying Behavior-Centered Design to Solve Cooperative Dilemmas

Phase 1
Generating
Collective Demand

Phase 2
Coordinating
a Shift in Behavior

Phase 3
Strengthening
the New Norm

I THINK WE SHOULD

I THINK YOU THINK WE SHOULD

I THINK YOU WILL

I THINK YOU WILL KNOW IF

I THINK I HAVE NO EXCUSE NOT TO

SUSTAINABLE COOPERATIVE BEHAVIOR
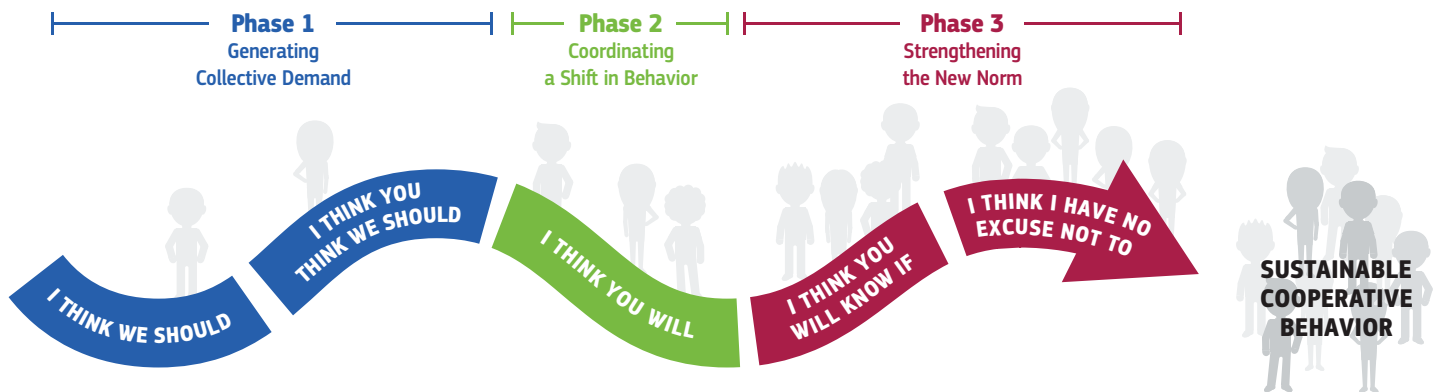
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Cooperative Behavior Adoption Guide: Applying Behavior-Centered Design to Solve Cooperative Dilemmas

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How can this guide help me?

This guide is designed to help practitioners apply the latest behavioral science to solve cooperative dilemmas. This guide applies the Behavior-Centered Design (BCD) approach, which blends behavioral science with design thinking, to walk you through the development of your own solutions to cooperative challenges. If you are new to designing behaviorally informed solutions, learn more about the BCD approach at behavior.rare.org.

The goals of this guide are to:

- Introduce you to the Theory of Cooperative Behavior Adoption (TCBA) and Behavior-Centered Design (BCD);
- Help you assess whether your environmental challenge is a cooperative dilemma;

- Guide you in developing your own behavior change intervention for each of the three phases of the TCBA; and
- Provide examples of successful past interventions.

Introduction to cooperative dilemmas

Many of the challenges involving both humans and the environment are cooperative dilemmas. While these dilemmas take on many names, such as public goods problems, tragedies of the commons, and common pool resource problems, the underlying dynamic is the same: the action that is best for the individual is different than that which is best for the group.

The problems in this domain are nearly endless. Take overfishing. Each individual fisher does better catching as many fish as they can. But when all fishers fish this way, it depletes the fishery to such an extent that the remaining fish cannot replace those that were lost fast enough, and the system collapses. Although on the surface it may appear different, that exact same dynamic is at play when we consider air pollution from cars. Individually, each driver does well driving their car as much as they would like, as their emissions have rather little effect on them directly. But in many cities, the combined effect of such overwhelming emission levels are undermining the health of the entire community. We can even see this same dynamic at play with guests in national parks. While everyone is better able to appreciate the natural beauty of the park if all guests follow Leave No Trace principles, each individual guest might prefer stepping off the trail or picking flowers for themselves.

As difficult as these problems seem, they are not insurmountable. Recent research in the behavioral sciences has revealed a series of key beliefs that, when changed, can move a community to act cooperatively. By combining these insights from research and the experience of environmental practitioners, we developed the three-phase Theory of

Cooperative Behavior Adoption for shifting groups and communities to these cooperative outcomes.

The first phase is **generating collective demand**. For a community to collectively demand change, it means that the members of that community hold two key beliefs: (1) they believe that everyone should change their behavior because it is the right thing to do, and (2) they also believe that everyone else in their community thinks that they should change. While collectively demanding change is the critical first phase in the process of changing to a cooperative outcome, alone it is insufficient to result in behavior change. This is because, even if people want the change, they will only be willing to change to a cooperative behavior if they believe those around them will change as well.

This requires the second phase of the behavior change process: **coordinating a shift in behavior**. Coordination can only be achieved if all the members come to the conclusion that everyone around them will be changing their behavior at the same time. By changing this belief, and there being sufficient collective demand from Phase 1, the community will change their behavior. But this new norm will be unstable. Any shock to the community might be enough to drive them back to the uncooperative behavior.

For the new norm to stick, we need to move to the final phase in the process of **strengthening the new norm**. This strengthening is done through activities that lead community members to adopt two final key beliefs if they were to violate the new norm: (1) they believe that others in the community would find out, and (2) those others would not accept any excuse for violating the norm.

While these three phases are supported by a host of behavioral science research, we still need to use a designer's eye to see how these can be applied in the real world. We therefore apply the Behavior-Centered Design (BCD) approach, which blends behavioral science and design thinking. This guide takes you through each step of the BCD journey to develop your own behaviorally-informed solution to cooperative dilemmas. You will find a host of examples from conservation and beyond to inspire your own solution ideas.

## Theory of Cooperative Behavior Adoption
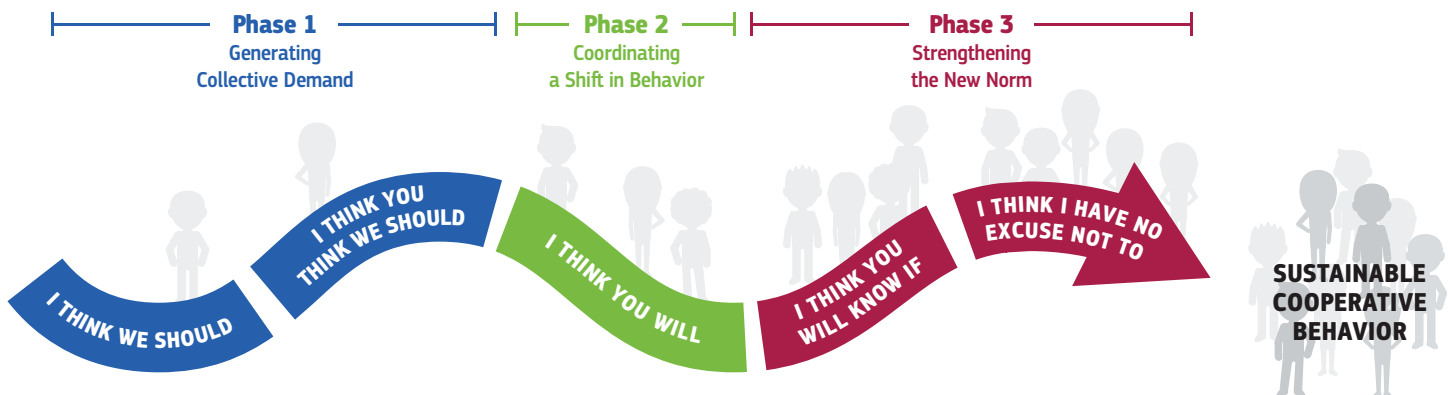
Designing your solution to cooperative dilemmas

In this section, we go through the first four steps of the Behavior-Centered Design Journey to develop your solution for a cooperative dilemma.

These steps include:

- **Frame**, identifying the relevant target behaviors, actors, and context of your environmental challenge, including whether the target behavior is a cooperative dilemma;
- **Empathize**, gaining relevant insights into the actors' motivations, barriers, and experiences;

- **Map**, connecting and analyzing those insights to develop behaviorally-informed hypotheses; and finally
- **Ideate**, brainstorming novel solutions that apply the TCBA to your environmental challenge.

1. FRAME

2. EMPATHIZE

3. MAP

4. IDEATE

6. TEST

5. PROTOTYPE

7. LAUNCH

8. ASSESS
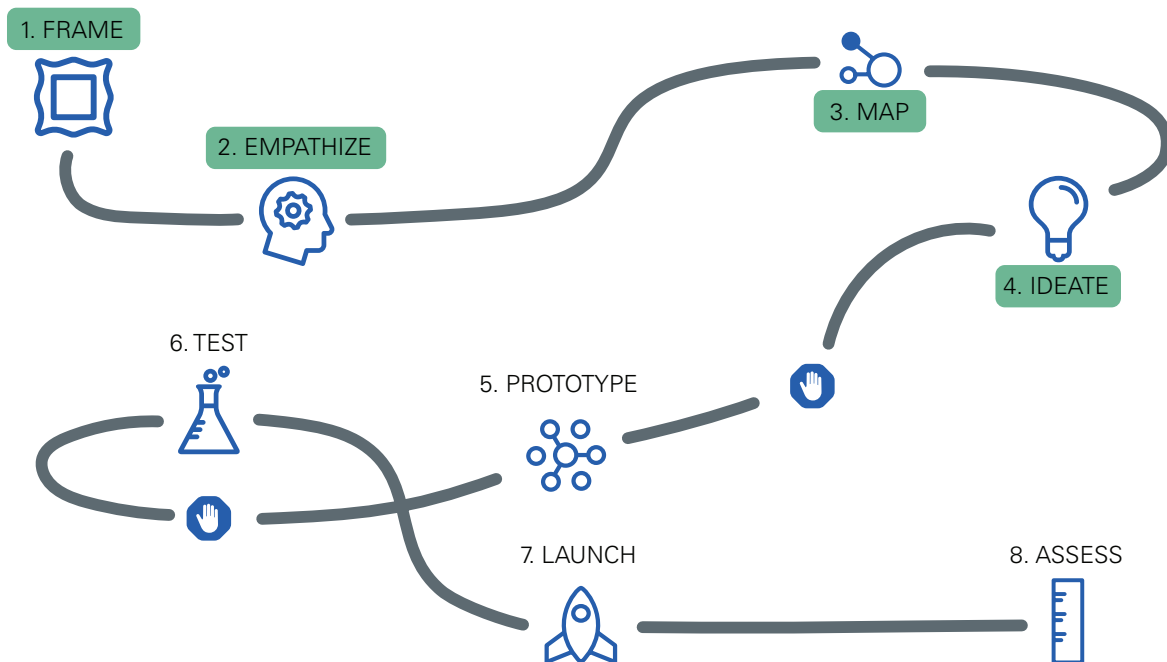
Design Step 1: Frame

In this step, you will define your target behavior, the target actors, and relevant context of your environmental challenge, and then evaluate whether your behavior fits in the cooperative dilemma framework.

You first need to isolate what is the specific behavior that needs to change to result in your desired environmental and social outcomes. It is important that this is specifically a behavior, an action or lack thereof, rather than a belief or attitude. You then need to identify who it is that needs to engage in this behavior. Typically, this is not an entire community. For example, in the case of fishery management, this actor may be fishers in the community, but not the community at large.

Distinguishing between attitudes, beliefs, and behaviors

In BCD, we create programs to change behavior. It is therefore important that when we are specifying our target behavior, we are clear on what that is.

Holding a **belief** means asserting something is true. For example, that believing fish populations will increase if people respect the reserve area.

Holding an **attitude** means asserting something is positive or negative. For example, believing that it is bad to fish in the reserve.

However, neither of these are **behaviors**, or actions one can perform in the world, such as only fishing outside the reserve. While beliefs and attitudes can motivate behaviors, they are separate from specifying the behavioral target.

Next, you will need to evaluate whether your behavior is in fact causing a cooperative dilemma. A cooperative dilemma has two main elements. ① Each actor must individually do better by doing the uncooperative behavior, regardless of what everyone else does. ② As a group, all the actors do better if everyone does the cooperative behavior as compared to everyone doing the uncooperative behavior.

This seeming contradiction is the tension between what is best for each individual and what is best for the group as a whole.

COOPERATIVE DILEMMA

The distinction between those two elements can be confusing, so let's look at an example. In fisheries management, reserve areas are often maintained where no one is allowed to fish. These areas allow fish to repopulate, which in turn can lead to higher catch for all the fishers collectively, assuming all the fishers respect the rules and don't fish in the reserve. But individually, each fisher does better if they fish inside the reserve, as that is where the highest concentration of fish exists. Let's evaluate this against our two criteria. Holding constant what everyone else does, each individual fisher does better if they go ahead and fish in the reserve (the uncooperative behavior). In addition, all the fishers do better off when everyone respects the reserve than if everyone fishes inside it (the cooperative behavior). That means we have met both criteria for a cooperative dilemma.

NOT A COOPERATIVE DILEMMA

Let's look at another case: upstream and downstream farmer irrigation practices. Farmers downstream benefit from upstream farmers using less water. But that benefit is not reciprocal: upstream farmers don't benefit from the water conservation of downstream farmers. In this case, it is true that each individual farmer does better drawing unsustainable amounts of water (the uncooperative behavior), meaning we meet the first criteria. However, it is not the case that each actor is better off if everyone reduces their water consumption (as compared to everyone using as much as they would like). Specifically, the upstream farmers don't benefit from everyone reducing their water consumption, because they are not affected by the behavior of the downstream farmers. Because this behavior fails the second condition, it is not a cooperative dilemma.

Now, let's look at your behavior. Does it meet both of the following two criteria?

Each actor **individually** does better by doing the uncooperative behavior, regardless of what everyone else does.

YES →

As a group, all the actors do better if everyone does the cooperative behavior as compared to everyone doing the uncooperative behavior.

YES → = **COOPERATIVE DILEMMA**

NO → = **NOT A COOPERATIVE DILEMMA**

NO → **NOT A COOPERATIVE DILEMMA**
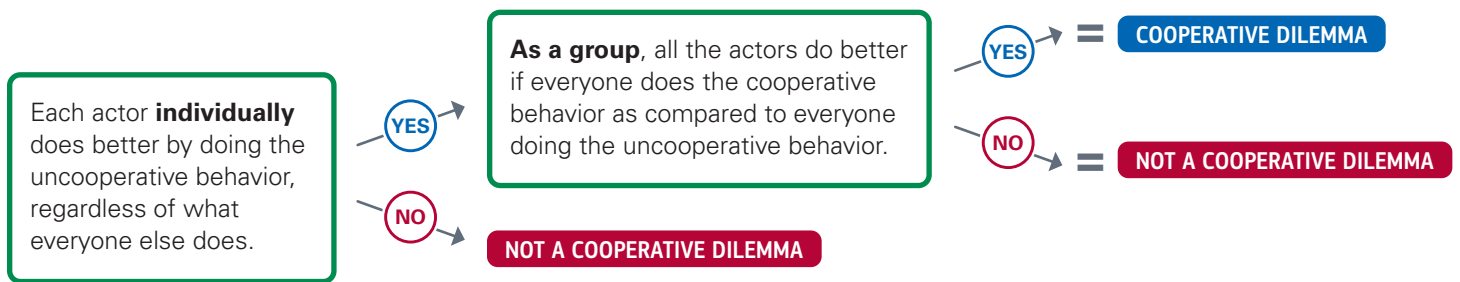
For additional resources on conducting the Frame step in BCD, including tools on behavior and actor system mapping, visit behavior.rare.org.

You are ready to move to Step 2 if you have:

☐ Identified a clear behavior

☐ Identified the relevant actors

☐ Diagnosed your behavior to be a cooperative dilemma

Design Step 2: Empathize

In this step, you develop an understanding of your target actor's motivations, barriers, and context for the target behavior.

Because we know your challenge is a cooperative dilemma, the TCBA allows you to infer the set of key motivations for adopting the cooperative behavior. As a reminder, these motivations include believing:

- People should adopt the cooperative behavior.
- Other people believe that people should adopt the cooperative behavior.
- Other people are (or soon will be) adopting the cooperative behavior.

After your target actors adopt the cooperative behavior, the TCBA also allows us to infer that the following two beliefs are key motivations for maintaining that behavior change:

- If someone violates the new norm, people will find out.
- Those people will not accept any excuse for having violated the norm.

Aside from inferring these key motivations from the TCBA, it is important to answer the following questions in your specific context to allow you to better understand how to drive adoption of your target behavior.

- **In what other contexts does this community of actors solve cooperative dilemmas?**
  For example, the community might already cooperatively assist in constructing one another's houses. This can be used in later programming to help you analogise your target behavior to other cooperative behaviors in the community.
- **With what identities and values do your target actors strongly associate, and attach to their reputation?**
  For example, fishers may value their reputation and identity as professional fishers. These can be leveraged by linking the target cooperative behavior to those identities.
- **What action knowledge or material resources do your target actors require for them to adopt your target behavior?**
  For example, fishers might not own legal gear, making it impossible to abide by fishery rules. Understanding these barriers will allow you to assess what other inputs are needed to facilitate your behavior change outside of the TCBA.
- **Of whom in your community of actors are other actors most likely to imitate the behavior?**
  For example, fishers might be most likely to imitate those who have previously had the largest catch. This can be used to most efficiently convert the behavior of your community of actors by ensuring your targeting the most influential members.
- **What is the most compelling unit for understanding the benefit of cooperation for your target actors?**
  For example, while the improvement fishers experience by the entire community not fishing in the reserve area may technically be in terms of kilograms of fish caught, fishers may find this expressed as being able to feed their

family to be more emotionally compelling.

- **What excuses might people give for doing the uncooperative behavior, even if everyone else was cooperating?**
  For example, if a fisher was asked why they were fishing in the reserve area, they might say that they didn't know where the boundaries of the reserve area are. It will be key for your intervention to eliminate these possible excuses.

Beyond these specific questions, it is critical for understanding the behavioral journey that your actors currently go through to result in their choosing the uncooperative behavior. This behavioral journey involves mapping out all beliefs and decisions that an actor holds in various contexts which culminate them taking on the uncooperative behavior.

For additional guidance on conducting interviews and surveys and developing behavioral journeys in the Empathize step in BCD, refer to behavior.rare.org.

You are ready to move to Step 3 if you have:

☐ Answered the questions above for your target behavior

☐ Constructed a behavioral journey to understand the process actors go through in engaging in the uncooperative behavior or the cooperative alternative

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Design Step 3: Map

In this step of the BCD process, you connect the insights you learned from the Empathize step to behavioral science and develop hypotheses about what could motivate the adoption of your target cooperative behavior. A hypothesis is an explicit statement that describes if something (such as a belief, context, etc.) were to be different, that some behavioral outcome would change.

Because your challenge is a cooperative dilemma, we can carry through that same set of beliefs about cooperative behaviors to develop behavioral hypotheses about motivating adoption of your target behavior. In this context, a behavioral hypothesis is a statement about how holding a particular belief influences an actor's behavior.

First, as described in the Empathize step, we can infer the following hypothesis about adopting cooperative behaviors:

Actors adopting the following beliefs will result in actors adopting the cooperative behavior:

- People should adopt the cooperative behavior.
- Other people believe that people should adopt the cooperative behavior.
- Other people are (or soon will be) adopting the cooperative behavior.

Second, we can also infer the following hypothesis about maintaining cooperative behaviors

Actors adopting the following beliefs will result in actors maintaining the cooperative behavior:

- If someone violates the new norm, people will find out.
- Those people will not accept any excuse for having violated the norm.

Additionally, you may develop secondary behavioral hypotheses to aid in the development of your intervention based on other data you collected in your Empathize step. For example, if you concluded that your actors needed particular knowledge to adopt the cooperative behavior, you should include that as one of your hypotheses for what is required for your target actors to change.

You are ready to move to Step 4 if you have:

☐ Reframed each of the hypotheses inferred from the TCBA for your behavior

☐ Listed any additional hypotheses you can infer from your findings in the Empathize step

Design Step 4: Ideate

In this step of the BCD process, you develop your own intervention applying the TCBA to your cooperative dilemma. The TCBA outlines three phases for an intervention addressing a cooperative dilemma: generating collective demand, coordinating a shift in behavior, and strengthening the new norm. In this section, we provide examples from solutions to cooperative dilemmas showcasing each of these phases, and present you with key questions to answer in the development of your own.

Solution Phase 1: Generating Collective Demand

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├────── Phase 1 ──────┤
        Generating
     Collective Demand
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I THINK WE SHOULD

I THINK YOU THINK WE SHOULD
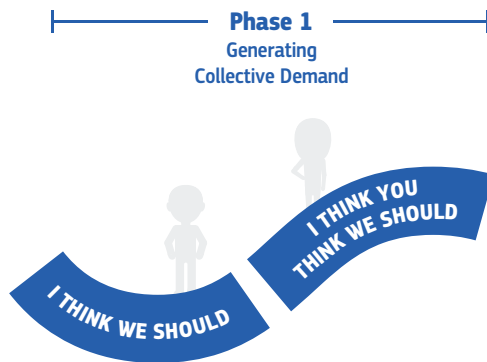
When first working with your target actors, you are unlikely to find they have collective demand for change. Collective demand has two components: each actor thinking that everyone should adopt the cooperative behavior, and each actor believing that the other actors believe so as well. Intervention elements at this phase should aim to shift those two beliefs in order to generate collective demand within a community.

The first belief is normally cultivated by helping actors recognize that they are in a cooperative dilemma, where they are either hurt or helped by the action of others. The second is achieved by getting people to publicly discuss their newfound belief that people should adopt the cooperative behavior. Here are examples of activities that foster these two beliefs in Rare's Fish Forever program and Community-Led Total Sanitation:

The Fish Game of Rare's Fish Forever Program

The Fish Forever program aims to drive fishers to abstain from fishing in reserve areas, which in turn allow fish stocks to regenerate and the entire community to benefit. However, before this shift can take place, the program needs to cultivate collective demand, where fishers believe that it is wrong to fish in the reserve, and that other fishers think so as well. Fish Forever generates these beliefs through a series of activities which focus on showing, in a compelling and emotional way, how each fisher's catch depends on the actions of other fishers, and giving the space to express these reactions publically to other fishers. One key activity for doing this is the Fish Game.

In the fish game, each fisher takes on the role of a fisher in their own community. Through the game's multiple rounds, fishers experience how their catch is influenced not only by their own fishing, but by those around them. They see firsthand how, when people fish in the reserve, everyone's catch decreases. But when everyone respects the rules of the fishery, their catch go up. Fishers also see how each fisher pursuing their own self interest might choose to fish in the reserve, but how this damages everyone else. The game is expressed in terms of them being able to feed their family or not, making it particularly emotionally evocative.

By seeing how one's own catch depends on others cooperating, fishers naturally come to think that it is wrong to fish in the reserve (the first critical belief). This game is not played in isolation, but instead played with other fishers in the community. Throughout the game, fishers are encouraged to discuss what they think and feel. As the fishers tell each other how they think it would be wrong to fish in the reserve, the participants then also learn that other fishers also believe it is wrong to fish in the reserve (the second key belief). In this way, the game builds collective demand by increasing both elemental beliefs.

Triggering Events in Community-Led Total Sanitation

Photo by Jamie Myers

Open defecation presents a persistent public health hazard in many low income countries. Community-Led Total Sanitation programs aim to drive community-wide shifts from open defecation to latrine use. Latrine construction is a very large expense for many members of the target population, meaning that building community-wide collective demand is a critical first phase. Community Led-Total Sanitation programs do that through various triggering activities, which lead community members to adopt the belief that people should use toilets, and that everyone else in the community believe so as well.

Triggering can come in a variety of forms. One activity involves having members of the community cook traditional dishes. Feces is then collected from local defecation sites. Both the food and feces are placed side-by-side in the village center and a community event is called. Once community members arrive, they are encouraged to observe the flies moving back and forth between the feces and food. This evokes a strong negative emotional reaction, which the facilitator points out is exactly what is happening in the community right now, with flies moving from defecation sites to their own cooking. A similar activity can be conducted with feces collected at a defecation site and a glass of water. A hair is dragged across the feces, then dipped into the glass of water. The facilitator asks if anyone wishes to drink the water. This similarly evokes a strong emotional reaction, which the facilitator maps on to this actually being the state of their local drinking water.

These triggering activities lead each member to adopt the strong emotionally driven reaction that it is wrong for people to defecate in the open, and that people should use toilets, the first critical belief. The facilitators of these activities then ask participants to express these reactions to the other members of the community present. After having this conversation, members across the community learn that others also think they should give up open defecation, the second critical belief. In this way, these activities generate collective demand for toilet use throughout the community.

Generating collective demand in your own intervention

IN ORDER TO GENERATE COLLECTIVE DEMAND, YOU NEED TO ANSWER THE TWO KEY QUESTIONS FOR THIS PHASE FROM THE TCBA:

- How do I get people to believe that they should adopt the cooperative behavior?
- How do I get people to believe that everyone around them believes they should adopt the cooperative behavior?

COMMON SUCCESS FACTORS:

- **Conveys the information that others' actions are affecting the actor in an emotionally compelling way.** Simply explaining facts is almost never enough to generate collective demand. The activities need to be expressed in such a way that the participant actors can clearly feel the effects on an emotional level, making them care about what others should do.
- **Convenes many actors together.** It is very difficult to achieve the second critical belief, getting actors to believe that others also think they should do the cooperative behavior, if activities are administered to individuals. Instead, it is best to involve as many actors at the same time, making it easier to promote updating that second belief.
- **Specifically encourages discussion among actors.** It is a mistake to assume that simply by changing actors' beliefs that the other actors will find out about it. Instead, activities need to have discussion built into them to ensure this exchange happens.

TIPS FOR LOCALIZATION:

In developing your own interventions, you will need to rely on your understanding of the community you are working within to find the most appropriate method of updating these beliefs. The information you collected in the Empathize step and further developed in the Map step is valuable in doing so. For example, your understanding of the most compelling outcome to express the benefits of cooperation in is critical for messaging during this part of the intervention. Similarly, understanding other cooperative dilemmas that this community has solved allows you express this new challenge in terms of that previously solved situation, allowing for actors to see the parallels and therefore more easily imagine a resolution.

Solution Phase 2:
Coordinating a Shift in Behavior

Phase 2
Coordinating
a Shift in Behavior

I THINK YOU WILL

While the community at this point will have collective demand for change, demand alone is unlikely to drive that shift. This is because people are conditional cooperators: they will only start cooperating if those around them are doing so. This means that the target actors need to shift their behavior at the same time as one another. Intervention components in this phase should therefore aim to shift the belief that other actors are, or soon will be, taking up the cooperative behavior. Here are examples of developing this belief in Rare's Fish Forever Program, as well as the Swedish Government's program to shift to driving on the right hand side of the road.

EXAMPLE

Public pledges in Rare's Fish Forever Program

While at this point in the Fish Forever program actors are collectively demanding change, that does not mean any change will happen. That is because despite this demand, all the fishers know that everyone is still fishing wherever they would like. And because changing their own behavior depends on believing others will do so as well, they will not change without the ability to coordinate that shift.

The Fish Forever program provides the opportunity to coordinate that shift through events like public pledges. At these pledge events, attended by nearly all the fishers in the community, each fisher comes forward and states that from this point forward, they will no longer fish in the reserve area. While each pledge is important for changing that individual fisher's behavior, what is far more important is the fact that each fisher observed everyone else make the same pledge. This leads each fisher to adopt the belief that everyone is changing together, giving them license to do the same.

EXAMPLE

Legal changes in Sweden for coordinating a shift to drive on the right

Photo by Jan Collsiöö

We often think of legal regimes as being important for shifting material incentives, making antisocial behavior costly by levying punishment. However, when trying to drive cooperative behavior, laws can also be used as part of an intervention as a coordinating device, allowing people to believe that, at some specific point in time, everyone's behavior will change in a predictable way. Knowing that everyone else's behavior will change at the same time allows each person to change their own behavior with the comfort that they will not be alone in doing so.

An excellent example of legal regimes being used for coordinating behavior change is the Swedish Government's Dagen H campaign and accompanying legislation to switch Sweden from driving on the left to the right. When Sweden passed their right-hand drive legislation, they set a specific date and time, September 6, 1967, at 5 am, as "Dagen H" or "H Day," as the time to shift behavior synchronously. Through a four-year educational campaign, every Swede was made aware of this synchronized shift and came to believe that everyone else in the country would be shifting at the same time. The campaign was therefore successful not due to the penalties under the new law, but due to convincing each target actor that all the other actors would be acting in the same way at the same time.

Generating collective demand in your own intervention

IN ORDER TO COORDINATE A SHIFT IN BEHAVIOR, YOU NEED TO ANSWER THE FOLLOWING KEY QUESTION FROM THE TCBA:

- How do I get people to believe that all the other actors will be changing their behavior at the same time?

COMMON SUCCESS FACTORS:

- **Broadcasts the fact that everyone else plans on changing their behavior to all relevant actors.** Everyone needs to have common knowledge of everyone's plan to change. That is to say, not only do people need to know that everyone plans to change, but they need to know that everyone knows that everyone knows of everyone's plan

to change, and so on. This can be achieved by convening everyone together, or messaging so intensively that everyone knows that everyone else has observed the same messages.

- **Makes a precise behavioral ask.** Commitments are ineffective if they are so general that it is not clear whether or not someone is violating them, as no one will know what they can rely on anyone else doing. For example, stating, "I will not fish in the reserve area from this point on," is specific in time and behavior. Stating, "I will care for the health of the fishery," is not.

TIPS FOR LOCALIZATION:

In designing your own intervention, you will need to decide how you can incorporate both of these principles into your intervention based on your

understanding of the local context. For example, building your coordination on top of existing community-wide meetings or communication channels you identified in the Empathize step will increase its chance of success. You will also need to ensure that your behavioral ask corresponds to the specific behavior your developed in the Frame step in a way that there is no ambiguity among your target actors. Finally, it is critical that you only launch this phase once you are certain you have achieved sufficient collective demand within the community and can therefore convincingly message that people will shift their behavior. If you "misfire" your coordination and are unable to convince your target actors that others will be changing, it will be incredibly difficult to convince them again in the future.

Solution Phase 3: Strengthening the new norm

Phase 3
Strengthening the New Norm

I THINK YOU WILL KNOW IF

I THINK I HAVE NO EXCUSE NOT TO
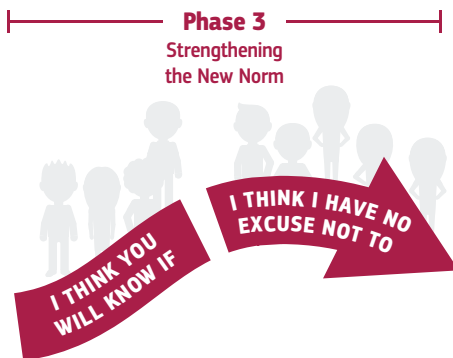
After coordinating the shift in behavior, the actors have started to act cooperatively. However, this level of cooperation is what might call unstable. Any shock to the actors is liable to drive them back to their uncooperative, individually beneficial behavior. To prevent this, the TCBA prescribes increasing two final key beliefs. The first is ensuring that everyone believes that, if someone were to violate the new norm, that others would find out. The second is believing that if others find out that they violated the new norm, they would not accept any excuse for the uncooperative behavior. We will look at intervention

activities targeting each of those beliefs in Rare's Fish Forever program, the Immunity Charm Program, and the Keheala Program.

EXAMPLE

Community-Based Patrols in Rare's Fish Forever Program

To cultivate the belief that people will find out if a fisher takes from the reserve area, fishers are encouraged to organize into voluntary sea patrols. While these patrols often lack the legal authority to arrest those who fish in the

reserve, they do observe these violations and can report them, both to authorities but even more importantly, to the rest of the community. This leads fishers to believe that if someone were to fish in the reserve, others would likely find out. Importantly, the fisher is not only influenced by thinking that they would be observed, but also by knowing that their fellow fishers would likely be observed and that they would therefore not fish in the reserve.

Charm Bracelets in the Immunity Charm Program

Photo provided by Daniel Carucci, Immunity Charm

In many low income countries, getting your child all the necessary vaccinations is an individually costly process, requiring many often difficult journeys to the doctor in the first years of a child's life. But the benefits of vaccination are not confined to the child receiving the vaccination: all the children who interact with the vaccinated child also benefit from the lowered risk of exposure. This means that every parent has an interest in those around their child being vaccinated.

However, vaccination is usually a private behavior, where no one knows whether or not a particular child is vaccinated. The Immunity Charm program makes that private behavior public through the use of Charm Bracelets. Through a rich understanding of the actor's context, the program developers identified that children often wore bracelets to ward off bad influences. Building on this existing practice, they created a bracelet which indicated all the vaccines a child had received, and was updated with an additional bead each time the child received a new vaccination.

This practice has obvious benefits for health workers, who are often working without the health records of their young patients. But perhaps far more importantly, these bracelets make it obvious to everyone in the community which children have and have not received vaccinations. This means that vaccination is now observable: if people do (or do not) vaccinate their children, those around them will find out.

Buoy Markers in the Fish Forever Program

For the norm to stick, it is not only important for people to believe that others will find out if they break the norm, but also that they will have no excuse for doing so. What these excuses might be are quite particular to the particular cooperative dilemma. For example, it is common for fishers caught fishing in reserve areas to say that they did not know where the boundary of the reserve is. One common solution to this challenge is to put up buoys, which mark the edge of the reserve area. While these buoys help fishers know where the edge of the reserve area is, their far more important purpose is in removing the excuse for fishing in the reserve. You can not say you do not know where the reserve is if you had to pass a giant orange buoy to get in.

Text Reminders in the Keheala Program

Photo provided by Jon Rathauser, Keheala

Tuberculosis is a highly communicable and deadly disease. It is also quite responsive to treatment, but that treatment takes months of adherence to a debilitating cocktail of drugs. Keheala is a mobile phone based program to encourage strong

adherence, both increasing successful treatment rates while also limiting the spread of the disease.

Keheala specifically designed their reminders to not only deliver critical information on when to take which medicine when, but also eliminate any excuse for not taking the medicine. They did this by not only sending what medicine needed to be taken at that time, but also requiring a response from the patient saying they had taken their medicine. If they did not respond, patients were sent additional reminders.

If they did not respond to those reminders, they received a phone call from a support sponsor to check-in. By requiring a response rather than just sending the reminder, Keheala eliminated the excuse for not taking the medicine of having missed the message, because you can not say you missed the message if you had to send a reply.

Strengthening the norm in your own intervention

IN ORDER TO GENERATE COLLECTIVE DEMAND, YOU NEED TO ANSWER THE TWO KEY QUESTIONS FROM THE TCBA:

- How do I get people to believe that if they violate the norm that people will find out?
- How do I get people to believe that if people find out they violated the norm, others won't accept any excuse for having done so?

COMMON SUCCESS FACTORS:

- **Builds signals out of existing cultural infrastructure.** When designing indicators of (non-) cooperation, it is always better to build on existing customs rather than trying to create entirely new ones. This allows for the indicators required for signalling cooperation to be far more readily adopted within the community.

- **Eliminates the most commonly given excuses for engaging in the uncooperative behavior.** Based on a firm grasp of the community, the designers were able to target their excuse elimination to those most commonly given by the target actors, thereby having the largest effect.

- **Any monitoring and social enforcement is conducted by members of the community.** While there is often an urge to impose external costs and benefits to cooperation, the most effective monitoring and social influence comes from the community itself, as it is most likely to be recognized as legitimate by the target actors.

TIPS FOR LOCALIZATION:

To build out your intervention, you will need to tailor these to fit your behavior and social context. For example, you will have to consider how monitoring is currently conducted among your target actors, and how you can leverage that existing cultural infrastructure to aid in your intervention. You should also refer back to the information you developed in your Empathize step, including what reasons are most commonly given for engaging in the uncooperative behavior, to ensure that those reasons are not available as excuses after your intervention has been implemented.

You are ready to move to Steps 5, 6, 7, and 8 of BCD if you have:

- ☐ Developed intervention component ideas for generating collective demand
  - ☐ Coordinating a shift in behavior
  - ☐ Strengthening the norm
  - ☐ Any other critical hypotheses you developed in the Map step
- ☐ Each of these intervention components are precisely targeting the key beliefs supporting each phase of the cooperative behavior adoption process
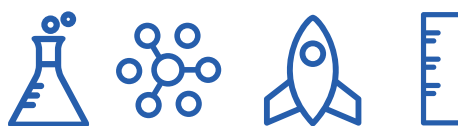
Design Step 5, 6, 7, and 8: Prototype, Test, Launch, and Assess

After you have developed your ideas for intervention, the next four steps of the BCD journey involve building a prototype, testing that prototype with your target actors, launching the intervention, and assessing and monitoring its impact. While these steps are not specific to cooperative dilemmas, executing them properly is critical for a successful intervention. For more guidance on performing each of these steps, please join the BCD learning community at behavior. rare.org.

Summary Checklist

Below is a checklist that summarizes the key outputs for each of the first four steps of the BCD process applied to cooperative challenges. You can use this checklist to ensure that, as you develop your solutions, you are developing the core outputs for each step.
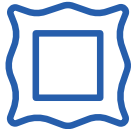
Step 1: Frame

- ☐ Identified a clear behavior
- ☐ Identified the relevant actors
- ☐ Diagnosed your behavior to be a cooperative dilemma

Step 2: Empathize

- ☐ Answered the core guiding questions for your target behavior
- ☐ Constructed a behavioral journey to understand the process actors go through in engaging in the uncooperative behavior or the cooperative alternative

Step 3: Map

- ☐ Reframed each of the hypotheses inferred from the TCBA for your behavior
- ☐ Listed any additional hypotheses you can infer from your findings in the Empathize step

Step 4: Ideate

- ☐ Developed intervention component ideas for
    - ☐ Generating collective demand
    - ☐ Coordinating a shift in behavior
    - ☐ Strengthening the norm
    - ☐ Any other critical hypotheses you developed in the Map step
- ☐ Each of these intervention components are precisely targeting the key beliefs supporting each phase of the cooperative behavior adoption process

Additional resources

https://behavior.rare.org

Bicchieri, C. (2017). Norms in the wild: how to diagnose, measure, and change social norms. New York, NY: Oxford University Press.

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Rare inspires change so people and nature thrive. Conservation ultimately comes down to people – their behaviors toward nature, their beliefs about its value, and their ability to protect it without sacrificing basic life needs. And so, conservationists must become as skilled in social change as in science; as committed to community-based solutions as national and international policymaking.

The Center for Behavior & the Environment at Rare is bringing the best insights from behavioral science and design to tackle some of the world's most challenging environmental issues. Through partnerships with leading academic and research institutions, we are translating the science of human behavior into practical solutions for conservationists worldwide.

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