Empowering Groups That Enable Play

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Creating play environments for children usually requires groups of adults working together. An extensive scientific literature describes how groups function to achieve shared goals in general terms, and groups attempting to empower play may find this literature useful. Design principles for managing natural resources, identified by Elinor Ostrom and for which she received the Nobel Prize in 2009, provide an exceptionally practical guide for all groups attempting to achieve common goals. In this article, the authors discuss the related scientific literature and connect it to the experience of two national organizations creating outdoor environments for play—KaBOOM! and City Repair. **Key words:** City Repair; designing play environments; design principles for resource management; Elinor Ostrom; KaBOOM!

Enabling outdoor play is a matter of restoring a physical and social environment that once occurred naturally. Ask elderly people about their childhood, and they will likely recall how their mothers told them to go outside and play until dinnertime, how they joined up with a gang of other kids who roamed the neighborhood and made their own fun from the materials at hand, how someone else's mother could call them out for misbehavior, and how wonderfully free they felt otherwise to do as they pleased.

Such play inhabits more than just our grandparents' and parents' memories of the good old days. Children in many traditional societies, and especially in the few remaining hunter-gatherer societies, grow up in the same way. In all likelihood, so did our ancestors during the thousands of generations that preceded the development of agriculture and settled societies (Konner 2010, Lancy 2008, Lancy et al. 2010). When a physical and social environment persists for so many generations, it forms the basis for the genetic and cultural evolution of the organisms inhabiting that environment.

Now that the natural environment of play is disappearing for our own children, we are discovering its importance for physical, mental, and social development. Restoring it is not a luxury but a necessity of the first rank. Physical-play

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spaces must often be built to replace the woods, fields, and found objects of the past. Even more important and challenging, a safe and secure social environment must be created so that parents feel comfortable allowing their children to play out of their sight.

Restoring the play environment for children is almost invariably a group effort for adults. Group efforts are not always straightforward. Even when everyone has a common goal, achieving it requires coordination and effort. The hard work of some can be exploited by others who share the benefits without sharing the costs, a dilemma that ecologist Garrett Hardin (1968) immortalized with the phrase "the tragedy of the commons." Neighbors and other stakeholders who organize to create a play environment frequently meet for the first time—even though they have lived close to each other for years. Scholars have devoted a large academic literature to the problems of cooperation and coordinated action that confront groups attempting to re-create the play environment for children.

Fortunately, the act of getting together to create a play environment can begin to solve some of these problems. When adults feel isolated from their neighbors, they do so largely because they have no activity that requires common action. When they gather to create a physical play space, they often experience a feeling of community that they value in and of itself. In a sense, they discover the natural adult social environment for our species—small groups whose members work together to sustain each other—in the process of re-creating the natural childhood environment. Restoring the natural adult social environment goes a long way toward restoring a safe and secure social environment for children.

Adults can get together on their own to create play spaces for children, but organizations also exist to help them. One such organization is KaBOOM!, whose vision is to create "a great place to play within walking distance of every child in America." The founder of KaBOOM!, Darell Hammond was raised in a group home called Mooseheart operated by Moose International (Hammond 2011). Far from the stereotypical orphanage, Mooseheart offered a wonderful opportunity for Hammond to grow up in the presence of other children in a supportive adult environment. In college, he studied with Dr. John Kretzmann, director of the Assets Based Community Development (ABCD) Institute at Northwestern University. Inspired by the generosity of others and the principles of mobilizing communities that inform ABCD, Hammond founded KaBOOM! in 1995, which facilitated the creation of thousands of community-built play spaces.

At about the same time that Hammond created KaBOOM!, a traffic accident involving a child biker inspired a group in Portland, Oregon, to turn a

typical street intersection into a community gathering place. The group painted the intersection in a brightly colored geometric design that defined the space. Volunteers installed a community bulletin board, a chalkboard, a food stand, a kids' playhouse, and even a station for serving tea on the sidewalk corners. This project led to the creation of City Repair, an organization that facilitates place making in Portland and throughout the United States. Its repair projects are community centered rather than child centered, but it uses the transformation of the physical environment as a vehicle to improve the social environment.

Organizations such as KaBOOM! and City Repair draw on extensive experience and on the social scientific research represented by ABCD, but there is another body of useful information. Evolutionary science has much to say about how cooperation succeeds or fails as a social strategy in all species and in the capacity of our particular species to function as cooperative groups (Gintis et al. 2005; Wilson and Sober 1998; Wilson 2002, 2007, 2011). In the following sections, we will show how evolutionary science leads to a surprisingly practical guide for helping groups accomplish shared objectives. Then we will compare the scientifically derived expectations to the experience of real groups attempting to transform their physical and social environments with the help of KaBOOM! and City Repair. We conclude by calling for a new set of advisory and assessment methods. The hundreds of groups facilitated by KaBOOM!, City Repair, and other organizations should be regarded as a grand experiment. With just a little effort, groups can find guidance and evaluate their success in ways that lead to an accumulation of knowledge about best practices. Empowering groups can become a science in addition to an art and make for a joyous expression of community.

The Basic Science of Cooperation

From an evolutionary perspective, why groups work together presents a puzzle. Natural selection favors traits that cause individuals to survive and reproduce better than other individuals. Working for the benefit of a group requires time and effort of its members. If all else remains equal, a member who works hard at group goals does not survive and reproduce better than a slacker in the same group who shares the benefits but does not work as hard for them. The hard-working "solid citizens" are vulnerable to active exploitation by others in the group—and to freeloading by the slackers. Given these disadvantages, how does

cooperation and everything else associated with such solid citizenry evolve in a Darwinian world?

Fortunately, the puzzle has at least a partial solution. Groups whose members work well together can survive and reproduce better than groups whose members do not function well as a unit, even if the solid citizens are vulnerable to slacking and exploitation within the groups that work well. If natural selection *among* groups is sufficiently strong compared to natural selection *within* groups, then solid citizens can evolve in a Darwinian world (Sober and Wilson 1998). These basic considerations apply throughout the biological world, in groups of microbes, in social insect colonies, in lion prides, and in primate troops as well as in groups of our own species. We might regard even our own bodies as groups of cells that succeed by working together—with the troubling exception of diseases such as cancer that "selflishly" exploit the group for their own gain, leading to our demise (Burt and Trivers 2006).

Knowledge about the evolution of cooperation in all species provides a new foundation for studying the evolution of cooperation in our own species. *Homo sapiens* are exceptionally cooperative and have been for a very long time. In fact, just about everything we regard as distinctively human, such as language and our elaborate cultures, results from cooperation that requires sharing symbols and knowledge among trusted associates. Our capacity for cooperation came first and led to the other capacities (Boehm 1999; Tomasello 2009, 2010; Wilson 2007).

We cooperate so well not because we are invariably nice but because we can hold each other in check. Many primate societies assume the form of status hierarchies in which the dominant individuals are able to intimidate the subordinate individuals, at least until the dominant are displaced. This kind of rivalry within groups makes a poor starting point for cooperation. In a typical hunter-gatherer society, individuals who try to assert dominance are themselves suppressed, resulting in a kind of guarded egalitarianism that anthropologist Christopher Boehm (1999) calls *reverse dominance*. When individuals can be easily deterred from succeeding at the expense of their neighbors, succeeding as a group becomes the only remaining option.

The evolution of cooperation and teamwork made possible by reverse dominance has probably been the primary social mode of our species for thousands of generations, which means that it is deeply reflected in the structure of our minds with complex results. We take genuine delight in working together and are even willing to die for group causes. Yet, we are also tempted to accumulate and hoard. We are able to control our selfish impulses to a degree but

often succumb to them. We have a passion for monitoring and controlling the selfish impulses of others but can also be trusting and even amazingly gullible. We differ as individuals in all of these respects, based on both our genes and experiences, which, of course, interact in subtle fashion. Many of our complex mental processes take place without our conscious awareness.

Scientists from several disciplines are beginning to study these intricate psychological and social processes from an evolutionary perspective. They use theoretical tools such as game-theory and agent-based models to identify which social strategies work under what circumstances in virtual social environments (Gintis et al. 2005). Experimental protocols in game-like settings—such as the ultimatum game, the prisoner's dilemma, and the public-goods game—serve as microcosms for human social relations enabling factors such as repeated interactions, trust, and social control to vary (Fehr et al. 2005). Such research has offered a wealth of information about the conditions that generate conflict, on the one hand, or cooperation, on the other, providing a largely unexploited source of insight for groups attempting to achieve common objectives in the real world.

Elinor Ostrom and Groups for Collective Action

The research of Elinor Ostrom, winner of the 2009 Nobel Prize in economics, relates especially well to real-world groups (Ostrom 1990, 2005; Cox et al. 2010). Ostrom has devoted her career to showing that groups of people are capable of managing their own affairs, but only if certain conditions are met. She and her associates have created an extensive database of groups attempting to manage common-pool resources such as forests, fisheries, and irrigation systems. By analyzing their successes in relation to their social organizations, she has identified the design features that come remarkably close to a how-to guide for all groups attempting to achieve common objectives—including, for example, the creation of a playground or a community gathering place.

Group Identity

Members of the most successful groups share a strong sense of group identity and understand the rights and obligations of membership. For groups managing common-pool resources, members must bear in mind the boundaries of the resource (Cox et al. 2010). Extensive psychological literature on the meaning and

consequences of group identity supports Ostrom's conclusion in the specific case of groups attempting to manage their common-pool resources (e.g., Gray 2010; Berreby 2008). Even something as simple as a group logo printed on t-shirts or baseball caps helps create and maintain an identity for groups attempting to build a playground or community space.

Proportional costs and benefits

Having some members do all the work while others enjoy the benefits is unsustainable over the long term. Everyone must do their fair share, and those who go beyond the call of duty must be appropriately recognized. When leaders receive special privileges, it should be because they have special responsibilities for which they are held accountable. Groups attempting to build a playground or community space often begin with a few volunteers who do most of the work while trying to engage the interest of others. Ostrom's second design principle suggests that it is important to go beyond this stage to one in which costs and benefits are more equitable. At the same time, strict scorekeeping can undermine the spirit of cooperation, a point to which we will return.

Consensus decision making

People hate being bossed around but will work hard to implement a consensus decision—to do what *we* want, not what *they* want. In addition, the best decisions often require knowledge of local circumstances that *we* have and *they* lack, which makes consensus decision making doubly important. For groups attempting to build a playground or community space, it is important to include all the stakeholders and to avoid the tendency of some individuals to stage-manage the project.

Monitoring

Cooperation must be *guarded*. Even when most members of a group are well meaning, the temptation to do less than one's share is always present, and a few individuals might try to game the system. If lapses and transgressions cannot be detected, the group enterprise is unlikely to succeed. Monitoring often takes place naturally in groups attempting to build a playground or community space (e.g. failing to show up for a meeting or work session) but can probably be enhanced, for example to encourage everyone to fulfill their expected role by recording attendance and having rules (agreed upon by consensus, of course).

Graduated sanctions

Friendly, gentle reminders are usually sufficient to keep people in solid-citizen mode, but there must also be the capacity to apply stronger sanctions, such as punishment or exclusion, if transgressions continue. No less than other groups, those attempting to build a playground or community space need to plan for worst-case scenarios.

Fast and fair conflict resolution

When conflicts arise, they must be resolved quickly and in a manner that is regarded as fair by all parties. This typically involves a hearing in which respected members of the group, who can be expected to be impartial, make an equitable decision. An easily established convention for groups attempting to build a playground or community space might be for everyone to take turns serving on a judicial committee, causing would-be transgressors to think about their own behaviors in a new light when they are called upon to evaluate the behavior of others.

Local autonomy

When a group is nested within a larger society, such as a farmer's association dealing with a state government or a neighborhood group dealing with a city, the group must be given enough authority to create its own social organization and make its own decisions, as suggested in Ostrom's design principles. This is a frequent problem for groups attempting to build a playground or community space, as we shall see.

Polycentric governance

In large societies that consist of many groups, relationships among groups must reflect the same Ostrom principles suggested for single groups. All groups, including those attempting to build a playground or community space, can benefit by working toward polycentric governance.

In a review of ninety-six case studies documented since Ostrom's original analysis, Cox et al. (2010) found broad support for the design features and suggested a more refined taxonomy, although the original list is suitable for our purposes. Groups with different objectives require different design features to a degree (a point to which we will return), but the design features identified by Ostrom are so basic and consistent with the literature on the evolution of cooperation that they are likely to apply to groups attempting to achieve nearly any common objective. Before we relate the principles to

groups attempting to build play spaces and community-gathering centers, two comments are in order.

First, each design feature can be implemented in a variety of ways. All groups should have a way to monitor good behavior, for example, but exactly how they do so can be tailored to local circumstances. Groups need the autonomy to manage their own affairs so that they can find the best ways to implement the design features.

Second, the typical picture of a group building a playground or a community space shows people beaming with the joy of working together, holding hands in a circle, or celebrating with food, music, and dance. In contrast, the design principles seem to describe group members as argumentative, suspicious of each other, and unlikely to work without mechanisms of social control. These two portraits are not as irreconcilable as they might seem. The design features create a social environment that is so favorable for communitarian activities that the communitarian side of human nature can be fully and joyously expressed. Paradoxically, when the design features are working at their best, it seems that they are not needed at all.

Basic Science and Current Practice: How Do They Compare?

In this section we apply the basic science of cooperation to the experience of groups attempting to create playgrounds and community-gathering places with the help of KaBOOM! and City Repair. The following questions guide our inquiries.

1. Do Ostrom's design principles for groups attempting to manage their common-pool resources also apply to groups attempting to build playgrounds and community-gathering places?
2. Are there additional design principles that should be added to the list identified by Ostrom?
3. Can the design principles be used to improve the guidance provided to groups by organizations such as KaBOOM! and City Repair?
4. Can the assessment of groups according to the design principles be improved, so that the most successful practices can be identified and communicated to other groups?

The Experience of KaBOOM!

Since its inception in 1995, KaBOOM! has built over two thousand playgrounds in the United States, Canada, and Mexico. In addition, many more communities have used the organization's best practices to build or improve play spaces. As might be expected, the groups vary considerably in how they attempt to accomplish their objectives and the degree to which they succeed. Ostrom's principles seem be as relevant for building play spaces as for managing natural resources. However, there are also important differences between two such objectives and differences in factors vital for success that are not specified by the design features.

Creating a group identity and defining the membership of the group marks a critical stage for any project. For KaBOOM!, a project typically begins with one person or a small committed group championing the idea of a community-built play space. The first goal requires engaging the interest of a larger group and especially establishing a sense of community that may not have existed before. This can make all the difference between something the participants see as their project rather than a project imposed on them by somebody else. All of the participants in the project must feel that they are part of the group and can identify with it. The more the group combines its work with festive occasions accompanied by food and music, the better its chance of success. KaBOOM! recommends groups using its Community-Build Model to create a vision and mission statement that articulates the importance of and need for a play space in their community, encouraging them to rally around a common goal.

Volunteers are essential for all KaBOOM! projects, and the volunteer work needs to be purposeful and structured. Even the most heroic and well-meaning group members can find themselves running out of steam and in need of help and guidance. Apportioning the work as well as the benefits is therefore critical for success and can be accomplished through a number of positive incentives. KaBOOM! encourages the formation of a planning committee with specific teams responsible for subtasks such as fund raising, securing food, youth engagement, and safety. Individuals can better contribute to the overall project when charged with smaller, definable goals and tasks. Monitoring group accountability becomes less cumbersome as tasks get delegated to smaller groups and each person's contribution becomes essential. In general, everyone will likely agree with the principle of sharing the costs along with the benefits, so effective volunteer work is a matter of establishing the norms and implementing mechanisms that facilitate adhering to the norms. The sooner this normative structure can be established, the better.

Consensus decision making determines the success of the project, and it does not necessarily occur naturally. When the group is not sufficiently inclusive, those who are not part of the group but who are likely to be affected by the project can feel alienated. Even when the group is sufficiently inclusive, the right leadership style needs to be cultivated so that everyone feels meaningfully consulted. The same leaders or core groups with the passion to champion the initial project can find themselves at odds with supporters if they attempt to dominate the decision-making process. Communities who have adopted the KaBOOM! Community-Build Model have had great success employing facilitative leadership strategies—where leaders guide other members while allowing them to draw their own conclusions and make key decisions. Employing this strategy not only allows others to take on leadership roles but also provides a means for group members to become invested in the long-term success of the project. Children should be consulted directly about what they would like—including older children who are often excluded from the design of play spaces. Adults of all ages should also be consulted—the more a play space for children also provides an attractive space for responsible adults, the safer it is for children.

Monitoring and applying sanctions need not be costly or confrontational. Creating a play space can be fun, and most people who volunteer their time to complete the project are trying to do their part; if they fail, it is typically because of competing demands. Therefore, friendly reminders of responsibilities usually work. When members are given leadership roles or work in very small groups on subtasks, tasks become less intimidating. In the case of KaBOOM! projects, tougher measures such as punishment and exclusion have not been needed. Cultivating a community atmosphere allows struggling members to ask for help or to hand off tasks they are unable to complete. Praise for those who do perform their duties is key. This might seem like common sense, but many community groups are unfamiliar with applying rewards and often need coaching.

Conflicts and clashes of personality can arise in any group attempting to achieve a common goal. Unless the group resolves difficulties swiftly and fairly (principle 6), an attempt to build a play space will collapse. Much of the planning done by KaBOOM! communities takes place online, which allow participants to share ideas, discuss progress, and air concerns. In this online community, conflicts bubble to the surface where members' actions can be monitored and addressed publicly by the full group. KaBOOM! experiences show that groups can work through most conflicts by focusing on the end goal of creating a great place for kids to play.

A successful play space project depends not only on how the group is organized but also on how it relates to other social organizations, such as the towns, cities, and states where their neighborhoods are located. Even when a town or city government supports a project, it might be constrained by state regulations or fears about litigation. In short, many play-space projects suffer from a lack of local autonomy and from poor relations among organizations that do not embody the same principles required for the group itself.

For example, consider two community groups that function well internally and that begin working together to create a play space. The groups do not negotiate their respective roles and Group B ends up doing most of the work. Although they finally manage to build the play space, only a reduced number of volunteers attend the opening day, where some of the key logistics have been left uncompleted and both groups feel resentful. Clearly, the same design features that prevent these problems from arising *within* each group need to be applied to the relationship *between* the two groups. Managing between-group relations can be even more challenging than managing within-group relations. With enough hard work, local groups can make their larger social environment more favorable for their goals and national organizations such as KaBOOM! and City Repair can help them do so.

The Experience of City Repair

The story of how City Repair began provides a dramatic illustration of the presence—and absence—of the design principles identified by Ostrom. The story starts in 1996, when a car struck a boy on his bicycle in a suburb of Portland, Oregon, called Sellwood. The boy was not seriously hurt, but the accident became a rallying point for the neighborhood to discuss safer opportunities for play. In short, there was now a self-identified group with a common problem to solve (principle 1).

A member of the group who had traveled to Italy told the others about the wonderful piazzas there that provide spaces for people of all ages to socialize and play. Another member shared the strong sense of community he experienced living in a Mayan village in rural Mexico. The streets of Sellwood were nothing like an Italian piazza or a Mayan village, but the group came up with an ingenious idea. By painting an intersection, they could redefine it as a social space, slowing down the traffic and turning it into a public right of way. The idea quickly

gained the support and participation of the neighborhood (principles 2 and 3) but also the opposition of the Portland Department of Transportation. Lack of local autonomy (a violation of principle 7), then, proved the major limiting factor first. After several attempts to work through channels, the group simply went ahead with their plans without permission. Their rebellious act contributed to their sense of identity and empowerment (principle 1), even as it forced a resolution to the problem of local autonomy.

Over time, the City of Portland became a supporter of the project, even adopting new legislation known as the Intersection Repair Ordinance that marked an improvement in between-groups relations (principles 7 and 8). The community, which had organized around the intersection problem (now dubbed Share-it-Square), continued to strengthen and to share resources. The community bulletin board, chalkboard, food stand, kids' play house, and tea station provided ongoing activities and goals rather than a single-project of painting an intersection. The social process of planning and building a space became even more important than the space itself. If the individuals who build the space simply dissolved the organization after it was built, they no longer benefit from the social process they have created. Ongoing activities make the social process as permanent as the physical space.

Not only did Share-It-Square inspire additional projects in Portland, but by changing the attitude of the residents and the ordinances of the city, it created a more favorable overarching social environment (principles 7 and 8). T-Hows, a teahouse without a city permit made of recycled materials, morphed into T-Horse, a mobile teahouse that spread the news about local place making throughout Portland. Earthday: A Celebration of Localization organized an event in a different part of the city each year to introduce the ideas of place making, sustainability, and community building all at once. City Repair incorporated in 2001, and now it facilitates similar efforts nationwide. Without any direct connection to the science of cooperation reviewed in this article, City Repair has hit upon most of its principles, starting with the importance of creating local groups with a strong identity and empowering them to manage their own affairs.

Further Empowering Groups that Enable Play

Organizations such as KaBOOM! and City Repair are already doing an admirable job of launching the groups that empower play and more generally create

a sense of community. The experience of these organizations broadly affirms the scientific literature and the design features delineated by Elinor Ostrom for groups attempting to manage common-pool resources. A group of neighbors trying to build a play space or paint an intersection might be different in some respects from a group of farmers managing an irrigation system or a group of fisherman regulating their harvest, but to succeed, any group trying to achieve a common goal should share certain elements of design. The design elements work because they are related to evolutionary principles that explain the nature of cooperation in all species, from microbes to humans.

By combining the scientific literature with their own extensive experience, organizations such as KaBOOM! and City Repair enhance their ability to empower community groups. The design features identified by Ostrom might seem like common sense, but many groups do not naturally adopt them. In fact, Ostrom was able to identify the design features because the groups in her database varied in their use of them, resulting in some that failed to manage their common-pool resources where others succeeded. Even the successful groups were not necessarily aware of why they worked well. A formal theory of cooperation and empirical research on human groups provides a new level of understanding and helps teach them to others.

The groups facilitated by KaBOOM! and City Repair are much like the groups studied by Ostrom in this regard. They vary tremendously in how they attempt to achieve their goals and how often they succeed. Some groups adopt the design principles, but others suffer from not being sufficiently inclusive, from lacking a strong identity, from decisions made by some members without consulting others, from an inability to monitor participation or correct nonparticipation, from unresolved conflicts, and from relations with other groups that limit autonomy. KaBOOM! and City Repair already provide excellent advice on their websites, in their publications, and through their consultations. By including Ostrom's design principles and their scientific justifications on their respective sites, these organizations provide an even greater service.

We think that the design principles are especially important for avoiding conflict and managing it when it occurs. There is often such a positive glow surrounding communitarian projects that conflicts come as a surprise. Yet, conflict can arise in any group dynamic or situation where people are working together, even when everyone has the best of intentions. Conflict can be fueled by confusion about roles as well as differences in beliefs and personalities. If these problems are not addressed, they might slow momentum and can tear the

group apart. Carefully planning for the possibility of conflict is the best way to keep the group experience positive.

In addition to benefiting from the scientific literature, organizations such as KaBOOM! and City Repair can also contribute to it by gathering information about groups and assessing their progress more systematically. Ostrom and her associates created their database from highly scattered literature on diverse groups around the world attempting to manage their common-pool resources. The many groups advised by KaBOOM!, City Repair, and similar organizations could help create a database comparable to Ostrom's.

Finally, even though certain design features are required by all groups working to achieve common goals, other design features are required for particular tasks. At a sufficiently fine scale of resolution, the experience of groups attempting to manage their common-pool resources will not provide a helpful guide for groups attempting to create playgrounds and community spaces. For example, managing a common resource is intrinsically an ongoing activity, whereas creating a playground or community space is focused on a single event. If it is important to create an ongoing social process that does not end with an installation event, this design feature must be built into the project. It does not come free. Then, too, neighborhood groups often experience a higher turnover of their active members than groups attempting to manage their natural resources. Groups with high turnover will require mechanisms that ensure stability as their members come and go. Indeed, most groups attempting to manage their common-pool resources—say, a group of farmers in Nepal managing their irrigation system—are concerned primarily with their own welfare. In contrast, organizations such as KaBOOM! and City Repair are passionate about exporting the practices that empower groups as widely as possible. Spreading best practices requires a different set of design features from implementing them at any particular location. Organizations such as KaBOOM! and City Repair can develop design features useful for their own objectives in addition to those helpful in achieving any common goal.

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