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Topic: Doing Social Math: Case Study in Framing Food and Fitness
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Some years ago, the Advocacy Institute and Berkeley Media Studies Group pioneered an approach to communicating statistics that they call "social math." By this, they mean making large numbers comprehensible and compelling by placing them in a social context that provides meaning. Like other frame elements, social math can be used to reinforce the reframes you wish to introduce by painting vivid pictures in people's minds. When it is combined with other frame elements, social math is a tool that can help guide people to think about the social and built environments surrounding the behavioral choices that individuals make. (For more on this technique and the literature that informs it, see the Public Issues Toolkit at www.frameworksinstitute.org.)

To incorporate social math successfully into an overall communications strategy, communicators should begin by looking at what the research says that the reframes about food and fitness need to accomplish. Social math can then help set a new frame by (1) connecting two or more things together; (2) comparing the size of things; or (3) functioning as a metaphor.

Many times, advocates get this process backward. Instead of starting with the message they want to convey and deciding that social math would be a useful tool to express their idea in a memorable, understandable way, they instead think of a clever social math example and then try to fit it into the message. Advocates focus on the "math" and downplay the "social" by focusing on a compelling piece of data while downplaying (or even undermining) the overall frame. Put another way, they fail to fully examine what relationship the math is designed to cement in people's minds. This leads to a narrow task of painting pictures with numbers. But the most important part of doing social math is figuring out what part of the frame you want to bolster with greater vividness. If you only think of social math as a way to underscore the idea that something is big, you underutilize this technique. Rather, social math should be used - like other frame elements and techniques - to drive home the larger frame you are trying to help people see.

In this EZine, we will look at several food and fitness problems advocates might want to address, possible policy solutions, and examples of social math that both undermine and support the reframes necessary to advance the policy goals. One of the challenges of talking about food and fitness issues, as identified in FrameWorks research, is to get environment into the picture. People tend to think about these issues as strictly a matter of personal (or, in the case of children, parental) responsibility. Social math can be used as a tool to guide thinking about the social and built environments that shape and constrain the behavioral choices that individuals make. Another real-world communications challenge is the sheer amount of available facts and figures about health, which often makes it seem to be an issue that should remain in

the province of experts rather than average citizens. Using social math poses an opportunity to cut through the clutter by providing numerical images that are more tangible and understandable to the public. Finally, advocates often struggle to integrate social math into the array of frame elements that they have at their disposal. This EZine attempts to model the thinking process you can use to align this tool with other frame elements and to make them all responsive to the reframing challenges identified in research.

Problem: Children are not getting enough exercise.
Policy Solution: Encourage walking and biking to school.

Possible Use of Social Math: "*Back in the late 1960's, in a class of 25 children, about 11 walked or biked to school. By 2001, only 4 of them were getting that exercise each day.*" (Statistics from the Centers for Disease Control, www.cdc.gov/nccdphp/dnpa/kidswalk/then_and_now.htm)

Potential problems: This example highlights one way that children are no longer getting as much exercise, breaks down a large number into a manageable unit (a classroom), and clearly shows a trend. The problem is that there is no focus on the surrounding environment or reasons to explain why children are not walking or biking to school. This statement leaves the reader to place responsibility on negligent parents or lazy children, and harkens back to the "good old days" when children were not driven to school. In short, it fails the test of attributing responsibility to society as well as to individuals.

Better Use of Social Math: *In 1969, for many students, walking to school was as easy as walking down the street because their school was right in their neighborhood. By 2001, lots of schools were farther away from their students, and walking or biking to school was the equivalent of doing a 5K race or more - twice a day.* (Statistics from the Centers for Disease Control, www.cdc.gov/nccdphp/dnpa/kidswalk/then_and_now.htm)

What are we Using Social Math to Do? This statement, using additional data from the same report, applies social math to help the reader understand the connection between two factors -- student behaviors and the built environment. It also provides a vivid metaphor, describing how far many children would have to walk as a "5K race". This shifts the conversation from lazy children toward appropriate policy solutions focused on the built environment.

Problem: Children are not getting enough exercise.
Policy Solution: Increasing physical education requirements in schools.

Possible Use of Social Math: *A newly released study conducted by the U.S. Department of Education found that first graders on average spent 45 minutes each school day in recess and physical education, about the same amount of time it takes to watch two episodes of "SpongeBob Squarepants."* ("Calories In, Calories Out, Food and Exercise in Public Elementary Schools, 2005." US Department of Education. http://nces.ed.gov/Pubs2006/nutrition/02F.asp)

Possible Problems: The first problem is that this statistic is just not very compelling. Given the many other subjects that children must learn, 45 minutes out of a school day is a fairly significant amount of time. The comparison to watching "SpongeBob Squarepants" also introduces the entirely new issue of television watching and inactivity in general, which takes the focus away from school-based physical activity. And, finally, it confuses the context by introducing an element that is clearly associated with choice - a parent or child decided to turn on the television.

Rewrite: *Exercise is something that children need every day. But half of all students attend schools that have reduced their phy ed class to just one or two days per week. Part-time fitness is no more effective than part-time reading or math instruction.*
("Calories In, Calories Out, Food and Exercise in Public Elementary Schools, 2005.")

What Are We Using Social Math to Do? We know from FrameWorks research that focus group participants disliked the fact that schools have cut physical education classes. The rewritten statement uses social math to compare the size of two things; in this case, the amount of physical education children are actually getting compared to the amount they need. Using the same data set, but focusing on how many days per week, rather than the total minutes per day, makes a much better case for the need to increase school physical education programs by keeping the focus on the school environment. It also places physical education in the same domain as other essential school responsibilities, such as teaching reading and math.

Problem: Poor child nutrition leading to obesity Policy Solution: Changing the school nutrition environment

Possible Use of Social Math:
In 2003-04, an estimated 17% of children were overweight, which is about 4,000 school cafeterias full of overweight children. (Statistics from the Centers for Disease Control.)

Potential Problems: This example offers a compelling visual image, but it leaves most relevant factors and community actors completely out of the picture. It doesn't put the issue of childhood obesity in any kind of context, or offer any information about trends so that the reader can assess to what extent this is a problem. The only policy connection a reader might make is to school meals, but without more context, the focus remains on children and their eating habits.

Better Use of Social Math:
With most schools selling snacks, candy, and pop, schools are more like a convenience stores than environments to learn about healthy eating. (Statistics from Centers for Disease Control, www.cdc.gov/healthyyouth/shpps/factsheets/pdf/outside_food.pdf)

What are we Using Social Math to Do? In this use of social math, the statement focuses on the school cafeteria offerings, and the low-nutrition (yet appealing) choices offered to students. While it lacks the gripping visual image of the previous example, it does a much better job of supporting a policy frame, and still presents the data in an accessible, understandable way.

Problem: Overconsumption of soda pop
Policy Solution: Regulating soda pop vending

Possible Use of Social Math: *More than 15 billion gallons of soda pop were sold in 2000. That works out to at least one 12-ounce can per day for every man, woman and child.* (from "The Amazing Statistics and Dangers of Soda Pop", Sally Squires, Washington Post February 27, 2001)

Potential Problems: This example shows a clever way to break down a really big number into an understandable unit. The danger is that it directs the focus entirely toward the behavior of the people drinking the cans of pop, and doesn't provide any context for that behavior. It also may inadvertently minimize the point, since one can per day doesn't sound like an excessive amount of consumption.

Better Use of Social Math:
Coca-Cola and Pepsi alone spend 100 times more on advertising than the federal "Five a Day for Health" healthy diet campaign. (Statistics from Consumers Union and CA Pan-Ethnic Health Network, "Out of Balance - Marketing of Soda, Candy, Snacks and Fast Foods Drowns Out Healthy Messages.")

What are we Using Social Math to Do? This revised statement compares beverage industry spending to government spending on a pro-nutrition health campaign. This puts the focus on behavior of the beverage industry rather than focusing solely on the behavior of consumers. It also makes visible the environment in which people drink excessive amounts of soda pop, and directs the reader toward a possible role for government.

Problem: Lack of exercise leading to poor health and obesity
Policy Solution: Increasing parks and open space

Possible Use of Social Math: In Los Angeles, white neighborhoods (where whites make up 75 percent or more of the residents) boast 31.8 acres of park space for every 1,000 people, compared with 1.7 acres in African-American neighborhoods and 0.6 acres in Latino neighborhoods. (from "The Benefits of Parks: Why America Needs More City Parks and Open Space," The Trust for Public Land. www.tpl.org/content_documents/parks_for_people_Jul2005.pdf)

Potential Problems: Breaking the amount of park space down to a per person level gives a large number more meaning. However, because it is not easily clear how many acres of park space per person people actually needed to exercise, the reader is left to focus completely on the inequity of the park space. This example runs the risk of making this an issue about race rather than health, which FrameWorks research has found to be largely counterproductive in raising support for health promoting policies.

Better Use of Social Math:
Between 1971 and 2002, the Trust for Public Land's work in cities resulted in the acquisition of 532 properties totaling 40,754 acres. That's like adding park space equivalent to 326,000 soccer fields. (statistics from The Trust for Public Land.)

What Are We Using Social Math To Do?
This example again breaks down a large number into a manageable space, but this time, it is compared to a recreational unit that is familiar (a soccer field). It points the reader in the direction of a solution, and if combined with available data showing that people are indeed more likely to exercise when park space is available, it can help make the case for policies supporting the creation of more park space.

Problem: Long distances that most food travels to reach the consumer
Policy Solution: Developing local farmer's markets and community-supported agriculture projects

Possible Use of Social Math: "In the United States, food typically travels between 1,500 and 2,500 miles from farm to plate, as much as 25 percent farther than in 1980." ("Worldwatch Paper #163: Home Grown: The Case For Local Food In A Global Market," World Watch Institute, November 2002. www.worldwatch.org/node/827.)

Potential Problems: This example focuses on the food, rather than the consumer, which is a good start. There really isn't any context to judge this distance, however (is 1,500 miles a long way for food to travel? Is it a problem?) and no where to envision a solution.

Better Use of Social Math: *In the United States, we need to roll back our food odometers because they have spun out of control. When food is traveling over 1500 miles from farms to plates, it loses nutritional value, wastes valuable energy in shipping and storage, and undermines the economic strength of local family farms.* ("Food odometer" concept from "Checking the food odometer: Comparing food miles for local versus conventional produce sales to Iowa institutions," Iowa State University. http://www.leopold.iastate.edu/pubs/staff/files/food_travel072103.pdf)

What Are We Using Social Math To Do? This example uses a vivid metaphor, the odometer, which is something easily understood by most readers. Within this metaphor is the understanding that odometers can have high readings or low readings, and that the reading for food in the US is too high.

Social math can be a powerful tool to advance communications about food and fitness. FrameWorks has found through years of research and experience that numbers by themselves are insufficient to tell a story. However, when numbers are utilized skillfully in the context of a strong Values Frame, accompanied by simplifying models and metaphors that support that reframe, with attention to consistency in other elements of the frame such as messenger, visuals and context, they are a powerful part of a communicator's toolbox.

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