The Magic Ratio of Positive and Negative Moments

According to the Nobel Prize-winning scientist Daniel Kahneman, each day we experience approximately 20,000 moments. A moment is defined as a few seconds in which our brain records an experience. The quality of our days is determined by how our brains recognize and categorize our moments—either as positive, negative, or just neutral. Rarely do we remember neutral moments.

There is no question that the memories of our lives are recorded in terms of positive and negative experiences. Now scientists propose that each day our brains—i.e., our thoughts and emotions—keep track of our positive and negative moments, and the resulting score contributes to our overall mood.

Over the past decade, scientists have explored the impact of positive-to-negative interaction ratios in our work and personal life. They have found that this ratio can be used to predict—with remarkable accuracy—everything from workplace performance to divorce.

This work began with noted psychologist John Gottman's exploration of positive-to-negative ratios in marriages. Using a 5:1 ratio, which Gottman dubbed 'the magic ratio,' he and his colleagues predicted whether 700 newlywed couples would stay together or divorce by scoring their positive and negative interactions in one 15-minute conversation between each husband and wife. Ten years later, the follow-up revealed that they had predicted divorce with 94 percent accuracy.

The Bucket and the Dipper

In a recent book How Full is Your Bucket, psychologists Donald O. Clifton and Tom Rath propose a metaphor of looking at positive and negative interactions during the day. Imagine we all have a bucket within us that needs to be filled with positive experiences, such as recognition or praise. When we're negative toward others, we use a dipper to remove from their buckets and diminish their positive outlook. When we treat others in a positive manner, we fill not only their buckets but ours as well.

Here are 5 strategies from these authors for increasing your magic ratio of positive to negative moments in any given day:

- Prevent 'Bucket Dipping.' Increase your own awareness of how often your comments are negative. Work toward a ratio of five positive comments to every one negative comment.
- Shine a Light on What Is Right. Try focusing on what employees or peers do right rather than where they need improvement, and discover the power of reinforcing good behaviors.
- Make Best Friends. People with best friends at work have better safety records, receive higher customer satisfaction scores, and increase workplace productivity.
- Give Unexpectedly. A recent poll showed that the vast majority of people prefer gifts that are unexpected.
- Reverse the Golden Rule. Instead of 'Do unto others as you would have them do unto you,' you should 'Do unto others as they would have you do unto them.' Individualization is key when filling others' buckets.
provide to my students? I mean, in a practical sense, how do I make this work in my classroom?” Well, first, I encourage you to understand that there is not some preset number of times that reinforcement should be delivered on any given day and to think about your reinforcement procedures in terms of what I like to describe as a range of proportionality. By this I mean that you want to aim to provide four instances of positive reinforcement for any given student’s appropriate social behavior for every one time you find yourself giving that same student corrective feedback for problem behavior. In other words, this is what is meant by the infamous 4:1 ratio in the field. Now, in this sense, everyone gets access to the same thing (this 4:1 ratio). What is different from student to student may be the time interval within which the 4:1 ratio is achieved on the basis of each student’s needs.

Let’s say you have three particular kids in your classroom who, for a variety of reasons in your own mind’s eye, are increasingly becoming distant from you (despite your efforts to increase rapport-building opportunities with each of them). In a parallel sense you find yourself correcting problem behavior with each of these three kids to a greater extent than the rest of your class. Let’s say Jane seems to warrant corrective feedback from you once daily, Carlos about twice as often (on average once in the morning and once every afternoon), and Jimmy requires corrective feedback once every class period (six to eight times per day). So, what does this 4:1 ratio look like with these three kids in concert with all of the other students in your classroom? Simply use your instincts with each student in question, coupled with your expertise and understanding about the principle of reinforcement, including this issue of proportionality and the 4:1 ratio. You know based on current levels of behavioral performance that you have a reasonably long period of time to catch the bulk of your kids in your classroom on their best behavior. In other words, their low or even nonexistent level of problem behavior grants you a larger block of time within which to provide reinforcement for expected behavior. Now, in general it wouldn’t hurt to reinforce the others in your classroom for prosocial behavior on a more frequent basis, but the point is that you have the luxury of more time with most of your kids based on their current levels of performance. The time interval for Jane is a bit more prescribed in that her daily rate of problem behavior suggests that you may have up to no more than a full day within which to catch Jane doing things the right way on at least four occasions. Carlos, based on his needs, has a tighter time interval in that you need to have him on your radar screen four times in the morning and four times in the afternoon by catching him doing things the correct way. Jimmy, based on his pattern of behavioral need, will require you to systematically attend to him in order to catch him doing things the correct way four times each class period in order to constructively prevent problem behavior over the longer term and yes, for the record, Jimmy appears to be “high maintenance kid.”
Strategies for Self-Monitoring the 4:1 Ratio in the Classroom

Strategy 1

Group: Place 20 pieces of unpopped popcorn in one pocket and 20 pieces of unpopped popcorn in another pocket at the start of the day. Remove one kernel of corn from your right pocket every time you "catch a kid being good" and provide reinforcement to that same child for following the behavioral expectations. Remove one kernel of corn from your left pocket every time you provide behavioral correction to one of your kids during this same day. At the end of the day, tally up how many kernels you have left in your pockets and then calculate a ratio based on your count (e.g., zero kernels remaining in your right pocket [20 delivered] versus 15 remaining in your left pocket [5 delivered] converts to a 4:1 ratio of positive reinforcement versus corrective feedback). You may also vary the time interval as you see appropriate (e.g., 1 hour versus an entire day).

Individual: Replicate the group process, but focus on a given child as warranted.

Strategy 2

Group: Loosely wrap a piece of masking tape around your right wrist and your left wrist. Have a marker in your pocket. Place one slash mark on the tape around your right wrist for every time you "catch a kid being good" and provide reinforcement to that same child for following the behavioral expectations. Place a slash mark on your left wrist every time you provide behavioral correction to one of your kids during the same day. At the end of the day, tally how many slashes you have on your right wrist and on your left wrist and then calculate a ratio based on your count (e.g., 20 slashes on right wrist versus 5 slashes on left wrist converts to a 4:1 ratio of positive reinforcement versus corrective feedback). You may also vary the time interval as you see appropriate (e.g., 1 hour versus an entire day).

Individual: Replicate the group process, but focus on a given child as warranted.

\(^1\) To calculate, divide \# positives by \# of negatives.
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This type of differentiation in your professional practice is based on student need, not preference (per se) on your part. In other words, you are not favoring one student over another; you are professionally differentiating your instructional practice based on your understanding of your students' needs. What is consistent is achieving the targeted 4:1 ratio with each of your students; what varies is the time interval within which you are working based on the level of your students' needs.

Will the other kids who are not getting as frequent attention as Jane, Carlos, and Jimmy rebel? Well, it really depends on your ability to meet each of their needs for acknowledgment on an ongoing basis. Yes, those other kids will likely rebel (in various forms) if your proportionality of reinforcement does not continue to adequately address each of their needs for acknowledgment. In other words, if another kid begins to feel like he or she is being taken for granted, then you are likely to see more frequent nuisance (and perhaps problem) behavior from him or her. This simply means you may need to shorten the time interval for reinforcement of appropriate behavior for that particular student. Think back to the food analogy that I previously shared. Appropriate behavior by your other kids who have been (at least to date) behaviorally successful is likely to continue to occur as long as they feel they are being acknowledged in a manner that is meaningful. Sure, occasionally you may have one particular student who begins to voice his or her displeasure in a manner that may require you to pull that student aside and talk privately with him or her as to your expectations in this regard. As long as each of your students (in a general sense) feels as if he or she is acknowledged at a reasonable level—as viewed from his or her perspective—significant problems in this regard are unlikely to surface. All of your kids need reinforcement; however, not all will need reinforcement at the same exact time. The key is finding the 4:1 ratio with each of your students.

This notion of the 4:1 ratio, by the way, is not an arbitrary number or concept. It is based on practical experiences in terms of what has been proven to be effective. Specifically, this 4:1 ratio reflects the similar notion of proportionality as the 80%-20% split of prevention to intervention. To help you put into practice this idea of proportionality, I have provided in the Appendix descriptions of simple self-monitoring procedures relevant to achieving this 4:1 ratio in your classroom. I encourage you to consider using one of these (or another similar approach) to periodically self-monitor your reinforcement practices within your classroom.
Positivity/Negativity Ratio

- From Wikipedia

- Positivity and negativity are powerful feedback processes in human behavior. Positive feedback encourages us to continue doing what we have done so far. Negative feedback, on the contrary, generally acts as a warning signal that tells us to moderate or stop what we are doing and to redress the course of our actions. Positive feedback can be linked to approach behavior and negative feedback to avoidance behavior. Through the course of evolution, these two processes, approach and avoidance, have helped us survive in complex environments. A powerful indicator of what is possible for a system is the positivity/negativity ratio of feedback: that is, how many instances of positive vs. negative feedback we can observe in a human interaction process, such as a team meeting or in a couple's conversation.

- The positivity/negativity ratio (P/N) has been found to be a critical parameter to ascertain what kinds of dynamics are possible for a team (Losada & Heaphy, 2004). P/N is measured by counting the instances of positive feedback (e.g. "that is a good idea;") vs. negative feedback (e.g. "this is not what I expected; I am disappointed."). Marcial Losada found that high performance teams have a P/N ratio of 5.6; medium performance teams have a P/N of 1.9 and low performance teams have a P/N of .36 (there is more negativity than positivity).

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So How Hard is Using Reinforcement?

Tim Knoster

"So how do I figure out what is the right amount of reinforcement to provide to my students? 
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