



Motivation

Kevan Lamm, Associate Professor

Bulletin 1578-01 published on May 19, 2025

What is Motivation?

Motivation is probably a term many of us have heard, or use, on a regular basis, whether it is getting out of bed early to start that exercise program we know we need to, or the healthier eating commitment we made as a New Year's resolution. It may also be the challenge we face in getting our children to sit down and complete the summer reading we know is important for them.

Despite the common use of the term, there is a science that underlies the concept. When we understand the core components of motivation, we can start to better understand ourselves, as well as the actions of those around us.

Within agricultural and environmental sciences (AES), this concept could be of critical importance. Fundamentally, the agricultural and environmental sciences represent an associated and integrated set of industries responsible for feeding and clothing the population. Although AES may not be as prominent or visible as they were a generation or two ago, they remain the foundation for our society.

It is within this context that we must recognize the importance of understanding how and why AES and associated industries operate as they do. Whether we are citizens who consume the products of AES, Extension professionals helping to educate others, producers growing crops, or any of a multitude of other roles in between, understanding the human dimension of motivation can improve our lives and work.

The Fundamentals of Motivation

Motivation as a concept has been studied for centuries. The fundamental question remains: Why do people tend to behave the way they do? Motivation can serve as a useful guide to help us make decisions for ourselves and to better understand others.

In general, there are two primary forms of motivation: approach and avoidance. You can see these behaviors from the most complex organisms (humans) all the way down to the least (insects).

Approach Motivation

Approach motivation is rooted in the desire for gain or improvement. Have you ever thought to yourself, "I would be willing to do almost anything if I could only achieve _____"? We can also see this in the world around us.

For example, have you ever seen an electrical-discharge insect control system (more commonly known as a bug zapper)? The system works by attracting insects to fly toward a light. The light is desirable to the insect, stimulating an approach-type motivation.

We see the same concept, although in a much different context and style, in marketing materials. If you've ever seen a commercial promoting a new car, you have probably been exposed to approach-based motivation. We see the car racing around a racetrack or climbing up the mountainside. As we observe these images, we receive a small neurochemical rush of dopamine. This feel-good hormone engages us and stimulates a state of desire.

Approach motivation is extremely powerful and has been used to great effect for as long as humans have been trying to influence the actions and behaviors of others. There is a strong physiological connection between this force (stimulation of desire) and actions.

For example, in the 1950s, psychologists surgically inserted dopamine-stimulating probes in the brains of lab rats. The rats were then provided a lever by which they could self-stimulate. What the psychologists found was that some rats would forego all personal care, including eating, to pursue the pleasure-inducing state, sometimes pushing the lever as many as 7,000 times a day. Any drive that can overcome the basic need for eating must be recognized as an extremely powerful force.

Avoid Motivation

The yin to approach motivation's yang is avoid motivation. From a conceptual perspective, this would be expected. While we certainly can think of examples where the feelings of desire have been strong, we can also probably think of situations where the feelings for self-preservation and the will to avoid loss have been equally great.

Have you ever thought to yourself, "I would be willing to do almost anything if I could only avoid _____"? Anyone who has ever experienced negative medical news for themselves or someone they care about has probably had a similar thought. Biologically, the imperative for self-preservation is paramount. Otherwise, there would be no next generation to extend the genetic line.

Fear is tremendously valuable. Reversing the bug zapper example from above, have you ever had the unpleasant experience of turning on a light in the middle of the night and seeing an insect quickly scurry across the floor and out of sight? This is an example of avoid motivation. The longer the insect is exposed, the higher the likelihood it will be squished. Therefore, the impulse to hide is greater than the desire to search for food.

Although we are hopefully not frequently encountering life-and-death-type situations, the role of avoid motivation in our lives is strong. Generally, we encounter avoid motivation in the form of punishments. For example, if you have ever received a speeding ticket and had to pay a fine, you were probably more sensitive to your vehicle's speed in the future.

The desire to avoid punishments can be strong and formative. Here again, neurochemicals may have a strong association with motivational approaches. Recent research has found that

dopamine (albeit a different variety) may be associated with adverse or negative situations.

Additionally, if the desire to avoid loss or punishment is particularly acute, there may also be an increase in norepinephrine, which is more commonly associated with a surge of adrenaline, the fight-or-flight hormone. Once engaged, this neurotransmitter signals the body to redirect all resources to preservation and stay away from nonessential activities such as logical thinking and analyzing.

We have probably been exposed to this type of motivation again in marketing contexts. Have you ever heard the term “impulse buying”? For example, “If you buy this product in the next 20 minutes, we will double your order—Don’t miss out!” The fear of loss, in this case, the potential of losing out on two of something for the price of one, can override our cognitive ability to determine whether we even need one of the products to begin with.

Approach and Avoid Motivation Summary

Both approach and avoid motivation can be extremely powerful tools in influencing and informing the behaviors of ourselves and others. From an academic perspective, we would typically refer to these motivational approaches as extrinsic in nature. Extrinsic indicates that the stimulation for the motivation arose outside of the individual themselves.

For example, the reward or punishment is something outside of the person to be acquired or avoided: “I want to buy this car (approach),” or “I don’t want to lose my job (avoid).” In general, motivational strategies outside of humans are limited to extrinsic approaches. If you have ever heard the saying “the carrot or the stick,” you now know how these terms apply to extrinsic motivational approaches, either approach (carrot) or avoid (stick).

Although tremendously powerful and effective, motivation is not limited to extrinsic approaches. In the next section, we will cover a third and potentially more powerful motivational approach.

Intrinsic Motivation

Whereas extrinsic motivation is external to the individual, intrinsic motivation is associated with a person’s sense of self and comes from inside the individual. Based on what we currently know about the inner lives and experiences of other creatures, humans are the only species that has a self-concept and spends effort to reflect upon and critically analyze ourselves.

Anyone who has ever asked the questions, “Who am I?” “Why am I here?” or “What is my purpose in this life?” has experienced this self-reflective process. These questions are fundamentally different than internal dialogue, such as “I am hungry, what should I eat?” or “I should avoid walking too close to the edge of a cliff so I don’t fall.”

The differentiation between an outer life and an inner life underlies the foundational concepts of psychology. For example, Maslow's hierarchy of needs has physiological needs at the base, topped with safety needs, love and belonging, esteem, and self-actualization. Extrinsic motivation is generally associated with the bottom half of the needs pyramid, while intrinsic motivation is more associated with the top half.

The importance and role of intrinsic motivation and the social and internal needs of humans cannot be overemphasized. Current research has again indicated the role of neurochemicals as a biological basis for understanding intrinsic motivation. What the science indicates is that these processes are predictable and replicable—both important characteristics to understand when we are trying to motivate ourselves or others.

According to Ryan and Deci (2000), two of the foremost motivation academics, “Intrinsic motivation is defined as the doing of an activity for its inherent satisfaction rather than for some separable consequence. When intrinsically motivated, a person is moved to act for the fun or challenge entailed rather than because of external products, pressures, or rewards.”

When we can find opportunities to connect an activity or behavior to internal drives, we are connecting to intrinsic motives. For example, think about your favorite hobby or activity—perhaps it is taking photographs or spending time with your family. These are actions you would take because they make you feel like you. Spending time with one's family might have external benefits, such as children having higher academic achievement and lower potential rates for truancy. However, it is likely these are not the underlying motives for wanting to spend time with your family. More likely, doing so just makes you feel good.

Connecting to some purpose or understanding of ourselves is one of the most powerful motivations we can tap into, and it is something we as humans are unique in our capacity to do. A violin prodigy might be intrinsically motivated to play and expand not only their ability to play but also to bring their gifts to the world, and to bring others some of the joy which they feel when they play.

Moving beyond external rewards and punishments into internally generated satisfactions, such as connecting to a greater purpose than oneself or aligning oneself with a personal calling, has had a profound effect on the world we live in. From landing a man on the moon, to the green revolution, to addressing the most critical issues facing humanity—these are the domain of intrinsic motivation.

Using Different Motivational Approaches

Much like tools in a toolbox, different motivational approaches work better in different contexts. For example, using a hammer to install a sink is not necessarily going to have the desired result. Therefore, the following guidelines are provided to help you use the different motivational approaches most effectively. This list is not comprehensive, and it is tailored to an Extension

professional audience; however, these examples are intended to provide a set of preliminary guidelines to help support you in a variety of situations.

What Approach Motivation is Best For

- Approach motivation is best for situations where rewards can be offered on a contingent basis. There must be some amount of choice in behavior and response. The situation should NOT result in a negative outcome.
- Examples:
 - Providing 30 extra minutes of recreation time in the afternoon if all campers have completed their daily cleaning by 9 a.m.
 - Sponsoring a pizza party for a group of youth if everyone turns in their 4-H portfolios.
 - Giving a farmer a subsidy for implementing a new technology that will make their operation more environmentally sustainable.
 - Rewarding yourself with a “cheat day” after adhering to your new diet for 2 weeks.
 - Providing a gift card to everyone in the office if all annual reports are submitted by the deadline.

What Avoid Motivation is Best For

Avoid motivation is best for situations where failure to perform or adhere to standards may result in negative outcomes.

Examples:

- Instituting a policy in a 4-H contest where any form of cheating will result in an automatic 0 in the contest and referral to the academic disciplinary committee.
- Linking employment to metrics for success. For example, employment termination based on failing to meet ethical standards, failing to file required paperwork, demonstrating unacceptable customer service, etc.
- A farmer being fined by a regulatory agency for improperly disposing of wastes from their production practices.
- Publicly posting a list of employees who were noncompliant in submitting their weekly timesheets.

What Intrinsic Motivation is Best For

Intrinsic motivation is best for situations where the outcome and satisfaction for the behavior are internally oriented, or when they are related to something that is bigger than oneself.

Examples:

- Encouraging a group of new Master Gardeners to not think about just the technical

aspects of plant cultivation, but also to envision how their efforts can help bring enjoyment, mental health, and greater well-being for others.

- Creating a vision for a group of cotton growers where the cotton they produce is not simply a commodity, but instead is the fabric that is used from swaddling newborns to clothing humanity.
- Explaining to a county Extension office, from the clerical administrative personnel to the agents and specialists, how they not only help solve technical problems, but also how their actions affect society. For example, solving a farmer's peanut production problem increases yield, which means more food for society and more resources for the farmer's family.
- Finding something you are personally passionate about and that you would do simply for the satisfaction of doing.

Summary

Motivation is a powerful concept, and one which we hear frequently about in our daily lives. However, motivation may look very different depending on the situation and the intended outcome. Having a variety of motivational approaches available to us can be very helpful as we find ourselves in situations where we are trying to influence the behaviors of others or ourselves.

The intent of this publication is not necessarily to provide a comprehensive overview of the entire academic field of motivation, but to provide a high-level overview that you can use and apply starting immediately.

References

Bopp, C., Engler, A., Poortvliet, P. M., & Jara-Rojas, R. (2019). The role of farmers' intrinsic motivation in the effectiveness of policy incentives to promote sustainable agricultural practices. *Journal of Environmental Management*, 244, 320–327.

<https://doi.org/10.1016/j.jenvman.2019.04.107>

Bromberg-Martin, E. S., Matsumoto, M., & Hikosaka, O. (2010). Dopamine in motivational control: Rewarding, aversive, and alerting. *Neuron*, 68(5), 815–834.

<https://doi.org/10.1016/j.neuron.2010.11.022>

De Boer, J. (2010). The role of prevention-oriented attitudes towards nature in people's judgment of new applications of genomics techniques in soil ecology. *Public Understanding of Science*, 19(6), 654–668. <https://doi.org/10.1177/0963662509342473>

Di Domenico, S. I., & Ryan, R. M. (2017). The emerging neuroscience of intrinsic motivation: A new frontier in self-determination research. *Frontiers in Human Neuroscience*, 11, 145.

<https://doi.org/10.3389/fnhum.2017.00145>

- Dweck, C. S. (1988). Goals: An approach to motivation and achievement. *Journal of Personality and Social Psychology*, 54(1), 5–12. <https://doi.org/10.1037/0022-3514.54.1.5>
- Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychologist*, 34(3), 169–189. https://doi.org/10.1207/s15326985ep3403_3
- Elliot, A. J. (2006). The hierarchical model of approach-avoidance motivation. *Motivation and Emotion*, 30, 111–116. <https://doi.org/10.1007/s11031-006-9028-7>
- Gable, P. A., & Dreisbach, G. (2021). Approach motivation and positive affect. *Current Opinion in Behavioral Sciences*, 39, 203–208. <https://doi.org/10.1016/j.cobeha.2021.03.030>
- Greiner, R., Patterson, L., & Miller, O. (2009). Motivations, risk perceptions and adoption of conservation practices by farmers. *Agricultural Systems*, 99(2–3), 86–104. <https://doi.org/10.1016/j.agsy.2008.10.003>
- Herath, C. S. (2010). Motivation as a potential variable to explain farmers' behavioral change in agricultural technology adoption decisions. *E+M Ekonomie a Management*, 13(3), 62–71. https://www.ekonomie-management.cz/download/1331826748_37a6/06_herath.pdf
- Lamm, K. W., Carter, H. S., & Melendez, M. W. (2014). Investigating the linkage between intrinsic motivation and project team satisfaction in undergraduate agricultural leadership students. *Journal of Agricultural Education*, 55(3), 103–115. <https://doi.org/10.5032/jae.2014.03103>
- Meierová, T., & Chvátalová, V. (2022). Frustrated or fulfilled? Motivation of Czech farmers to implement climate change adaptation measures on the landscape level. *Journal of Rural Studies*, 92, 354–370. <https://doi.org/10.1016/j.jrurstud.2022.04.013>
- Mustofa, A. Z. (2022). Hierarchy of human needs: A humanistic psychology approach of Abraham Maslow. *Kawanua International Journal of Multicultural Studies*, 3(2), 30–35. <https://doi.org/10.30984/kijms.v3i2.282>
- Oudeyer, P. Y., & Kaplan, F. (2007). What is intrinsic motivation? A typology of computational approaches. *Frontiers in Neurorobotics*, 1, 6. <https://doi.org/10.3389/neuro.12.006.2007>
- Rouet-Leduc, J., Van Der Plas, F., Bonn, A., Helmer, W., Marselle, M. R., von Essen, E., & Pe'er, G. (2024). Exploring the motivation and challenges for land-users engaged in sustainable grazing in Europe. *Land Use Policy*, 141, 107146. <https://doi.org/10.1016/j.landusepol.2024.107146>
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54–67.

<https://doi.org/10.1006/ceps.1999.1020>

Ryan, R. M., Bradshaw, E., Deci, E. L., Sternberg, R., & Pickren, W. (2019). Motivation. In R. Sternberg & W. Pickren (Eds.), *The Cambridge Handbook of the Intellectual History of Psychology* (pp. 391–411). Cambridge University Press.

<https://doi.org/10.1017/9781108290876.016>

Tabernero, C., & Hernández, B. (2011). Self-efficacy and intrinsic motivation guiding environmental behavior. *Environment and Behavior*, 43(5), 658–675.

<https://doi.org/10.1177/0013916510379759>