The Skillfulness of Virtue

Improving Our Moral and Epistemic Lives

Matt Stichter

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MATT STICHTER
Washington State University

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Introduction

In the past forty years, the concept of virtue has risen to prominence within ethics, and with that has come a renewed interest in moral development. The reason for the connection between virtue and moral development is that acquiring a virtue is thought to shape a person's thoughts, emotions, intentions, and behavior. That is, coming to possess a virtue is supposed to alter how we perceive and react to situations of moral import, for we are cultivating new habits or dispositions. A similar trend has occurred within epistemology over the last thirty years, with the rise of virtue epistemology. The interest in virtue there has led to a focus on the characteristics that are important for achieving knowledge, understanding, and other epistemic goods.

However, in the past two decades, there has also been much skepticism about what virtue theorists tend to envision that we are acquiring when we acquire a virtue, namely a well-entrenched global character trait. Research from the field of social psychology has cast doubt on the plausibility of acquiring cross-situationally consistent character traits that will lead us to act appropriately across a variety of contexts. Virtue theorists have since been put on the defensive, and this has brought the experimental results of moral psychology to the forefront of discussions of virtue, both for critics and defenders. However, the topic of virtue in general (in contrast to specific applications of it to virtue ethics or virtue epistemology) has always been connected with psychology, because acquiring a virtue is understood as a process of psychological development. So figuring out what virtue is and how to acquire it is then inseparable from views about human psychology and questions about how people can alter patterns of behavior.

This book contributes to virtue theory and the ongoing exchange between philosophers and psychologists by defending the idea that the

acquisition of a virtue is a process of acquiring a skill.[1] Expertise in a skill enables us to be reliably responsive to reasons and to act well in demanding situations, and acquiring expertise requires the motivation to hold oneself to high standards – all of which are elements we typically associate with possessing a virtue. This 'virtue as skill' thesis has an ancient pedigree, though it has really only been developed in detail within the last twenty years.[2] The idea originates in ancient Greek discussions of virtue.[3] Aristotle, for example, in his account of virtue frequently invoked comparisons to skills, in an effort to illuminate the process by which virtue would be acquired. In a well-known discussion of virtue, Aristotle claims that:

> we acquire them as a result of prior activities; and this is like the case of the arts, for that which we are to perform by art after learning, we first learn by performing, e.g., we become builders by building and lyre-players by playing the lyre. Similarly, we become just by doing what is just, temperate by doing what is temperate, and brave by doing brave deeds.[4]

Acquiring virtue for Aristotle involves a process of learning by doing, which should be familiar to us from our own experiences of acquiring skills. Learning a skill is a process of acquiring practical knowledge, that is, the knowledge of how to do something, like building a house or driving a car. With virtue, the practical knowledge is the knowledge of how to act well, like acting honestly or kindly. Virtues, like skills, require experience and practice to acquire. You cannot learn how to surf merely by reading a book about it, and likewise, you cannot acquire the virtue of kindness just by reading one of the current books on virtue. You need to learn by doing – to get good at surfing you need to surf, and acquiring kindness requires doing kind acts.

Such structural similarities between virtues and skills have been noted by others in the virtue literature, both in virtue ethics and virtue epistemology, but often it is taken to be merely a helpful analogy. Rarely is it

[1] This is to be distinguished from a weaker claim that virtues are merely associated with skills, such that people who have certain virtues tend to have related skills as well (for example, if self-control were merely a skill we would expect a virtuous person to have acquired).

[2] I should note that sometimes I refer to the 'virtue as skill' thesis as the 'skill model of virtue'.

[3] Despite the influence of the ancient Greeks on contemporary discussions of virtue as skill, I will not be giving an historical reconstruction of their views. But for differing perspectives on the virtue as skill thesis in Ancient Greek thought, see Angier, Tom, *Techne in Aristotle's Ethics: Crafting the Moral Life* (New York: Continuum, 2010); Annas, Julia, *Intelligent Virtue* (Oxford: Oxford University Press, 2011); Hutchinson, D.S., "Doctrines of the Mean and the Debate Concerning Skills in Fourth-Century Medicine, Rhetoric, and Ethics," *Apeiron*, 21 (1988), 17–52; Stichter, Matt, "Ethical Expertise," *Ethical Theory and Moral Practice*, 10 (2007), 183–194.

[4] Aristotle, *Nicomachean Ethics* (Grinnell: The Peripatetic Press, 1984), 1103a32–1103b3.

thought that the reason why people find so many similarities is simply because *virtues are skills*, which is the position this book defends. Certainly one of the advantages of the 'virtue as skill' thesis is that given the vast research done on skills and expertise by psychologists, there is no psychological skepticism about the ability of people to acquire skills (in contrast to being able to acquire global character traits). Of course, it will still take the rest of this book to argue that we should not be skeptical of people being able to acquire virtues as skills, but I suspect that some of the resistance to conceiving of virtues as skills is due to an underappreciation of the complexity of skill acquisition and skillful performances.

If the thesis that a virtue is a skill is correct, then it will have a significant impact on our conceptions of virtue development. Determining whether this is plausible requires answering several questions. First, what is the nature of skills and expertise? Second, what characteristics would virtues and the virtuous person have if they are modeled on skills and expertise? Third, do we have evidence that virtue development tracks skill acquisition? There are two related difficulties in answering these questions. First, the comparison of the virtuous person to experts in a skill is what matters most for the 'virtue as skill' thesis. However, although most of us have acquired several skills, few of us have achieved the level of expertise with regard to those skills. Since research shows that those with expertise approach problems in a qualitatively different way than those less skilled, our own experiences may thus mislead us about the nature of skill.

Second, this potential for misleading characterizations of skills and expertise leads to philosophers implicitly working with different conceptions of skills. Furthermore, if there are different conceptions of skills, then there can also be different conceptions of the 'virtue as skill' thesis. Thus, an apparent agreement between philosophers that virtues are skills can mask serious underlying disagreement, if they are operating with fundamentally different conceptions of skills. Progress on this issue will be next to impossible without some general agreement amongst philosophers as to the nature of skills. Furthermore, the usefulness of any comparison of virtues to skills depends upon the accuracy of the account of skills being referenced.

This book addresses these questions by grounding an account of skill in the recent psychological research on self-regulation and expertise, as well as in recent advances in cognitive science. I then explore the philosophical implications of that research for the 'virtue as skill' thesis. While I am constructing a general account of virtue, I tend to focus on cases of moral

virtues, given that my primary area of interest and background is in ethics.[5] But I also devote some time to discussing epistemic virtues, especially since there is starting to be more work done in virtue epistemology on the connection between virtues and skills than in virtue ethics.[6] However, I do not attempt to provide a full taxonomy of these categories of virtues, as that requires further empirical work (rather than mere philosophical reflection) to be carried out.

Chapter Outline

The explication of the 'virtue as skill' thesis, and a look at its implications in different fields of virtue theory, is divided into five chapters. Chapter 1 provides an extensive overview of the psychological theories relevant to developing my virtue as skill thesis. Instead of diving straight away into the literature on skills and expertise, I begin with theories of self-regulation. The reason for this is that they provide the foundation for understanding how we set goals and standards for ourselves, along with strategies for reaching those goals and upholding those standards. In order to reach more complicated goals you will often need to acquire skills, as skill development allows us to handle that complexity in stages. The chapter then covers the essential elements of skill acquisition and expert performance, which provides the building blocks for the development of a skill-based account of virtue in the next chapter. In addition, these elements are further explained by reference to 'dual-process' theories in cognitive science. After detailing the process of skill acquisition and expert performance, I then show some of the problems with two prominent philosophical accounts of skill that have been used recently to build skill models of virtue. These two accounts give a very incomplete picture of skillfulness, and are not based in the framework of self-regulation.

Chapter 2 begins the process of building my virtue as skill account, based on the framework from the previous chapter. I say 'begins the process', as this chapter provides the bare bones of the account, which

[5] In brief, virtues can be broadly grouped together by the kind of ends at which they aim. So moral virtues aim at moral ends (usually determined in reference to living a flourishing life), epistemic virtues aim at epistemic goods (like truth, knowledge, understanding, etc.), aesthetic virtues aim at securing aesthetic goods like beauty, and prudential virtues are generally useful to securing any kind of good (which could encompass virtues such as courage, patience, or integrity), etc. I will be concerned in this book only with moral, epistemic, and prudential virtues.

[6] This is due to the influence of Ernest Sosa's approach to virtue epistemology, which I discuss in Chapter 3, which likens cognitive performances to skilled performances.

CHAPTER 1

Self-Regulation and Expertise

Virtue theory has been around for about twenty-five hundred years, but in the last twenty-five years the role of virtue has come into serious dispute. Owen Flanagan (1991) was among the first to note that current psychological research was calling the possession of traditional conceptions of virtue into question. This turned into serious skepticism about virtue with Gilbert Harman (1999) and John Doris's (2002) "situationist" critiques on the instantiation of virtue presumed by contemporary virtue ethical theories, due to experimental results in social psychology that seemingly showed moral behavior to often be largely a result of situational variables rather than personality traits or moral reasoning.[1] This initiated a vast new literature within virtue theory, with adherents and opponents scouring the psychological literature to see whether virtue could be given an empirically adequate grounding. The most important realization of this debate has been that for those who are concerned with moral development, as are most virtue theorists, attention must be paid to the psychological research on personality, situational influence, and behavior. Recommendations for moral development cannot be done merely from the philosophical armchair anymore, as theorists need to be aware of the psychological mechanisms that affect how people actually behave. This idea is neatly summarized by Flanagan's "Principle of Minimal Psychological Realism," which states that any prescription of a moral ideal should involve only those processes or behaviors that we have reason to believe are possible for humans.

In recognition of the importance of this principle, this chapter provides an overview of the general psychological mechanisms underlying human agency in the form of self-regulation, and the more specific mechanisms involved with skill acquisition, before I move on in the following chapters

[1] Also, this critique has been recently extended to virtue theory in other areas of philosophy, such as virtue epistemology. I will take up this issue at length in Chapter 5.

to explore how we might reconceive of virtue given the psychological mechanisms for improving our behavior that we know are available to us. In the process of summarizing these various mechanisms, I will also be synthesizing numerous psychological theories that are usually discussed in isolation from each other, in order to provide a broader psychological framework.[2] I caution the reader that there is a fair amount of ground to cover before I start discussing the philosophical implications of this research, but it will prove important to present an overall framework at the outset.

I begin with social cognitive theories of human agency, which understand the exercise of agency primarily in terms of self-regulation. In understanding self-regulation, I divide the discussion into two sections that explain the connected activities of goal setting and goal striving. This will provide a starting foundation for understanding skill acquisition more specifically, as skill acquisition is a complex form of self-regulation. The next two sections discuss key elements in skill acquisition. The first covers the role of deliberate practice in improving one's level of skillfulness, while the second draws on dual-process theories of cognition to explain how, in practicing, we can make initially effortful tasks in skilled performance become effortless. In the two sections that follow, I discuss important aspects of the knowledge that people gain when acquiring a skill, first in terms of schemas and mental models, and second in terms of the limitations in articulating and codifying that skillful knowledge.

Finally, having presented the overall framework, I am then in a position to critique the two main philosophical accounts of expertise that appear in the virtue as skill literature. The work of both Julia Annas and Hubert Dreyfus have made significant contributions to the 'virtue as skill' thesis. However, each has also made some unwarranted assumptions about skills and expertise, and neither of their accounts is grounded in an understanding of self-regulation more broadly.

Self-Regulation: Goal Setting

According to social cognitive theories of agency, human functioning is the result of a triadic interaction between the environment, the intrapersonal

[2] While my goal is not to provide new psychological theories for either self-regulation or skill, as the main aim of this chapter is to provide an accurate and in-depth account of skill to provide the foundation for virtue as a skill in the next chapter, nevertheless the integration of these psychological theories is new.

(cognitive and affective) features of a person, and the behavior of that person.[3] First, human behavior is not a product solely of one's intrapersonal features, independent of the environment in which one acts. Second, behavior is also not a product solely of one's environment. Instead, behavior is the result of the interaction between the environment and the person, where it matters how someone construes their situation in determining their response to it. Third, behavior is not merely a passive by-product of the interaction between environment and person, as behavior can lead to changes in both environmental and intrapersonal factors. The current social environment, for example, is the product of previous human behavior, as is the current natural environment, say, with respect to global climate change. With regard to one's own intrapersonal features, behaving in a way that successfully achieves a goal, for example, is likely to produce a feeling of self-satisfaction, and encourages the actions that brought about the achievement. Failure, on the other hand, often prompts feelings of disappointment, which could go along with either thinking about how to do better in the future or giving up on the goal altogether.

As another kind of example of this triadic relationship, you can also take steps to mediate the potentially negative effects that an external environment or your own intrapersonal features may be having on your behavior. If you are trying to study in a noisy environment, you may not be able to stop that noise from distracting you from focusing on your studies. In response, you can try to block out the noise via headphones, or move to some quieter location, in effect changing the environment so that you can effectively study.[4] With regard to our own intrapersonal features, if a

[3] Virtue theorists may already be familiar with some aspects of social cognitive theory through the work of Mischel and Shoda, which Daniel Russell and Nancy Snow have recently incorporated into their accounts of virtue. Bandura's work on social cognitive theory is both earlier and broader than Mischel and Shoda's work that followed on the cognitive-affective personality system (where they basically go into more detail on the personality aspect of the triad). However, it should also be noted that their approach has been critiqued as being unable to account for some broad personality regularities, such as the Big Five personality traits (DeYoung and Weisberg), as well as being unable to account for virtues (Miller). See Mischel, W. and Shoda, Y., "A Cognitive-Affective System Theory of Personality: Reconceptualizing Situations, Dispositions, Dynamics, and Invariance in Personality Structure," *Psychological Review*, 102: (1995), 246–268; Russell, Daniel C., *Practical Intelligence and the Virtues* (New York: Oxford University Press, 2009); Snow, Nancy E., *Virtue as Social Intelligence: An Empirically Grounded Theory* (New York: Routledge, 2010); DeYoung, Colin G. and Weisberg, Yanna J., "Cybernetic Approaches to Personality and Social Behavior," in Snyder, M. and Deaux, K. (eds.), *Oxford Handbook of Personality and Social Psychology*, Second Edition, in press (New York: Oxford University Press); Miller, Christian, *Character and Moral Psychology* (Oxford: Oxford University Press, 2014).

[4] Zimmerman gives an example of a golfer having trouble with her swing because the sun is blinding her. By putting on sunglasses, she is changing the effect her current environment has on her, and this will enable her to have a better swing. Zimmerman, Barry J., "Development and Adaptation of

basketball player feels that she is in a high-pressure situation, it may produce internal stress that negatively affects her behavior – 'choking'. She can then attempt to change her construal of the situation, thinking about just playing well in general and not obsessing about the details of a maneuver, so that it prompts different behavior. Because of the interactive framework, in order to pursue our goals, we may first need to alter our intrapersonal processes or the environment, before we can act effectively.

Social cognitive theory locates agency in our attempts to self-regulate, where self-regulation is a matter of having a goal that one is trying to achieve. Control theory, or cybernetics, has long studied the processes involved with goal-oriented systems, both in machines and in animals. The basic stages to any form of regulation involve having: (1) a goal (or desired state of affairs); (2) a representation of the current state affairs; (3) a way to compare (1) and (2) to see if the goal is currently being met; and (4) if the goal is not being met, an action available within the system that can change the current state of affairs to meet the goal (and the system must then go through stages [2] and [3] again in order to know when the goal has been achieved).[5] A simple example of this is a thermostat that is set to keep a room at a minimum level of warmth. The thermostat has: (1) a set temperature goal; (2) a way to check the current status of the ambient temperature; and (3) the ability to compare the goal temperature with the current temperature. What it does in response to the comparison depends on whether there is a discrepancy between the goal and current temperatures. If there is no discrepancy, it does nothing. If instead the status of the temperature is below the goal, then the thermostat has (4) a method for triggering the heater to turn on. Furthermore, the thermostat keeps checking the current temperature, so that it can turn off the heater when the goal temperature is reached.

Of course, that is just the most basic picture of a goal-directed system, and more complex systems will add additional layers of processes to this initial picture. For example, if the system has multiple means of achieving the goal, then there needs to be an additional process for selecting a particular means. In addition, if a system has multiple goals, and a situation affords opportunities to pursue multiple mutually exclusive goals,

Expertise: The Role of Self-Regulatory Processes and Beliefs," in Ericsson, K. Anders (ed.), *The Cambridge Handbook of Expertise and Expert Performance* (Cambridge: Cambridge University Press, 2006), 705–722.

[5] It is important to note that these stages need not be strictly speaking sequential, as these processes might be going on in parallel. DeYoung, Colin G., "Cybernetic Big Five Theory," *Journal of Research in Personality*, 56 (2015), 33–58.

then there needs to be a process for selecting which goal will be pursued on that occasion. Furthermore, when thinking of humans, we also need to account for additional processes of coming up with new goals, as well as new strategies for achieving preexisting goals.

The basic model of control is just one of discrepancy reduction between the goal and the existing state of affairs (e.g. the thermometer reducing the discrepancy in temperature), but in giving ourselves goals to strive for, we instead produce new discrepancies between the current state of affairs and what we desire them to be.[6] In other words, thermometers do not get bored, but people do. Boredom and, more positively, curiosity seem to motivate the adoption of new goals.[7] Finally, when there is a discrepancy between a goal state and the existing state of affairs, we can also choose to give up the goal instead of continually trying to achieve it (unlike the case of the thermometer), thus involving another set of processes.

Given the complexity of human behavior, I will be touching on all of the aforementioned aspects of goal-directed behavior at various times throughout the book. However, it is well beyond the scope of this book to try to provide a comprehensive view of all the possible processes and factors that bear on self-regulation. So, I will be focusing instead on those processes that are most relevant to understanding humans pursuing important goals related to skill acquisition, as well as internalized moral and epistemic norms as goals. To handle the overall complexity, it helps to divide self-regulation into the related activities of setting goals and striving to reach them.[8]

Self-regulation begins with commitment to a goal, which implies adopting a certain standard of behavior by which one judges oneself. With humans, unlike the thermometer, this also has an affective dimension, as Albert Bandura relates:

> The self-regulatory control is achieved by creating incentives for one's own actions and by anticipative affective reactions to one's own behavior

[6] Bandura, Albert, "Self-Regulation of Motivation and Action through Internal Standards and Goal Systems," in Pervin, Lawrence A. (ed.), *Goal Concepts in Personality and Social Psychology* (London: Lawrence Erlbaum Associates, 1989), 19–85, 38.

[7] Haase, Claudia Maria, Poulin, Michael, and Heckhausen, Jutta, "Engagement and Disengagement across the Life Span: An Analysis of Two-Process Models of Developmental Regulation," in Greve, W., Rothermund, K., and Wentura, D. (eds.), *The Adaptive Self: Personal Continuity and Intentional Self-Development* (New York: Hogrefe, 2005), 117–135.

[8] This is adapted from the Rubicon model of action phases, a more specific theory regarding goal-oriented behavior in humans. Gollwitzer, Peter M., "Action Phases and Mind-Sets," in Higgins, E. Tory and Sorrentino, Richard M. (eds.), *Motivation and Cognition: Foundations of Social Behavior*, Vol. 2 (New York: The Guilford Press, 1990), 53–92.

goal that is more specific about how the higher-level goal is to be achieved. As Angela Duckworth puts it: "Lower-order goals are more numerous, context specific, short-term, and substitutable, whereas higher-order goals are typically fewer in number, more abstract, more enduring, and more important to the individual."[15] The higher-order goals represent the goals that are most intrinsically valued, and those most tied to our sense of self. These are goals we do not give up lightly.[16] Contrast that to lower level goals, which can be given up more easily. For example, if you find that your normal route home from work is blocked by construction, you can easily substitute that with another route. Presumably, getting home by a particular route will not be strongly tied to your identity.

The relationship between the differing levels of the goals need not be merely means-end reasoning, though, as sometimes the lower order goals provide the constitutive elements of a higher order goal.[17] Or sometimes a goal involves multiple contextual elements, such that those goals need a more concrete specification of what it means to achieve that goal in a particular context. For example, the goal of firefighting does not involve just the extinguishing of the fire, as firefighters have to be concerned about saving lives threatened by the fire, as well as trying to avoid extensive property damage. So in any particular context of a fire, firefighters need to have a more concrete idea of what the goal ought to be of their practice (say by prioritizing the innocent lives first, and containing the fire second).[18] Once you know what goal you are trying to achieve here and now, then you need to figure out a particular strategy for trying to achieve it.

Self-Regulation: Goal Striving

Switching from the setting of a specific goal into striving to achieve it, takes us from the vertical hierarchy of goal organization into a horizontal (or temporal) perspective on action, which is represented by the Rubicon

[15] Duckworth, Angela and Gross, James J., "Self-Control and Grit: Related but Separable Determinants of Success," *Current Directions in Psychological Science*, 23:5 (2014), 319–325, 321.

[16] These are sometimes referred to as 'protected values'. Tanner, Carmen and Medin, Douglas L., "Protected Values: No Omission Bias and No Framing Effects," *Psychonomic Bulletin & Review*, 11:1 (2004), 185–191. There will be further discussion of this in Chapter 5.

[17] In fact, this is how many virtue theorists view the relationship between virtues and living well. Virtues are not merely means to the end of living well, but rather the virtues are constitutive of what it is to live well.

[18] This is also a relationship that is supposed to apply to virtue. You may have a goal of being honest, but you also need a specification of what honesty requires of you in this particular context (where what is required of you varies from one context to the next). Swartwood, Jason, "Wisdom as an Expert Skill," *Ethical Theory and Moral Practice*, 16 (2013), 511–528.

model of action phases.[19] Action phase theory separates goal setting and striving into four distinct phases: (1) choosing a goal to commit to; (2) planning how to achieve the goal; (3) taking action to implement the plan; and (4) evaluating the action in the light of the goal commitment.[20] The first phase involves what was discussed in the preceding paragraphs regarding the vertical hierarchical organization of goals, and it is the second phase which begins the horizontal (or temporal) movement towards achieving one of those goals.[21] On this model, a distinction is made between motivation (goal setting) and volition (goal striving). The reason for this distinction is that deciding whether to commit to a goal in the first place, or later whether to maintain commitment to that goal, requires a different kind of mindset from the activities associated with striving to achieve a goal (planning and acting).[22] In short, in phases of motivation you are undecided about your goal commitments, whereas phases of volition assume a decided goal commitment that you are now trying to realize.

[19] Achtziger, A., and Gollwitzer, Peter, M., "Motivation and Volition in the Course of Action," in Heckhausen, Jutta and Heckhausen, H. (eds.), *Motivation and Action* (New York: Cambridge University Press, 2007), 202–226; Heckhausen, Jutta, "The Motivation–Volition Divide and Its Resolution in Action-Phase Models of Developmental Regulation," *Research in Human Development*, 4:3–4 (2007), 163–180.

[20] While there is overlap here with the four fundamental stages in control/cybernetic theory discussed earlier, the action phases do not map on to those stages directly, in part because the Rubicon model is more specific in its focus than cybernetics. Action phases 1 and 2 represent having a goal and a means for achieving it, which any self-regulating system needs, though in cybernetics it is not required that the goal-oriented system deliberate about what goals to adopt or how to achieve them, as they may be fixed via programming in machines (e.g. the thermostat) or by instinct in living organisms. So, action phases 1 and 2 are more specific to processes of deliberating about ends and means. Though it should also be noted that the Rubicon model is not dealing directly with the processes by which one selects a specific goal to pursue among the many that a particular situation might afford, or for selecting amongst multiple means for achieving that goal. However, as will be detailed below, how strongly one commits to a goal and how detailed one's plans are for achieving the goal are both factors that influence which specific goal and means will be selected in a particular situation.

[21] It might be difficult to distinguish the relationship of superordinate–subordinate goal (vertically organized) from that of acting to achieve a subordinate goal (horizontally organized), as they can both admit of a means-end relationship (though again some of the relationships between goals are constitutive rather than instrumental). Subgoals are basically stages on the path to the superordinate goal, each of which requires figuring out how you are going to achieve it before you are in a position to start implementing a plan to achieve the next higher-ordered goal. So, you can think of the horizontal movement depicted by the action phase model as the steps one takes to achieve one of the subgoals, and part of the fourth phase is an evaluation of whether it is time to move on to tackling a higher-ordered goal.

[22] The two mindsets are usually referred to as 'deliberative' for motivation phases and 'implemental' for volition phases. I prefer, however, not to use this nomenclature at least for the 'deliberative' mindset, as it might suggest that conscious deliberation does not take place in the volitional phases – which would be untrue. It also evokes dual-processing theories of cognition, which often contrast 'deliberative' with 'automatic' processes, but that distinction does not map onto the difference in the two mindsets (as both types of cognitive processes can play a part in each mindset). I prefer to contrast the mindsets as 'commitment' versus 'implementation'.

1		2		3		4
Motivation Pre-decision		**Volition** Pre-action		**Volition** Action		**Motivation** Post-action
Deciding on a goal	→	Planning how to achieve goal	→	Acting to achieve goal	→	Evaluating the action[23]

In the first phase, you are trying to decide what goals to set for yourself. It is a phase that involves "carefully weighing alternative goal intentions and deliberating the pros and cons regarding the goal's incentives (attractiveness of the activity itself, the outcome aimed for, and the consequences of the outcome) and expectancies about attaining those."[24] These two considerations are often referred to as 'desirability' and 'feasibility'. 'Desirability' can be thought of in terms of reflecting on why you might want to commit yourself to a goal, by thinking about what is valuable about achieving it. By contrast, 'feasibility' requires you to think about how likely it is that you can achieve that goal. Both considerations matter, though sufficient desirability can outweigh significant difficulties in feasibility, like for those setting out to become an Olympic athlete. Importantly, considerations of feasibility are affected by one's self-efficacy beliefs. As Bandura argues, "there are many activities that, if done well, produce valued outcomes, but they are not pursued by people who doubt they can do what it takes to succeed. Such exclusions of large classes of options are made rapidly on efficacy grounds with little thought of costs and

[23] Zimmerman claims that self-regulation takes place during three cyclical phases: forethought (before acting); performance control (while acting); and self-reflection (after acting). This maps onto phases 2–4 in action phase theory. For example, in forethought, one strategizes how to achieve some desired outcome. This is often done in terms of 'if-then' plans (or implementation intentions), figuring out in advance what you plan to do if you find yourself in a particular situation. While performing, you execute those strategies, perhaps even modifying them while acting. Following this, self-reflection allows one to evaluate the performance as to whether the desired outcome was achieved. This in turn can influence the next process of forethought (assuming the goal has not been fully achieved), and so can form a cyclical feedback system. However, this approach simply assumes a goal commitment already in place, so it misses distinctions within the initial phase 1 of goal setting, as well as the extent to which evaluations in phase 4 represent a different mindset from phases 2 and 3, for such evaluations might lead you to change your goal commitments. Zimmerman, Barry J., "Attaining Self-Regulation: A Social Cognitive Perspective," in Boekaerts, Monique, Pintrich, Paul R., and Zeidner, Moshe (eds.), *Handbook of Self-Regulation* (San Diego: Academic Press, 2000), 13–39, 16.

[24] Heckhausen, Jutta, "The Motivation–Volition Divide and Its Resolution in Action-Phase Models of Developmental Regulation," *Research in Human Development*, 4:3–4 (2007), 163–180, 166–167.

benefits."[25] One demonstrated strategy for improving decisions in this phase, which takes into account these considerations of desirability and feasibility, is 'mental contrasting':

> the strategy of mental contrasting entails conjoint mental elaboration of the desired future and the present reality, thereby making both simultaneously accessible and creating strong associations between them. In mental contrasting, the positive future is elaborated first, and the negative reality is framed as 'standing in the way' of realizing the positive future. The simultaneous activation of the desired future and present reality emphasises the necessity for action.[26]

This strategy works better with respect to eventual goal attainment than just focusing on either the positive future or the present obstacle, as it prevents one from being overly optimistic or pessimistic when considering the possible goal. It combines both the elements of desirability of the future goal, and feasibility in terms of what is the main obstacle to overcome. Ultimately phase 1 culminates in a commitment to realize a goal.[27]

Once you have committed yourself to realizing a goal, it is time to start figuring out how you are going to realize it, and this transitions from goal setting (motivation) to goal striving (volition). Phase 2 is

[25] Bandura, Albert, "Social Cognitive Theory of Personality," in Pervin, Lawrence A. and John, Oliver P. (eds.), *Handbook of Personality: Theory and Research* (New York: The Guilford Press, 1999), 154–196, 182.

[26] Duckworth, Angela Lee, Grant, Heidi, Loew, Benjamin, Oettingen, Gabriele, and Gollwitzer, Peter M., "Self-Regulation Strategies Improve Self-Discipline in Adolescents: Benefits of Mental Contrasting and Implementation Intentions," *Educational Psychology*, 31:1 (2010), 17–26, 18. Also, as I will note in the discussion of the second phase, this strategy works even better if combined with the strategy of 'implementation intentions' in the planning phase.

[27] It is worth highlighting Gollwitzer's claim that the:

> model of action phases does not ignore the fact that goal striving is hierarchically organized. This is most evident in the model's distinction between goal intentions and behavioral intentions. Behavioral intentions are supplements to goal intentions and serve to promote the implementation of goal intentions. Accordingly, the formation of a goal intention precedes the formation of behavioral intentions, and the latter are justified by the former. But not all of the intentions formed subordinately to some goal intention must be behavioral intentions. People frequently form goal intentions in the service of other (superordinate) goal intentions (e.g., when a person who has decided to become a psychologist makes up his or her mind to go to school abroad). In this case, the formation of the subordinate goal (i.e. going to school abroad) should be preceded by a concern not only for the feasibility of this goal, but also for its desirability.

Gollwitzer, Peter M., "Action Phases and Mind-Sets," in Higgins, E. Tory and Sorrentino, Richard M. (eds.), *Motivation and Cognition: Foundations of Social Behavior*, Vol. 2 (New York: The Guilford Press, 1990), 53–92, 61.

essentially a planning phase. Bandura notes this connection in self-regulation, stating that:

> people motivate themselves and guide their actions anticipatorily through the exercise of forethought. They anticipate likely outcomes of prospective actions, they set goals for themselves, and they plan courses of action designed to realize valued futures ... by cognitive representation in the present, conceived future events are converted into current motivators and regulators of behavior.[28]

Committing yourself to a goal in phase 1, with considerations of desirability and feasibility, is part of this process of forethought. It motivates the next phase of forethought in planning what steps to take to achieve that goal. So, in phase 2 you are likely trying to figure out what needs to be done, how you are going to do it, when and where you will take action, etc.

However, it is also common for people to spend little time on this phase, as they might think that committing themselves to a concrete goal, like 'snacking less often', is a specific enough intention to effectively act on. But a far more effective route to planning your goals is through the use of implementation intentions, which differ from the kinds of intentions we have when we decide to commit ourselves to goals (i.e. goal setting). Gollwitzer has been at the forefront of this research, and he explains the difference as follows:

> In contrast to goal intentions, implementation intentions specify a plan on the when, where, and how of acting on one's goal intentions. Implementation intentions are subordinate to goal intentions and have the format of "If situation x arises, then I will perform goal-directed behavior y!", thus linking an anticipated opportunity to a select goal-directed response. By forming implementation intentions, people plan out in advance (i.e. pre-select) which situations and behaviors they intend to use to achieve their goals (goal intentions).[29]

Basically, an implementation intention has an 'if-then' structure – if this situation arises, then I will respond in this particular way (in order to achieve the goal I have committed myself to). Perhaps this sounds rather obvious as a strategy to realize one's goals, but people frequently do not

[28] Bandura, Albert, "Self-Regulation of Motivation and Action through Internal Standards and Goal Systems," in Pervin, Lawrence A. (ed.), *Goal Concepts in Personality and Social Psychology* (London: Lawrence Erlbaum Associates, 1989), 19–85, 19.

[29] Trötschel, Roman and Gollwitzer, Peter M., "Implementation Intentions and the Willful Pursuit of Prosocial Goals in Negotiations," *Journal of Experimental Social Psychology*, 43 (2007), 579–598, 581.

your goal was achieved and was a low level subgoal (like getting a gym membership in order to exercise more frequently), then it may be appropriate to dismiss that subgoal so that you can focus on the next higher goal (like taking the fitness classes offered there). Or your goal may be more enduring and success at achieving it once will prompt you to maintain commitment to it (if you take a fitness class and like it, then you maintain your commitment to coming to class).

Part of what you are also assessing here is whether achieving your goal had the outcome you hoped. You might find that achieving your goal did not have the value or meaning you expected, in which case you might end up dismissing the goal commitment (like pursuing a major in college only to find out that you do not really find that discipline interesting after all). Concerns about 'desirability', which were present in the first stage, reappear here. On the other hand, if you find that you did not accomplish your goal, then your concerns are also going to include 'feasibility', as you have to assess whether you could do things differently to accomplish your goal in the future. Bandura highlights that it "is partly on the basis of self-beliefs of efficacy that people choose what challenges to undertake, how much effort to expend in the endeavor, how long to persevere in the face of difficulties, and affect their vulnerability to stress and despondency in the face of difficulties and failures."[38] If the goal seems too frustrating to achieve, you might cease your commitment to it entirely. But even if it is difficult to achieve, a really desirable goal can prompt you to maintain your commitment and renew your efforts at realizing it. While this phase certainly has potential implications for future planning (i.e. goal striving), as success supports taking the same strategy in the future while failure will require some re-planning, what is primary in this phase is a concern about motivation and goal setting, as having taken action to implement your goal provides you with new information to consider with respect to what goals you have set for yourself (both in terms of feedback on the desirability and feasibility of your goal).

The distinction between motivation and volition in the action phase model also shows up when discussing two different ways in which one might have to prevent highly valued goals from being sidetracked. As mentioned previously, in acting (phase 3), one might have to exert self-control

eliminated. There is no process for it to change its strategy for achieving this goal, to give up on this goal entirely, or to adopt a new goal.

[38] Bandura, Albert, "Self-Regulation of Motivation and Action through Internal Standards and Goal Systems," in Pervin, Lawrence A. (ed.), *Goal Concepts in Personality and Social Psychology* (London: Lawrence Erlbaum Associates, 1989), 19–85, 29.

to keep oneself from acting to further an overall less valued goal instead (because of short-term gratification). But in evaluating one's action (phase 4), there is a different danger of losing your commitment to a superordinate goal if you find achieving one of the subgoals too difficult. Angela Duckworth's distinction between self-control and grit can be understood in terms of the different challenges involved with phase 3 (volition) and phase 4 (motivation).[39] Both grit and self-control are ways in which we protect high level goals, but they do so with respect to different time frames. Whereas self-control is employed in the moment to resist some temptation to act in a way that prevents you from acting on a more highly valued goal, grit is a characteristic addressed to long-term commitment to goals that are highly valued. Grit refers both to the passion and determination with which one remains committed to long-term goals, over long periods of time and despite setbacks. So those with grit are more likely:

> when faced with setbacks, to find a way forward by "sprouting" new lower-order goals (or actions) when a current lower-order goal (or action) is blocked. For instance, if a grant proposal or manuscript is rejected, tears may be shed, but soon enough another funder or journal outlet is identified and pursued. In other words, in a gritty individual's domain of passionate interest, goals or actions deemed unfeasible are met with the response of an active search for—or even invention of—viable alternatives.[40]

Grit is a matter of whether one maintains commitment to a superordinate goal when it becomes difficult to achieve it, such that one might abandon it altogether to pursue some other superordinate goal. Thus, in evaluating your action (phase 4), if you did not meet your subgoal, you may: (1) decide that there is another means for achieving it and renew your commitment to that subgoal (and by extension to the superordinate goal it serves); (2) decide that one should drop commitment to this subgoal, but replace it with another subgoal that also supports the superordinate goal; or (3) drop your commitment to the superordinate goal altogether, and find some alternative superordinate goal to pursue. Those with higher levels of grit are more likely to end up finding alternative ways to pursue their superordinate goal (options (1) and (2)), and those with less grit are more likely to opt out (option (3)). Duckworth argues that self-control is more predictive of success in day-to-day life, in terms of resisting the temptations

[39] I will return to Duckworth on the domain-specificity of self-control in the next chapter.

[40] Duckworth, Angela and Gross, James J., "Self-Control and Grit: Related but Separable Determinants of Success," *Current Directions in Psychological Science*, 23:5 (2014), 319–325, 322.

that you will later regret; while grit is more predictive of success over long periods of time or even a lifetime. This is why grit is especially important for skill acquisition and expertise, given the long-term goals one is working towards.

In sum, self-regulation theory provides us a general account of goal-directed behavior. Goals provide us motivation to act, based in part on how valued those goals are, and often the pursuit of a superordinate goal is broken down into successive subgoals. It is important to separate out phases of goal setting and goal striving, as each involves different types of considerations. In goal setting, considerations of the desirability and feasibility of goals are important. There are helpful strategies such as mental contrasting when initially setting one's goal, as well as the potential need for grit in maintaining one's commitment to a goal in the long term. In goal striving, since a goal has been set, considerations turn to planning and acting to achieve the goal. There are effective strategies for planning, such as implementation intentions, as well as the potential need for self-control when acting in case there is a conflict amongst your goals. I will return to these elements of self-regulation not only in the next section with regard to skill acquisition, but throughout the book, as it will also help to clarify debates in virtue theory.

Skill Acquisition: Deliberate Practice

Skill acquisition is basically a sophisticated form of self-regulation, which we engage in so as to achieve a desired goal in a domain of high complexity.[41] It is important to note that a skill involves some flexibility in how one goes about achieving that outcome (to cope with changes in one's environment – which is part of what makes the domain complex), as well as a broad view of the outcome (such as in learning how to speak a language, rather than a single phrase). In committing yourself to acquiring a skill, you begin internalizing standards about what counts as a good performance, which will guide your efforts to learn the skill. Skill

[41] That is, not all acquired abilities are necessarily skills. Some tasks are so simple, such as tying one's shoelaces or opening doors, that once you have done it a few times there is nothing else to learn. The need to acquire sophisticated competences such as skills arises when dealing with complex issues, since the skills enable one to handle the complexity by progressively developing one's abilities. As such, my view is similar to that of Ellen Fridland, as she refers to "skills as the subclass of abilities, which are characterized by the fact that they are refined or developed as a result of effortful attention and control to the skill itself." Fridland, Ellen, "Skill Learning and Conceptual Thought: Making a Way through the Wilderness," in Bashour, B. and Muller, H. (eds.), *Philosophical Naturalism and Its Implications* (New York: Routledge, 2014).

acquisition requires a progression from tackling simple tasks to more challenging tasks, no matter what level of skill you are aiming at, and of course as one advances in skill development which tasks count as 'simple' or 'challenging' will change. Learning how to be a competent and safe driver on the road can be one's superordinate goal, and reaching that goal requires successfully achieving many subgoals along the way (e.g. learning how to start the car, how to change gears, how to back out of a driveway, how to parallel park, etc.). Each of those subgoals requires planning how to achieve them, and there is a progression of difficulty in the subgoals that requires successful completion of the previous subgoal.

This progressive mastering of subgoals requires "practice, practice, practice."[42] So how much practice is needed to acquire a skill at the level of expertise? Frequent estimates place the amount of time necessary to achieve expertise in any field at 10 years or 10,000 hours.[43] However, mere experience is not sufficient for achieving expertise. People reach a certain level of acceptable performance, after which further experience does not lead to any improvement in performance. Additional experience may make performing at that level of skillfulness easier, but that is not the same as actually improving one's performance. Thus, the number of years of experience one has is not a sufficient predictor of performance. While having 10 years of experience may be necessary for expertise, it does not by itself guarantee expertise.

What more is needed? Research indicates that a particular kind of experience is necessary for expertise, as it turns out that the quality of the practice matters just as much as the quantity. Improving your level of skill requires not the mere repetition of things you already know how to do, but continually striving to do things that you currently cannot do. This kind of experience is referred to as 'deliberate practice', and it is roughly

[42] Though by no means is that the only factor that plays a role in skill acquisition. Also, hereafter when I mention "research" I will be referring to the psychological research on expertise. Note that I will be mainly summarizing the psychological literature at the outset for use in clarifying philosophical debates later in this chapter and throughout the rest of the book. Fortunately, the psychological research on expertise is fairly uniform in its findings across various different skill domains, and general findings about expertise replicate across domains. In this respect it is far less contentious than the research surrounding the person-situation debate within psychology, which requires careful attention to the experimental details to determine precisely what is being shown, as well as some of the famous experiments suffering from failures of replication.

[43] However, it should be noted, this number of hours can vary amongst different skill domains, and for individuals working within the same domain due to natural talent. Horn, John and Masunaga, Hiromi, "A Merging Theory of Expertise and Intelligence," in Ericsson, K. Anders (ed.), *The Cambridge Handbook of Expertise and Expert Performance* (Cambridge: Cambridge University Press, 2006), 587–612, 601.

10,000 hours of deliberate practice that is needed for expertise. Deliberate practice requires having specific goals in mind for improvement, rather than the vaguer goal of 'getting better', as is true with self-regulation in general. There need to be specific aspects of your performance that you go about planning how to improve, which then structures the kind of deliberate practice you engage in.[44] As you engage in deliberate practice you seek out feedback about your performance, in the hopes of identifying and correcting errors. You keep monitoring your progress as you practice. If you do not seem to be progressing, you may need to redesign your practice sessions. If instead you keep up a steady progression, then at some point you achieve your current goal. At that point it is time to set out to strive to accomplish the next more difficult goal (i.e. you advance to planning how to achieve the next higher-ordered subgoal on the vertical hierarchy). This is how you improve upon your current level of performance.[45]

In this process of deliberate practice you can see the three action phases of self-regulation: planning (phase 2), when designing a deliberate practice session; engaging in practice (phase 3); and evaluation (phase 4), at the end of practice. Fortunately, coaches and teachers can help us with these phases, by helping us plan, monitoring our performance, and giving us feedback. However, it should be noted that feedback on your performance cannot come merely from others, as crucial as that is in the early stages of skill acquisition. As Barry Zimmerman points out, "[b]ecause high levels of skill must be practiced and adapted personally to dynamic contexts, aspiring experts need to develop a self-disciplined approach to learning and practice to gain consistency."[46] Often there will not be a coach around when you are exercising your skill, and so you need to learn how to provide yourself with feedback on your performance.

The point about adapting skill to dynamic context has another important implication. Not only does practice allow you to improve your level of skill, it can also function as a form of planning for actual performances (action phase 2) if the practice session attempts to simulate actual conditions under which someone will perform. K. Anders Ericsson provides an

[44] Horn, John and Masunaga, Hiromi, "A Merging Theory of Expertise and Intelligence," in Ericsson, K. Anders (ed.), *The Cambridge Handbook of Expertise and Expert Performance* (Cambridge: Cambridge University Press, 2006), 587–612, 601.

[45] This also helps to explain why Fridland takes "attention-governed, practice-related improvement as a criterion of skill," Fridland, Ellen, "They've Lost Control: Reflections on Skill," *Synthese*, 191 (2014), 2729–2750, 2740.

[46] Zimmerman, Barry J., "Development and Adaptation of Expertise: The Role of Self-Regulatory Processes and Beliefs," in Ericsson, K. Anders (ed.), *The Cambridge Handbook of Expertise and Expert Performance* (Cambridge: Cambridge University Press, 2006), 705–722, 706.

without much (or any) conscious awareness or intention, and happening spontaneously.[55] Practice allows us to make progress on tackling ever more difficult tasks by tapping into automaticity.[56] Novices learning a skill will have to pay a lot of attention to what they are doing, and attention is a scarce resource. Due to limitations in our short-term or working memory, we can only focus our attention on a limited number of activities at one time. For example, you are not going to be able to pay full attention to changing lanes in heavy traffic at fast speeds if you still have to pay a lot of attention to changing gears. You need that changing of gears to become effortless, so that you can focus your effort on the more demanding task of dealing with heavy traffic.[57] Importantly, as this example suggests, often it is only aspects of a performance, not the whole performance, which becomes automatic. Some aspects of the performance becoming automatic (like changing gears) enables other aspects of the performance to be carried out with greater flexibility and control (as in responding to the actions of other drivers in fast moving traffic).

The contrast between effortful and effortless actions is captured by dual-processes theories of cognition.[58] The first type of cognition is characterized as automatic, intuitive, fast, and effortless; while the second is cognition that is deliberate, analytic, slow, and effortful. Kahneman distinguishes the two processes as System 1 (automatic) and System 2 (deliberate).[59] However, while much of the dual-process literature makes it sound as if you are guided

[55] It should be noted that these are common features associated with automaticity, but not all of these features are necessarily instantiated at the same time. See, for example, Bargh, John, "The Four Horsemen of Automaticity: Awareness, Intention, Efficiency, and Control in Social Cognition," in Wyer, R. S. and Srull, T.K. (eds.), *Handbook of Social Cognition Vol. 1* (Hillsdale, NJ: Erlbaum, 1994), 1–40.

[56] Feltovich, Paul J., Prietula, Michael J., and Ericsson, K. Anders, "Studies of Expertise from Psychological Perspectives," in Ericsson, K. Anders (ed.), *The Cambridge Handbook of Expertise and Expert Performance* (Cambridge: Cambridge University Press, 2006), 41–68, 53.

[57] My thanks to a reviewer who drew my attention to this quote from Alfred North Whitehead: "It is a profoundly erroneous truism, repeated by all copy-books and by eminent people when they are making speeches, that we should cultivate the habit of thinking what we are doing. The precise opposite is the case. Civilization advances by extending the number of important operations which we can perform without thinking about them." Whitehead, Alfred North, *An Introduction to Mathematics* (New York: Henry Holt and Company, 1911), Chapter 5.

[58] Though, as I will bring out later in this section, it is more accurately described as cognitive processes that range on a continuum from effortful to effortless.

[59] Kahneman, Daniel, *Thinking, Fast and Slow* (New York: Farrar, Straus and Giroux, 2011). For concerns regarding dual-process theory, see Keren, Gideon and Schul, Yaccov, "Two Is Not Always Better Than One: A Critical Evaluation of Two-System Theories," *Perspectives on Psychological Science* 4 (2009), 533–550. For a defense of dual-process theories, see Evans, Jonathan and Stanovich, Keith, "Dual-Process Theories of Higher Cognition: Advancing the Debate," *Perspectives on Psychological Science* 8:3 (2013), 223–241.

by either one process or the other, a more nuanced view sees the two systems as working together, as I will show with skill acquisition.[60]

Deliberate practice clearly involves a transition from deliberate to automatic processing, as Ericsson notes that "[c]onsistent with the mental demands of problem solving and other types of complex learning, deliberate practice requires concentration that can be maintained only for limited periods of time"[61], and furthermore, "the requirement for *concentration* sets deliberate practice apart from both mindless, routine performance and playful engagement, as the latter two types of activities would, if anything, merely strengthen the current mediating cognitive mechanisms, rather than modify them to allow increases in the level of performance."[62] Chess players, for example, when engaging in deliberate practice will spend time studying opening moves and playing through past games played by grandmasters (to see if the move they made turns out to be the same move made by the expert player). This kind of study takes focused concentration, as you are trying to figure out the mistakes you are prone to make, and how to correct them. Ericsson notes that the effect this has is that "individuals refine their representations and can access or generate the same information faster. As a result, chess masters can typically recognize a superior move virtually immediately, whereas a competent club player requires much longer to find the same move by successive planning and evaluation rather than recognition."[63] Deliberate practice also enables a transition from deliberate control over a performance to a performance handled by automatic processes, as those previously effortful tasks become effortless.

Automaticity thus enables, though by no means guarantees, reliably accurate intuitive judgments about how to act in a situation.[64] One

[60] See Christensen, Wayne et al., "Cognition in Skilled Action: Meshed Control and the Varieties of Skill Experience," *Mind & Language* 31:1 (2016), 37–66. I'll begin with the less nuanced version of skill acquisition and dual-processes, and then move to the more nuanced version described by Christensen.

[61] Ericsson, K. Anders "The Influence of Experience and Deliberate Practice on the Development of Superior Expert Performance," in Ericsson, K. Anders (ed.), *The Cambridge Handbook of Expertise and Expert Performance* (Cambridge: Cambridge University Press, 2006), 683–704, 699.

[62] Ericsson, K. Anders, "The Influence of Experience and Deliberate Practice on the Development of Superior Expert Performance," in Ericsson, K. Anders (ed.), *The Cambridge Handbook of Expertise and Expert Performance* (Cambridge: Cambridge University Press, 2006), 683–704, 692.

[63] Ericsson, K. Anders, "The Influence of Experience and Deliberate Practice on the Development of Superior Expert Performance," in Ericsson, K. Anders (ed.), *The Cambridge Handbook of Expertise and Expert Performance* (Cambridge: Cambridge University Press, 2006), 683–704, 697.

[64] Here it will be important to note that it does not follow that all intuitive judgments are reliable. Robin Hogarth argues that what all intuitive judgments have in common is a lack of conscious awareness about how those judgments came about, since they were not the result of deliberate effort. Such judgments come about in a spontaneous manner, and people often feel a sense of