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## *Practical Expertise*

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HERE ARE TWO examples of activities. We can see a commonsense distinction between them, which I shall argue is of more than commonsense importance.

I drive my car to the university parking garage for which I have a permit. I do this nearly every day and have done so for years; I am familiar with the route I take and so would not hesitate to say that I know how to drive to my parking garage. When I started to drive this route, it was unfamiliar, and I had to think consciously about the best way to do it, balancing factors like directness of route against avoiding traffic, and the like. Gradually, I became used to driving on this route, and it has become habit with me. I no longer have to think about which way to turn at each corner, where to slow down, and the like. My driving has become routine. This does not make it mindless; I am still at some level aware of where I am going, since I stop at red lights, drive at the right speed, and behave cautiously around dangerous drivers. But driving has become detached from my conscious thinking, and my actual conscious thoughts and deliberations may fail to be properly integrated with it. We all recognize the phenomenon of finding yourself at the garage, having started out intending to go somewhere else en route, but not having done so, or finding yourself at the usual entrance, which is closed, although you know perfectly well already that it is closed for construction. A decision to act differently from the usual has not successfully penetrated and affected the patterns of routine, which have carried on unaffected.

Contrast this with a skilled pianist playing a piece. (This, unlike the routine example, is not autobiographical, although I used to play the piano; readers are invited to substitute different examples if these make the point work better for them.) As I learn to play the piano, I need first to work out consciously what is the right thing to do and then do it over and over again. This proceeds from learning notes to learning scales, arpeggios, and so on and eventually learning to play whole pieces. Here there is habituation that results in my coming to be able to do effortlessly and without conscious deliberation what at first had to be explicitly worked out. My fingers now pick out the right notes in the right relation to one another at the right speed, without need for conscious thinking before each

action of striking the keys. When we consider the speed with which an expert pianist plays the notes, we might be tempted to think that the original experience has been transformed into routine. But there is a difference from the driving case. While it is true that my ability to play expertly may require that I have developed some physical capacities in my fingers such that certain movements are 'automatic,' the playing itself is not routine or automatic—or rather, if it is, my playing is not expert. For one thing, the expertise is not detached from the person's ability to think and decide consciously; the playing is continually responsive to my thought about the piece, my decisions to speed up or slow down, and the like. If I resolve to play the first movement more feelingly and romantically than usual, I won't find myself at the end of it having played it the usual way or, again, if I do, this is a failure of expertise. Rather, my playing is constantly informed by and sensitive to my thinking in a way that produces, and is in turn responsive to, feedback. The expertise is not a static given; it is dynamic and always developing. It decays, is sustained, or is modified, depending on the conditions of its exercise. Routine, on the other hand, once developed to the point of adequacy, stays where it is.

The key difference here is between habituation that results in mere habit and routine and habituation that results in a dynamic trait that expresses itself in intelligent and selective response. It is central to routine that the reaction to the relevant situation is always the same; this is why routine is predictable and dependable, which is often useful. The second type of habituation, however, results in reactions that differentiate among, and are appropriate to, different situations.

This distinction is not well marked in our ordinary discourse about habits (even the word *habituation* is artificial). It is not respected in contemporary psychological research on automaticity.<sup>1</sup> And it has, as far as I know, made almost no impact on contemporary philosophical debates about practical expertise and reasoning, except in the discussion of Aristotelian themes. Why then press it?

It seems important in itself, once we notice that speed and immediacy of reaction can be found in two such diverse contexts. This should at least arouse our curiosity as to the different kinds of habituation that result in such different abilities as routinization and intelligent response. Further, we can, as I noted, say both that I know how to drive to my garage and that I know how to play the Schubert *Wanderer* fantasy. Given the sharp differences between these kinds of 'knowing how,' we should be curious as to the different notions here of 'know-how.'

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1. The work of psychologists like John Bargh—as in the influential 'The Unbearable Automaticity of Being' (Bargh and Chartrand 1999)—makes no distinction between the automaticity resulting from routine and the immediate response resulting from developed practical expertise.

In this chapter, I shall be following up one of them, hoping that this makes a contribution to contemporary discussions of know-how. I shall be focusing on the kind of habituation that results in the second kind of case I sketched. Rather than routine, this kind of habituation results in *practical expertise*.

In this account, I have been heavily influenced by the role in ancient epistemology and ethics of what has been labeled 'the skill analogy.' It is a commonplace in study of ancient philosophy that ancient accounts of knowledge and of virtue were influenced by the notion of *techné*, translated 'craft,' 'skill,' or 'expertise.' I shall not, however, be trying to do anything like transpose the ancient notion of skill into a contemporary setting. Apart from the general anachronism of any such proceeding, we have to be aware of the point that practical skills played a very different role in the ancient world from any that they play in an industrial (and postindustrial) world, so that skill no longer seems to us an interesting source of analogy. One mark of this is that the idea of practical skill or expertise in the ancient world centered on a few central and agreed examples: medicine, farming, navigating, shoe making, and so on.<sup>2</sup> For us, these are examples of activities that have either been mechanized or now depend in large part on theoretical scientific knowledge. Our central examples of practical expertise are more likely to come from sports or the arts, and so they are less central to daily living and our employments.<sup>3</sup> This does not lessen the philosophical interest of practical expertise, but it renders it less obvious for us. Moreover, our notion of *skill* has expanded, sometimes in ways that take it far from the idea of practical expertise; we talk of social skills and also of children's skill in tying their shoelaces and so on. We sometimes talk of skill in contexts where natural talent plays a crucial role, as in sporting skills. And the idea of *craft* has become marginalized; we expect craft products and craftspeople to be working in a niche rather than in the center of the economy.<sup>4</sup> For these and other reasons, I will not be trying to capture the ancient notion of skill but rather developing from it an account of practical expertise as one kind of the phenomenon we call 'know-how.' I will then indicate briefly ways in which this has been found to be of philosophical interest.

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2. Socrates in Plato's 'Socratic' dialogues is constantly using examples of this kind. At *Gorgias* 491, the aristocratic Callicles accuses Socrates of always talking about 'cobblers, fullers, cooks and doctors' (Socrates has just been using the examples of weavers and farmers).

3. This issue, and some others about ancient and modern conceptions of skills, is discussed in my 'Virtue as a Skill' (1995).

4. Perhaps it is worth pointing out that in some cultures this has not diminished the former respect in which craftspeople were held; in Japan, for example, some craftsmen and women in ceramics and textiles are still valued as 'living national treasures.' This seems to be the exception, however.

I will be relying heavily on unpacking, and coming to understand, our everyday conception of practical expertise, and the question can quite rightly be raised of why we should pay any attention to this when we are doing philosophy. One answer is that when we think about practical expertise, we are at an advantage, for we have it to hand. Even if I cannot myself fix the computer, mend the car, plumb in the washing-machine, I know what is needed and understand the difference between it and muddling through, fixing things inexpertly, and hoping for the best. Moreover, most of us do have some kind of practical expertise ourselves. We have a better idea from our own experience of what practical expertise is, then, than we do of the more abstract idea of 'know-how,' still less of the conception of knowledge that interests philosophers, and practical expertise appears to be at least a promising place to start investigating.

What most strikingly characterizes practical expertise is that acquiring it necessitates two factors that might at first sight not go well together. One is the need to learn; the other is the drive to aspire. The need to learn seems obvious enough, but it is worth noting an implication it has, one pointed out by Aristotle.

What we need to learn to do, we learn by doing; for example, we become builders by building, and lyre-players by playing the lyre. (Aristotle 350 B.C.E./2000)

There is something we lack and have to have conveyed to us by teachers. We don't know what to do and have to learn what to do by doing what somebody else does, someone who does know what to do. We begin to learn by copying them, as we try to do what they do.

But even with a comparatively nonintellectual skill like building, I will have failed to learn if I *just* copy the teacher and take 'doing what he does' to be a matter of routine to be established. The teacher tries to get the learner precisely *not* to establish a routine of doing what the teacher does. A piano student who faithfully copies the teacher's way of playing ends up impersonating the teacher, mannerisms and all, and this is clearly a failure to learn, not a success. The successful learner of a practical skill needs to do three things.

First, he needs to *understand* what in the role model to follow. The mindless learner copies the teacher, mannerisms and all; the successful learner works out what in the teacher's performance is important to the expertise and what is not and copies the former, coming to ignore the latter. This is the point at which expertise becomes divided off from routine performances. We learn to tie our shoelaces as a matter of routine, and we do pick up, harmlessly, the idiosyncrasies of the person who taught us. Shoelace tying is not a matter of sufficient complexity that we need to understand what is crucial in it.

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Second, the point of understanding what is crucial to pick up in what the teacher does is that the learner should be able to acquire *for herself* the skill the teacher has. The successful learner goes on to do what is in one sense the same thing the teacher did, but not in a blankly routine way. The apprentice builder learns to do what the expert builder does—that is, to build—but at a more specific and concrete level what he is doing may in many respects be different from the actual steps taken by the teacher, the steps from which she learned to build. This underlines the further point that routine reaches a plateau, beyond which further input and thinking is not needed, whereas this is not true of practical expertise. The moment comes when you have to speak French, bicycle, dance on your own; this is notoriously the moment when it becomes clear whether you have actually learned the skill. Self-direction leads naturally from understanding; you need understanding to be able to carry on for yourself in dancing, speaking French, or building, and understanding enables self-direction rather than remaining on a plateau of routine.

Third, the successful learner strives to improve, to do what he is doing better, rather than being satisfied by taking it over by rote from the teacher. This is what a lot of practice is about; we do what is in some sense 'the same thing' over and over, but not to perfect the routinization of a movement. Rather, we are learning to speak French, skate, or drive, *better*. Again, this distinguishes cases where all that is required is repetition and routine from cases where staying at that level signifies failure to learn. The point about improvement links naturally to the other two points; you can improve because you understand what it is, in what you are learning, that you, rather than the teacher, can improve.

It might be objected that an expertise cannot always continue to demand a drive to improve; doesn't there come a point at which you can speak fluent German, drive, skate, or whatever? At this point, the drive to improve recedes, but with a practical expertise, it never entirely disappears. Expert golfers, tennis players, and flautists continue to practice to maintain and not lose the expertise they have (though they may maintain routine mastery of technical matters needed for the exercise of the skill). A practical expertise is never static in the way that a routine habit is, so even experts face the same issues as learners, though in a modified form.

All three of these points indicate aspects of the drive to aspire, which marks off the acquisition of practical expertise from the development of routine, while both require learning something you previously didn't know. These points about learning may seem commonplace, but their implications are important: there is a kind of 'know-how' for which it is important to note the development from learner to expert, with no plateau at which the ability is routinized.

Other aspects of practical skill converge with this result. One is the role of enjoyment. Intuitively, practical expertise gives us examples of increasing

enjoyment as a skill develops. As we begin to learn a practical expertise—learning Italian, tennis, skating—we are held back by not being able to do it very well, and when this happens, we are frustrated and find the activity unpleasant. Who enjoys getting tenses wrong and hitting balls into the net? As we improve at Italian or tennis, we enjoy doing it more because we are less frustrated by inadequacies and mistakes and have fewer occasions when we fail to exercise the expertise. Playing tennis is painful and annoying as long as your performance comes up short of your intentions; speaking Italian is painful and annoying as long as you have to make a conscious effort to find the right words and get the sentence construction right. As we improve in both cases, the skill is exercised more smoothly and successfully, and we come to enjoy its exercise. An indication of this is that conscious thought is no longer required for me to exercise the expertise successfully.

But if conscious thought is no longer required, have we not admitted that the skill has become routine? No. We can begin to see why, by thinking of activities that really are routine, like driving a familiar route, getting dressed and undressed, or tying shoelaces. These are not examples of enjoyable activities. It is indeed a mark of practical expertise, as opposed to routine, that it can become enjoyable. This intuitive point has been supported by the work of the positive psychologist Mihalyi Csikszentmihalyi, who has for many decades studied what makes people experience activity as satisfying and enjoyable.<sup>5</sup>

We perhaps tend to think that we enjoy ourselves most when we are relaxed and not working, at least not engaged in work that requires effort. For us 'leisure,' understood as freedom from work, is desirable. Csikszentmihalyi's research shows, strikingly, that we need to rethink this. What he calls 'optimal experience,' the experience of enjoyment and satisfaction, is experienced not when we are inactive but rather when we are engaged in activity in an intelligent and concerned way. We enjoy what we are doing when we can "focus attention at will . . . be oblivious to distractions . . . concentrate for as long as it takes to achieve a goal, and not longer" (Csikszentmihalyi 1991, 31). Mere repetition and rote activities leave us bored and frustrated, whereas we enjoy being engaged in complex activities like puzzle setting and problem solving.

Enjoyment is felt most when we are engaged in goal-directed activities, where achieving the goal typically involves responding to feedback and picking up on new features created by the solution of the previous problem. Enjoyment is threatened, however, by frustration caused by new information the person doesn't know how to deal with. This applies especially to achieving one goal at the cost of others. Enjoyment is most achieved when all the person's relevant goals are

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5. Csikszentmihalyi (1991), summarizing much previous research.

harmoniously organized and sorted out, so that she is equipped to deal with feedback and new information without having to stop to figure out how it relates to the goal being pursued.

Every piece of information we process gets evaluated for its bearings on the self. Does it threaten our goals, does it support them or is it neutral? ... A new piece of information will either create disorder in consciousness... or it will reinforce our goals, thereby freeing up psychic energy. (Csikszentmihalyi 1991, 39)

So when all the relevant goals are harmoniously structured and the person is focusing on the achievement of a goal that requires engagement with the situation,

attention can be freely invested to achieve a person's goals, because there is no disorder to straighten out, no threat for the self to defend against. We have called this state the *flow experience*. (Csikszentmihalyi 1991, 39)

This interesting result can be related to the distinction I have been sketching. The routine driving to the parking garage is not something I give my attention to, and it goes on in a way sometimes independent of my actual deliberations. It is not well integrated with new goals, such as going somewhere else on the way, as there is no feedback to keep me aware of the need to drive a different route. It is not an enjoyable experience, as there is nothing to produce flow, in Csikszentmihalyi's sense. We can see how different is the case of the skilled pianist. The skill she exercises is the result of a lot of habituation, but the result is not routine. The way she plays the piece expresses the intelligence of her interpretation of it; the playing is responsive to the interpretation, and the activity has the structure in which flow can be produced. And skilled piano playing, like skilled exercise of golf, skating, translating, and many others, can be, and often is, enjoyable. 'Flow' is perhaps not the best metaphor for what Csikszentmihalyi is talking about here, for it brings to mind passively going with the flow, which suggests activities like my routine driving. What is meant by flow requires the opposite: engagement in a task in a way characteristic of experts,<sup>6</sup> in a way requiring attention and continual modification of activity.

The 'flow' experience has two important features. It is 'autotelic': that is, the activity is experienced as being its own end, enjoyed in itself even where in fact

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6. Csikszentmihalyi himself is not explicit about dealing with skills, but this is what his examples overwhelmingly show.

the activity produces something further. Here sporting activities produce good examples: actions in some sports can be experienced as enjoyable in themselves even if they do not produce the goal, or whatever. The other feature is that persons engaged in the activity lose awareness of their selves—that is, they cease to be aware of themselves as performing the activity (and so may lose track of the time passing). Again, this lack of self-consciousness is most easily illustrated from trained athletes, who often report a sense of 'loss of ego' as they are engaged in running or throwing the javelin. 'Flow' is produced when we have a combination of intense focus and loss of self-consciousness. Nothing could be further from the blankness experienced in routine activity?

The role of enjoyment in activity, then, gives us a further way in which routine activities differ from practical expertise. Routine activities do not characteristically produce 'flow,' since there is nothing requiring focus and engagement. It is intense engagement in skilled and expert activities that produces the loss of self-consciousness characterizing flow. We have here an interesting empirical confirmation of an intuitive distinction between routine habits and practical expertise, namely, that the latter are characteristically enjoyable, and the former are not.

Another point where an intuitive difference turns out to unpack into a philosophically significant divergence is a difference in the structure of learning between routine habits and practical expertise. When I pick up a routine habit, I need to do nothing but copy my role model, or sometimes just develop my own habit of doing the same thing over and over. There is no content to my learning over and above my being able to repeat the same activity without thinking about it. With practical expertise, more is needed. Something has to be conveyed from the teacher to the learner that cannot be reduced to the teacher's showing the learner something to repeat. What is this? The learner has to come to understand what to emulate in the teacher's activity in order to take it over for herself. We could call this, very generally, the point of the activity. This could just be the obvious aim, or it could be more complex, involving grasp of rules or principles. The more complex the activity, the more is involved in coming to understand its point.

In ancient philosophy, what characterizes skill or expertise, as opposed to merely having a subrational 'knack' or routine, is the ability to 'give an account,' where this means to explain the point of what you are doing, why you are doing this rather than that.<sup>8</sup> Someone who isn't able to do this thereby reveals that he

7. A great deal of Csikszentmihalyi's own work is trying to systematize ways of turning boring, frustrating routine work into challenging and flow-encouraging work.

8. For notable examples, see Plato's *Gorgias* (462d–465a and 501–501d) and the opening chapters of Aristotle's *Metaphysics A*.



doesn't understand what he is doing (though he might, of course, still get things right if all that is required is a subrational routine). Does this answer to anything that might be found convincing in contemporary terms? If we think of how practical expertise is actually conveyed, we see at once the importance here of the giving and understanding of reasons. The apprentice builder or plumber needs to know not just *that* you lay the pipe this way, but *why*. Only by being given reasons for laying the pipe this way rather than that will she be able to distinguish relevant from irrelevant factors in the situation in which she has seen the pipe laid, and only if she has a grasp of this will she be able to lay pipe in different situations without doing it in ways relevant to the original situation but inappropriate in the new one. Reasons here are the medium of explanation; the teacher can, by giving reasons for what she does, explain to the learner why she must wire or lay pipe in such and such a way, so that the learner can then go ahead in different situations without routinely doing the exact same thing in all of them. Clearly, in cases above a certain level of complexity, explanation is necessary, or the learner will not get the point at all; there are many ways in which we can focus on irrelevant aspects of what the teacher is doing.

This giving and understanding of reasons implies that practical expertise implies some degree of articulacy. This claim frequently meets with resistance, on the grounds that we recognize cases of expertise or skill where articulacy is not necessary (frequently gardening is proffered as an example) or where it may not seem feasible (people with physical skills are often unable to coach others who wish to acquire those skills). Many of these cases are really cases of natural talent or of mastery of technical matters needed for exercise of the skill. In any case, we have already seen that contemporary usage of the notion of skill or expertise is quite broad, and it is no surprise that it does not cover all and only the kinds of expertise that we have been looking at so far; these are the cases that I am interested in, where we can see a sharp distinction between practical expertise and mere routine, despite some apparent shared characteristics.

The articulacy requirement can appear quite problematic, however convincing it may seem in the context of learning a practical expertise. It can seem especially so if we think in terms of 'knowing how' and 'knowing that.' Obviously, a prominent feature of practical expertise is that it involves a development from the learner to the expert, and so it cannot be thought of as a kind of 'knowing how' that excludes 'knowing that.' It is routine habit that could be thought of as 'knowing how' with no 'knowing that'—precisely what is contrasted with practical expertise. Where expertise is concerned, we are happy to say that the mechanic knows how to fix the car, if he is an expert; if he is not an expert, then he doesn't know how to fix the car, though he might be able to follow the instructions of someone who does know. And the issue of

whether he is, in fact, an expert is settled by whether he can give reasons for what he does.

The main problem, however, is that the articulacy requirement seems to sit uneasily with the fact that practical expertise is exercised readily and without hesitation, with an immediacy that seems not to leave psychological room for the entertaining of reasons. Indeed, it is exactly this immediacy that forms the basis for the point that expertise can involve enjoyable activity, when you are so engaged in the complexity of the task that you lose awareness of yourself as performing the activity. How can this immediacy of engagement go with the idea that practical expertise requires the giving and understanding of reasons? The articulacy requirement seems outrageously intellectualist.

The answer to this is obvious by now. The account of practical expertise is a developmental one. At first, the builder or pianist does need to learn by being given reasons for what he does. The pianist acquires skill first by consciously thinking what to do and will at first be running through thoughts about reasons the teacher has given him for playing the arpeggio one way rather than another, adjusting the left-hand speed, and so on; these in fact form the basis for his practicing. If this is not the case, he is merely acquiring a routine habit and will never acquire the skill. Understanding what you are doing is acquired by thinking before acting in ways that incorporate what has been learned, and understanding is increased as it leads to, and is in turn reinforced by, increased self-direction and improvement. This is just a fact of experience, familiar to anyone who learns a practical expertise. An equally familiar fact of experience is that as you improve, you need to think less and less about what you are doing. As the pianist improves, he needs less and less to think what fingering the next chords will require, how to balance what the two hands are playing, and so on. Eventually, the expert pianist will play with a speed and immediacy utterly different from the thought-requiring plodding of the beginner. We have already had underlined the point that the speed and directness of response may seem from the outside comparable to those of habituated routine activity but that there is a huge difference: in the case of practical expertise, the thoughts that have gone into the development of the skill now inform and educate the way the skill is exercised, so that the exercise of piano playing, building, or whatever involves educated rather than mindless response. Moreover, the response, however direct and immediate, is sensitive to situations and thus flexible in the way it reacts to modifications in them. The thoughts required in learning do not get in the way of this. They have, in a useful philosophical term, effaced themselves.

However, does this in turn not leave us with a problem? If the articulacy requirement applies only to the learning of practical expertise, and not its expert exercise, then it seems to play no role in bringing about the actual expert activity,

and we might well wonder whether it should enter into an account of what practical expertise itself is. Here again, though, it emerges that a contrast with routine is helpful. The original thoughts about driving on my route clearly play no role now in my driving to my parking garage; this is what makes it a case of routine. Moreover, they are not readily recoverable, either. If someone asks me whether the route I drive is the best, I will have to detach myself from my ongoing practice and work out whether this is the case. It may be that my route no longer is the best, since I have been driving it routinely, rather than in a way sensitive to new input. With practical expertise, on the other hand, the thoughts have effaced themselves, but they have not entirely evaporated. If the expert meets with an unusually stubborn problem, for example, thoughts about the best way to cope with this sort of situation will be available to her without her having to detach herself from the activity and start over with the investigating. Most important, these thoughts become available when the expert teaches a nonexpert or explains the skilled activity to her. A skill taught to one person is conveyable through that person to someone else.

This is a matter of degree, since it is a further commonplace that not everyone is equally good as a teacher. There are also other factors: with physical skills, a large part of the accomplishment may be due to natural talent; the outstanding physical performer may not be a good teacher, since much of his performance is not due to learned factors. Still, if someone is an expert practitioner of a skill, but when asked to explain how to do it or what makes for a good or a bad exercise of the skill can say absolutely nothing helpful, we infer that she is not good at articulating what she knows or that what appears to be expertise may in fact be natural talent or even routine. We don't infer that there is nothing to articulate. A plumber or car mechanic who can explain nothing whatever about the way he has fixed the leak, or the car, soon loses our confidence; we judge that he doesn't know what he is doing. The same is even more strikingly true of a computer help line.

So far, I have sketched a notion that may seem commonplace, one we are all familiar with when we need an expert to fix the computer, translate the Latin, or rebuild the wall. What we want is someone with practical expertise, not with the kind of 'know-how' that is mere routinized habit and brings with it no ability to explain and teach what is being done. Is this philosophically interesting?

First, this notion of practical expertise was extremely influential in two areas of ancient philosophy that have recently made some impact on contemporary philosophizing. One is that of knowledge. It is a commonplace among ancient philosophers that for Plato (to take only one example) the model of having knowledge, at least in the so-called 'Socratic' dialogues, is that of the person with a *techne* or practical skill, who knows what he is doing and can thus 'give an account' of what he says and does. Socrates' interlocutors are shown up time and again as people who

make claims to knowledge but lack it because they cannot 'give an account' when challenged of what they say and do. They pontificate about virtue, or piety, but it turns out that they don't know what they are talking about.<sup>9</sup>

Second, accounts in ancient ethics of virtue draw heavily on 'the skill analogy'—the idea, that is, that virtue has the intellectual structure of a practical expertise. Some ethical theorists take the analogy further than others; Aristotle thinks that there are definite limits to it, while the Stoics think of virtue as 'the expertise of living.' What interests them all are the aspects of practical expertise I have highlighted, which turn out to prove illuminating for an account of virtue. There are, of course, aspects of virtue that have no echo in practical expertise, and vice versa; for all that, 'the skill analogy' is central to all ancient accounts of virtue.

I do not have the scope here to follow up these philosophical fortunes of practical expertise, but I think it is interesting that the relevant accounts both of knowledge and of virtue have recently become familiar in contemporary discussions otherwise completely unlike the ancient ones. One important point that we may find more salient if we take practical expertise seriously is that simple talk of 'knowing how,' especially if it is assumed to be opposed to, or always in some kind of contrast with, 'knowing that,' can blind us to the importance of recognizing different kinds of knowing how to do things. In particular, it can lead us to overlook the interesting combination I have claimed that we find in practical expertise. Here we find immediate and direct response, which looks superficially like the immediate and direct response of routine, but which is actually sensitive to modifications in the situation, intelligent and educated. Taking these points about practical expertise seriously may enrich the thoughts we have today about the ways we engage with the world in practice and the different types of ability that we classify together as 'know-how.'

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9. I discuss this side of the 'skill analogy' in my 'Virtue as a Skill' (1995) and some other aspects in 'Moral Knowledge as Practical Knowledge' (2001).