Lai K, 2019, 'The Cicada-Catcher: Learning for Life', in Lai K; Chiu WW (ed.), *Skill and Mastery Philosophical Stories from the Zhuangzi*, Ceacop East Asian Comparative Philosophy series, UK: Rowman and Littlefield, International, pp. 143 – 162

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**Chapter Ten**

**The Cicada-catcher: Learning for life**

Karyn Lai

When Confucius was on his way to Chu, he passed through a forest where he saw a hunchback catching cicadas with a sticky pole as easily as though he were grabbing them with his hand. Confucius said, “What skill you have! Is there (a) *dao*?” “I have (a) *dao*”, said the hunchback. “For the first five or six months I practise balancing two balls on top of each other on the end of the pole and, if they don’t fall off, I will lose very few cicadas. Then I balance three balls and, if they don’t fall off, I will lose only one cicada in ten. Then I balance five balls and, if they don’t fall off, I know it will be as easy as grabbing them with my hand. I position my body like a stiff tree trunk and hold my arm like an old dry limb. No matter how expansive heaven and earth are, or how numerous the ten thousand things, I’m aware of[[1]](#footnote-1) nothing but cicada wings. Not wavering, not tipping, not letting any of the other ten thousand things take the place of those cicada wings—how can I help but succeed in taking them?’ Confucius turned to his followers and said, “He keeps his will undivided and concentrates his spirit—is this not what we say about the venerable hunchback?” (*Zhuangzi* 48/19/17-21. Adapted from the translation by Watson, *The Complete Works*, 199-200).[[2]](#footnote-2)

1. Introduction

The cicada-catcher seems an unlikely Daoist. He comes across as being focused and organised as he has a clear sense of his task and what he is required to do. He confidently and lucidly articulates how he has mapped out and undertaken his training for cicada-catching, giving readers the impression that he has himself successfully followed through with his plans to become an excellent cicada-catcher—so impressive are his actions that Confucius stands in awe. This story runs against the grain of representations of Daoist philosophy as being wary of words and language (*yan* 言) and as advocating action guided by intuition rather than reason.[[3]](#footnote-3) Especially in the *Zhuangzi*, a text with a chapter entitled “Free and Unfettered Wandering” (*Xiaoyaoyou* 逍遙遊), the cicada-catcher’s noticeable meta-level awareness of his task and the practice required appear ill-fitted to some of the fundamental concerns of Daoism, as represented in the literature.

A focal point of this story is the learning process planned and undertaken by the cicada-catcher. What are his goals, and how does he plan to achieve them? How does learning to balance balls on the end of a pole prepare him for catching cicadas? And why does he need to attend (only) to cicada wings? This chapter explores these questions in order to understand more about Zhuangzian skill and mastery from the angle of what is learnt, and how it is learnt. Can its views on knowledge and action be aptly captured in terms of some of the conceptual frameworks and terms provided by western philosophical discussions in epistemology, philosophy of action or philosophy of mind? I suggest that the explanatory frameworks and angles used in recent work on Embodied Cognition Theory (ECT)—broadly speaking, that cognition is dependent on or shaped by bodily and sensorimotor capacities, and exercised by engaging with what is presented in the environment—captures many important elements of mastery in the *Zhuangzi*. The second objective of this chapter is to draw insights from the *Zhuangzi*’s views on learning in order to shed light on the notion *dao* in the *Zhuangzi*’s intellectual context. What are the skill masters learning? When approached by Confucius on his awe-inspiring performance, the cicada-catcher claims he has *dao*. What is *dao*? Do each of the *Zhuangzi*’s masters have (a) *dao*? The mastery stories focus on single, *ordinary*, activities. Hence, should we live like the masters? How are their reflections relevant to life, and how do these views speak to a contemporary audience? I propose that our grasp of *dao* may be illuminated through a fuller understanding of the cicada-catcher’s learning program. From that angle, in the cicada-catcher’s story, *dao* refers to preparedness, yet openness, in one’s engagement with the world. The fundamental claim here is that the cicada-catcher’s approach to learning can inform our thinking about preparedness for encountering and dealing with contingencies in life.

To support my argument about learning and *dao*, the discussion in the following section, section 2, examines the cicada-catcher story to illuminate how learning must be structured, yet create space for openness in one’s encounter with the world. I discuss some possible ways in which we may explain what it is the cicada-catcher hopes to learn, and how he does it. Section 3 dwells on how some existing characterisations of the *Zhuangzi*’s views on knowledge and action—for example, as know-how, intuition, or spontaneity—fail to capture the cicada-catcher’s empirically-based approach. As an alternative, I suggest in Section 4 that some aspects of ECT can provide a more fitting explanatory framework for understanding the story. The point here is not to establish or defend ECT but to demonstrate that this more recent approach to knowledge, action and cognition, can help cast our gaze on the integration between a person’s capabilities and actions, and therefore better illuminates the *Zhuangzi*’s empirical approach. Finally, in Section 5, I consider how the *Zhuangzi*’s views of learning, articulated in the cicada-catcher story, may be instructive about how we can pursue a good life.

2. Learning, as a Daoist Learns

In the story, the cicada-catcher’s learning process involves only the cicada-catcher himself and the activity of cicada-catching. There are no references to a teacher or a model, or to other cicada-catchers who might share in his practices. There would have been other cicada-catchers as part of this cicada-catcher’s community of practice, but in this story we encounter only him, in conversation with Confucius. Some of Confucius’ followers are present, but they are only recipients of Confucius’ instructions and do not have a voice in this story. At the scene, Confucius is intrigued by the cicada-catcher’s expertise and requests more information about his skill (*qiao* 巧). “What skill you have! Is there (a) *dao*?” (*you dao ye* 有道邪), Confucius asks. The portrayal of the craftsman engaged in learning, without a teacher, is a common theme in the skill stories in the *Zhuangzi*. The butcher, Pao Ding, tells of how he has learnt to carve an ox effortlessly (*Zhuangzi* 7/3/2-8/3/12); the swimmer enlightens Confucius on how he has developed skill to swim at the foot of dangerous cascades (*Zhuangzi* 48/19/22-26); the wheelmaker, Bian (扁), says that has tried teaching his son how to make wheels, but has failed to do so (*Zhuangzi* 36/13/68-74). In fact, *none* of the *Zhuangzi*’s stories on expertise directly involve a teacher! Moreover, although there are passages where instruction occurs, they advocate non-conventional ways of teaching (see Defoort, “Instruction Dialogues in the *Zhuangzi*”). For example, Liezi’s teacher scares away a shaman simply by manifesting vacuity (*xu* 虛; *Zhuangzi* 20/7/15-21/7/31). In the final section, I will explain how the *Zhuangzi*’s aversion to teaching is an important part of its rejection of conventional views on government and society. Here, I focus on the text’s discussions on the *transmission* of ideas to illuminate our understanding of the cicada-catcher’s learning processes. Verbal instruction, a commonly-used mode of teaching, is a recurrent theme in some of the mastery stories. In fact, the text is wary of it. For example, the Wheelwright singles out words as an ineffective mode of teaching and learning. He draws parallels between his attempt to teach his son how to make wheels, and Duke Huan’s reading of books on past sages:

I cannot put it into words, and yet I figure it out in the midst of the activity. I cannot teach this to my son, and he cannot receive it from me...When the men of old died, they took with them the things that couldn’t be handed down. So what you are reading there must be nothing but the chaff and dregs of the men of old. (adapted from the translation by Watson, *The Complete Works,* 152-3)

The point here is not that *no* knowledge or skill can be transmitted but, rather, that the kind of capability the *Zhuangzi* sought (*qiao*, 巧; *ji* 技) cannot be transmitted, especially not in words. Is this a reason why these ordinary men have acquired mastery without a teacher? But—aren’t these masters themselves attempting to impart instructions when they converse with Confucius and others about their skills? Is it their intention to teach? On closer scrutiny, it appears that these masters are perhaps only describing how *they themselves* have learnt their skill, in response to the questions they have been asked. In other words, the format of the masters’ response in quite a few of the stories runs like this: you’ve asked me how I do this (butchering, swimming, ferrying etc). Well, let me tell you how *I* did it. First, it was like this, and I did that. Then I proceeded to do this. Now, at this point (years later) this is what I do. (I’m not telling *you* how to do it!). The use of first-person self-references by these masters in their stories supports this claim that the masters were telling their personalised stories rather than providing generalised accounts of learning: across the mastery stories, the characters *chen* (臣), *wo* (我) and *wu* (吾) are used. These self-referential terms signify how the masters, by and for themselves, have developed and cultivated their different skills and capabilities. Therefore, in the stories where Confucius seeks to hear from the masters, there is an ironic twist: what these individual masters have articulated as personal experiences, Confucius appropriates and generalises for his followers to learn from. Confucius attempts to transmit (*dao* 道) what is not transmittable. In giving verbal instructions to his followers to do as the master does, Confucius has failed to see the point, that is, to learn as the master learns! Such attempts by Confucius to teach occur not only in the cicada-catcher story but also in the stories of the swimmer at the dangerous cascades, and of the ferryman (*Zhuangzi* 48/19/22-49/19/26). If we follow this line of reasoning, the lesson of the skill stories is not so much to urge readers to *do* as a Daoist master does, but to *learn* as a Daoist master learns. In other words, the stories engage at a meta-level discourse on learning. Their point is not for us readers to imitate the cicada-catcher’s actions, or to internalise his words, as Confucius attempts to get his followers to do. The cicada-catcher has *dao* (*wo you dao ye* 我有道也) and our task is not to acquire *his* *dao* but to develop our own. This is one reason the text self-reflexively refers to its teaching as “teaching without words” (*bu yan zhi jiao* 不言之教; in *Zhuangzi* 12/5/1-13/5/13; 57/22/1-57/22/5). In this light, Confucius is spurned twice: first, as the novice Daoist learning from a Master (who would undoubtedly be of a lower social rank than Confucius) and, secondly, as one who misses the point entirely about what can be learnt and how it should be learnt.[[4]](#footnote-4) In the style of the *Zhuangzi*, we could express scepticism about learning from instructions, as: “Can skill be learnt? Can skill not be learnt?”[[5]](#footnote-5)

3. Philosophising Knowledge and Action

The cicada-catcher articulates a self-designed training program that he has undertaken in order to develop his abilities in cicada-catching. This training is arduous and sounds fantastical—as if anyone could balance five balls, or even three, at the end of a pole! But, there is more: with his body, he needs to imitate trees, the familiar habitat of cicadas. What underpins the design of this training program? The cicada-catcher needs to observe cicadas, to see how sensitive they are to movements in their environment. For example, how do cicadas detect threats? Will an on-rush of air caused by a moving object (the pole or the hand) be likely to send them flying off? What is the tree-environment of cicadas like? How does a human (body) position itself so as to be like a tree, in relevant ways, for cicadas? How might balancing balls on a pole help develop cicada-catching skills?

Evaluations of the *Zhuangzi*’s stories and the mood and style of the text often highlight its distinctive views of knowledge and action. Accounts have described the *Zhuangzi*’s epistemological approach as closely aligned with knowing-how rather than knowing-that,[[6]](#footnote-6) and its views on mind (if it had views on ‘mind’, broadly conceived) and action in terms of the intuitive, spontaneous and non-rational. With regard to the latter, for example, an early 20th century sinologist, Henri Maspero, proposes that, in the story of the Wheelwright, “[r]easoning itself must be abandoned, for it obscures the true knowledge which is intuitive” (Maspero, *China in Antiquity*, 307). The assessment of the *Zhuangzi*’s departure from reason is echoed by another influential sinologist, Angus C. Graham, who characterises Zhuangzi as “anti-rationalist”.[[7]](#footnote-7) Further, specifically in relation to the skill stories, Graham situates his analysis of the *Zhuangzi*’s philosophy comparatively, in the terms of western epistemological debate:

The many stories about craftsmen in [the *Zhuangzi*] are always especially illuminating to a Westerner grappling to understand [Daoism]. He learns from them that the [Daoist] art of living is a supremely intelligent responsiveness which would be undermined by analysing and choosing between alternatives, and that grasping the Way is an unverbalizable ‘knowing how’ rather than ‘knowing that’. (Graham, *Unreason within Reason*, 186)

These characterisations of the *Zhuangzi* as “antirational”, or as abandoning reasoning, or as “know-how”, sit within a Cartesian framework that dichotomises body and mind, and which elects the mind as the distinguishing feature of the self. Closely associated with this conception of mind is the promotion of its foremost *capacity*, that is, to *reason*. In defence of these *Zhuangzi* studies in Anglophone literature, it should be noted that their aim is often to defend the distinctiveness, and legitimacy, of the kind of reasoning the *Zhuangzi* seems to uphold. These discussions are well-intentioned in their attempts to carve a place for the *Zhuangzi* in comparative Chinese-western discourse. Unfortunately, this strategy has its limits because it aligns the text’s epistemology with *anti*reason, irrationality or know-how, all of which take second place to reason and intellectual knowledge in dominant strands of western epistemological discourse.

The unsatisfactoriness of the projects described above may be illuminated by drawing attention to an analogous scenario in George Orwell’s *Animal Farm*. In *Animal Farm*, the downtrodden and disgruntled animals are led by the pigs to overthrow their human masters. When they succeed, the animals devise new standards, agreeing to uphold the dictum “Four legs good, two legs bad”—a simple overturning of the values associated with their human masters. The animals also create a set of “Seven Commandments” that merely overturn the practices and beliefs of the overthrown humans, such as “3. No animal shall wear clothes”, and “4. No animal shall sleep in a bed.”[[8]](#footnote-8) These decisions taken by the animals remain locked in the entrenched animal-human dualism. Sadly, the animals have failed to take advantage of their newly-established opportunity to explore new possibilities.

How does this analogy inform our understanding of the underlying epistemological assumptions in the *Zhuangzi*’s cicada-catcher story? I propose that, to characterise the *Zhuangzi*’s views on reasoning, or its style of reasoning, as anti-rational, or intuitive, or as know-how, implicitly accepts the dichotomies entailed by the philosophical vocabulary. This is akin to how the animals’ new creed of “Four legs good, two legs bad” implicitly accepts the dualism inherent in this framework.

If we examine the cicada-catcher’s story, we realise that *both* what we call “knowing-how” *and* “knowing-that” are involved in this *one* activity of cicada-catching. How do we represent this activity using the language of knowing-how and knowing that? We may say:

The cicada-catcher *knows-that* after he can balance three balls, he needs to develop his skill by balancing five balls. When he *knows-how* to balance three balls, he needs to *know-that* he *knows-how* to balance three balls (i.e. a higher-order knowledge). This higher-order *knowledge-that* engenders (or is linked in a causal way to) the belief that he is ready to attempt to balance five balls.

And so it goes. This cumbersome rendition of the cicada-catcher’s story is intended to highlight the potential overlaps between knowing-how and knowing-that, not as two mutually exclusive types of knowledge but, indeed, working together at relevant points in the process such that the cicada-catcher is able to say, “Then I balance five balls and, if they don’t fall off, I know it will be as easy as grabbing them with my hand.” (I will revisit this issue of the integration of knowing-how and knowing-that later in this section.)

Just as importantly, the analysis of knowing-how and knowing-that in western epistemology is often embedded in a framework whose primary concern is to understand knowledge’s nature. From this angle, the approach is typically to set out what it means to know-how and to know-that, prior to investigating how individuals may be said to possess knowledge-how or knowledge-that. This concept of knowledge (whether in propositional form or as capacities or skills) is grounded in the assumption of a person’s—*any* person’s—*possession* of a particular (type of) knowledge, According to this view, interest in the cicada-catching story might include raising questions such as “What kind of knowledge is needed to catch cicadas?” and “Can Confucius and his disciples learn this knowledge?”

This mindset detracts from what actually happens in the story. The cicada-catcher articulates a personalised account of his way of cicada-catching, hunchback and all. *This* is the way (*dao*) he succeeds at cicada-catching. He is *not* offering a generalised explanation of the know-hows of cicada-catching, as one might if one were answering a question relating to knowing-how, conceived in the way described in previous paragraphs. Ironically, and in contrast, Confucius assumes that the cicada-catcher imparts a body of teaching that his followers may appropriate and call their own. He misunderstands the fact that *this* cicada-catcher’s knowledge is not transferable, and he attempts to convey the teaching to his followers. But, we have to ask, how can the cicada-catcher’s learning program—the lessons designed for and undertaken by a hunchback—be useful for Confucius and his followers who, as far as we know, are not hunchbacks? Confucius has failed to grasp that the cicada-catcher, as the knower, is not intersubstitutable with other knowers.

The cicada-catcher’s *dao*—his ability to catch cicadas—holds *only* for him because *dao* is subject-dependent. There may be others who can catch cicadas, but perhaps not as though they were grabbing cicadas with their hands, or perhaps even more skilfully! His capacity to catch cicadas is personal and not transmittable. The cicada-catcher is very much *in* his cicada-catching world, attuned to cicadas and their environments. The emphasis in this story is not on how a cognisant subject encounters the inert world (although the cicada-catcher is very aware of what he is doing and how he executes his task).[[9]](#footnote-9) Rather, it centres on his preparation for his performance, and his performance itself. Here, I highlight two pertinent aspects of cicada-catching performance in the story.

First, upon seeing the cicada, the cicada-catcher’s capacities are engaged *at once*: physically positioning his body and his limbs, dispositionally attuned to the cicada’s bearings, understanding how the cicada is situated relative to his own position, flexing the right muscles in a particular way with appropriate swiftness, and so on. To say that these capacities are engaged at once is not to say that they must all happen at the same time. Rather, it is intended to convey the coordination of the different capacities that, *in working together in a specific context*, are constitutive of masterful cicada-catching performance. He observes cicadas—for example, to understand that they are comfortable in particular tree environments—in order to develop a course of action so that he can *be* part of the tree environment. There is no “correct” sequencing of thinking before acting, as for instance, where the cicada-catcher *first* seeks to understand that the cicada is in a certain position and where, to catch it, he needs to crouch in a particular way and act speedily and *then*, *secondly*, act accordingly.[[10]](#footnote-10) “I position my body like a stiff tree trunk and hold my arm like an old dry limb. No matter how expansive heaven and earth are, or how numerous the ten thousand things, I’m aware of nothing but cicada wings”, says the cicada-catcher. His performance draws on knowledge-how, knowledge-that, physical ability as well as appropriate dispositions, all at once. Surely, the cicada-catcher’s performance is not anti-rational. Note the self-aware way he has taken into account the habitat and habits of cicadas and accordingly planned his practice. Nor, indeed, is it lacking in knowledge-that, given his discursive, step-by-step articulation of how he develops skill for catching cicadas. In the words of Gilbert Ryle, cicada-catching in this story is *one* intelligent activity, not *two* (the thinking and the doing):

When I do something intelligently, i.e., thinking what I am doing, I am doing one thing and not two. My performance has a special procedure or manner, not special antecedent. (Ryle, *The Concept of Mind*, 32)

This brings to mind, secondly, that in the cicada-catcher story, there is no clear boundary between the cicada-catcher’s *thinking* self and his *doing* self. His views and thoughts are shaped by his perceptions of the cicadas and their environments. But the story says more than just that body and sensorimotor experiences influence thought.[[11]](#footnote-11) Consider how the cicada-catcher holds his body like a stiff tree trunk: this must be excruciating. Yet, could it be less so for Zhuangzi’s cicada-catcher because he is a hunchback? Did he *become* a hunchback from his cicada-catching practice, or does his being a hunchback render him particularly well-suited to catching cicadas? Or is his being a hunchback a mere coincidence with his special abilities for catching cicadas? The last scenario is possible though not plausible, as the text is playfully knowing in its choice of words and images; consider, for example, how the Wheelwright’s name is “Flat” (*Bian*; *Zhuangzi* 36/13/68-74). The cicada-catcher story does not tell us more about the connection between hunchback-ness and cicada-catching, but it prompts us to ponder the fascinating possibilities suggested by its imagery. Whether being hunchbacked is an enabling capacity for cicada-catching, or an unintended consequence, we are left to wonder whether the cicada-catcher’s *being* in the environment of cicadas is constitutive of his cognitive processes. This is a much more significant claim than that made previously, which was that experiences shape thought. Here, the suggestion is that the cicada-catcher’s positioning of himself and acting within the cicada-catching environment, could, or maybe should, be seen as cognitive processes. Perhaps, for this reason and more, we need to move beyond the conceptual framework of traditional classifications of rational/anti-rational, mind/body and knowing that/knowing how.

4. Knowing, as a Daoist knows

The discussion in this section highlights a few themes that have arisen in the context of debates in Embodied Cognition Theory. The aim is to show that ECT has a few interesting angles that will help draw out the performance-orientation of the *Zhuangzi* in a much more pertinent way than the dominant epistemological frameworks in western philosophy do. In some ways, it is not a coincidence that we can detect in the cicada-catcher story some similar lines of thought that have informed ECT. Both have empirical bases. In the case of the *Zhuangzi*, its focus is on the performance of the cicada-catcher. In the case of ECT, many of its arguments draw from what it means for people or subjects to encounter situations and act responsively.[[12]](#footnote-12) In brief, both approaches focus on the performative or participatory aspects of human action; their objective is not to theorise the mind.

An important note to make here is that this section in no way assumes or suggests that ECT is a unified theory.[[13]](#footnote-13) Nevertheless, a core emphasis in ECT is the involvement and integration of a range of human capabilities, in cognition. For example, vision, bodily movement, and the feedback generated from the subject’s actions in the environment are more tightly integrated than thought to be in a traditional picture of mind as the centre of cognitive processing (see, for example, O’Regan and Noë 2001). In the three subsections below, I highlight three points of alignment between ECT and the cicada-catcher story: destabilising the mind as the centre of cognition; perception; and performance.

4. 1 Destabilising the Mind as the Centre of Cognition

In ECT, cognitive processing is not the sole prerogative of the mind. The body, as well as the environment in which an individual is situated, may have non-reducible contributory roles such that they are integral parts of cognitive processes. Different strands of ECT adopt particular angles on cognition, whether to understand that “mind” is shaped by body within its environment (e.g. Gallagher, *How the Body Shapes the Mind*), or to see that “mind” is manifest in our sensorimotor processes in contexts.[[14]](#footnote-14) Yet, we can say generally that ECT holds an expanded conception of mind (as compared with the traditional view that mind and body are each associated with distinctive processes), undergirded by complicated, yet more empirically realistic, accounts of agency and causation.

How might some of these ideas provide a vocabulary for unpacking the cicada-catcher’s learning, knowledge and action? ECT is established on discourse that destabilises mind-body dualism, as well as the role of mind as the independent centre of cognitive processes. In cicada-catching, it is not that the cicada-catcher first engages in reflection, “in the mind”, with catching-activity following as a result of the reflections. The story provides more details that may be embraced within an explanatory framework of integrated cognition: the cicada-catcher holds his arm like a tree limb, he sees only cicada wings, and he manipulates the pole as if it were his hand.[[15]](#footnote-15) Even though we may descriptively carve out the different components of cicada-catching in words, these are not three activities, but one. On one account of ECT, such successful manipulations of the setting of the environment, and of the things therein (such as the pole to grab cicadas with) *are* the cicada-catcher’s cognitive practice (see Menary, *Cognitive Integration*, and Wheeler, *Reconstructing the Cognitive World*). Cognition operates—in both “body” and “mind”—*while* the cicada-catcher observes his environment and acts in it. The upshot of understanding the story in this way is not to reduce cognition to action, but to highlight the *interdependence* of what are typically identified as “cognitive” capacities, on the one hand, and “sensorimotor”, on the other. Recall a question raised earlier about the cicada-catcher’s hunchback: has his hunchback developed because of his cicada-catching activities, or is he a better cicada-catcher because of his hunched back? It is not only that his cognitive processes are generated by his doing; he learns, knows and acts *with his body*.[[16]](#footnote-16)

4.2 Perception: Learning to See

The cicada-catcher story focuses on the cicada-catcher’s encounter with cicadas and his attentiveness to their wings. Why does he focus on their wings? The discussion in this section focuses on the idea that cognitive processes take place within specific environments and therefore it is necessary to develop perceptive skills to effectively manipulate what is available. Should elements within environments change, performance needs to be adjusted in order to successfully adapt to that change (cf. Varela, Thompson, & Rosch, *The Embodied Mind*; Barsalou, “Situated Conceptualization”). Consider, for example, how the cicada-catcher story effectively expresses awareness that the probability of things going wrong is overdetermined: distractions might arise, cicadas might fly off, and so on. It is no wonder, therefore, that arduous practice is necessary for effective cicada-catching. Amongst other things, the demanding training processes described by the cicada-catcher aim to hone his perceptive skills, *situated in the environment*. For the cicada-catcher, “perception” includes visual perception (e.g. observing cicada habitats), sensorimotor perception (e.g feeling the movement of the balls stacked at the end of the pole) and even the closing off of some other perceptual capacities (e.g. restricting the distractions of the world (*wanwu* 万物, lit. *ten thousand things*)) (cf. Gibson, *The Ecological Approach*; Chemero, “An outline of a theory of affordances”).[[17]](#footnote-17)

The cicada-catcher is completely absorbed in his activity: “No matter how expansive heaven and earth are, or how numerous the ten thousand things, I’m aware of nothing but cicada wings.” What does he perceive in the cicada-wings? What does his training help him see, that a person not trained in cicada-catching does not see? One branch of the debate in ECT draws on discussions on perception in ecological psychology. An influential account, offered by James Gibson in 1979, understands perception in terms of its functions within the animal’s environment (Gibson, *The Ecological Approach*). The perceptive capabilities of an animal are crucial in helping an animal navigate and live in its environment or habitat. However, the distinctiveness of Gibson’s account lies not in its provision of a list of perception’s functions within the environment. Its key significance was to highlight the opportunities provided within an environment, for which he coined the term “affordance” to suggest that the environment is not inert, nor does it exist as a bunch of representations to be processed by the perceiving subject’s “mind”. Gibson writes: “[t]he affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or for ill.” (Gibson, *The Ecological Approach*, 127). The word “affordances”, the nominal form of the verb “afford”, highlights the richness of the environment and what is made available to animals.[[18]](#footnote-18) For perceiving subjects, different possibilities may arise from the same environment: rotten fruit on the forest floor “afford” food for the Rhinoceros Beetle whereas they might present the likelihood of slipping, for the bushwalker. Cicadas present cicada-catching affordances for the cicada-catcher. But why does he focus on cicada *wings*? To catch cicadas, one end of the pole had strong adhesive to which cicada wings would stick, and the cicada caught. In the language of affordances, we may say that the cicada-catcher concentrates on cicada wings because they present sticking affordances for the sticky end of the pole. By focusing his attention on cicada wings, the cicada-catcher aligns his perceptive capabilities with cicada habitats, hence *enacting* the cicada-catching affordance. One advantage of this explanatory framework is its aversion from an approach that both elevates the intellectual capacities of perceiving subjects and deflates the status of the environment by objectifying it.

Is there more we can say about what the cicada-catcher perceives in the environment? In general, from the angle of a person’s engagement within the environment, it is important to ask the question of what it is she attends to when she looks, listens, feels and perceives more generally. Given the situatedness of human action in contexts that present manifold opportunities, and given that there is no limit to what we perceive in each of these contexts of action, our perceptive capabilities need to be fine-tuned to new kinds of information (Ingold, *The Perception of the Environment*, 166). We see that the cicada-catcher learns by doing: first balancing one ball at the end of the pole andattending to what is required for him to do that successfully. During the learning process, the cicada-catcher must cultivate activity-appropriate behaviours and skills, and also acquire an understanding of conditions that might impact on the activity in significant ways. This familiarisation process allows a learner to understand patterns in *typical* contexts, perhaps akin to the kind of activity Hubert Dreyfus refers to as “habitual activity”. One example of habitual activity is driving to the office (*Being-in-the-World*, 93). Another is pegging clothes on the line.

Learning to operate in formulaic ways is necessary, though not sufficient, for activities that are not merely habitual. Many activities we engage in require us to take into account context-based factors which impact on the activity. In the case of cicada-catching, for example, this might include cognisance of the damp undergrowth in *this* environment, or of the denseness of *that* forest. These elements could constitute the “new kinds of information” Ingold alludes to, as discussed above. Through his learning practices, the cicada-catcher must come to understand salient factors that are more or less stable, and others that vary more significantly, in different contexts where cicada-catching happens. Learning in this way alerts the learner to the important focal points of a particular activity, helping her understand what she needs to attend to when taking action so that she can be just as successful in atypical scenarios. This aspect of learning may be identified as an “education of attention”, as suggested by Gibson (Gibson, *The Ecological Approach*, 188, 254; cited in Ingold, *The Perception of the Environment*, 167).

Back to the cicada-catcher story: perhaps a cicada-catcher trained to catch cicadas in a “habitual” way may be able to catch some cicadas. However, the cicada-catcher in our story knows in a qualitatively different way: he knows not to be distracted by the range of situational particularities, focusing only on those that *matter*, in relevant ways, to cicada-catching. The position and movement of cicada wings seem critical to the cicada-catcher’s success; perhaps they indicate that the cicada has come to rest on this branch, or that it is unsettled, or that it is about to fly off. The cicada-catcher’s attentiveness to cicada wings helps him pre-empt possible exigencies associated with the activity

In the language of ECT, we could say that the cicada-catcher is perceptively attuned to a dynamic cicada-catching environment and that his cognitive processes involvehis movement through the environment, including his control of his attention, to focus on cicada wings. In this light, we may perhaps more accurately describe the *Zhuangzi*’s underlying epistemological commitments as “agentive knowledge”, that focuses on apt practice. One account of agentive knowledge helps to illuminate the discussion here: it is “not a general knowledge that can be taught, but a knowledge that shows itself in individual praxis, in the course of doing something right in a given situation”.[[19]](#footnote-19)

4.3 Performance

By focusing on performance, we move away from the emphasis on mind and its computational capacities. Instead, we attend to how the cicada-catcher catches cicadas or, more generally, how people get things done, in real time (cf. Clark, Being There, 1997). The cicada-catcher story requires readers to step back and take in the performance of the cicada-catcher within his cicada-catching environment. That cicadas might fly off suddenly, whether because there has been an onrush of wind, or a change in temperature, or because they have sensed a predator, seems to be written in the fine print of the story. Indeed, the emergent environment demands the cicada-catcher’s complete attentiveness to the task at hand. The view that environments are dynamic, hence requiring a systems approach, is a line of debate arising in the ECT literature. Here, mind and world operate as an integrated system; intellection works interdependently with sensorimotor experiences, *situated* within specific environments. In this explanatory framework, a person’s engagement with the world comes to the forefront. An influential account of a dynamic systems approach, proposed by Anthony Chemero, characterises affordances in terms of the relation between individuals and the environment (Chemero, “An Outline of a Theory of Affordances”).[[20]](#footnote-20) As relations, specific affordances enable particular behaviours: soil affords nest-building behaviours for the Australian Apostle Bird, and earth that is sufficiently deep affords burrow-digging behaviours for Wombats. This view of affordances creates room for attention to *action*, drawing our gaze to the individual’s behaviour in context. The account builds on the Gibsonian emphasis on a system-based approach—an *ecological* one—that seeks to understand the psychology of perception more accurately, in terms of what an individual perceives and how it behaves within the environment.[[21]](#footnote-21) Chemero’s ecological approach, a “form of realism about the world as it is perceived and experienced” (Chemero, *Radical Embodied Cognitive Science*, 150), allows us to locate an organism’s activities in a rich, varied and often unpredictable environment, and to arrive at a more realistic picture of its behaviours and capabilities in context. From this ecological angle, the cicada-catcher’s performance may be understood in terms of appropriate physicality, awareness, concentration, percipience and responsiveness, each of which are necessary, though insufficient, for catching cicadas.

We may build on this picture to provide a richer account of the cicada-catcher’s performance. Here, consider the way in which the cicada-catcher uses the pole as if he were “grabbing” the cicadas with his hands. In other words, the pole may be considered a vehicle—an “extra-bodily vehicle”—in his cicada-catching (Menary, *Cognitive Integration*, 4-6). It enables him to engage in this activity more effectively. We could say that the pole is an “epistemic tool”, in the same way a calculator is an epistemic tool for a person performing mathematical calculations (Menary and Gillett, “Embodying Culture”, 74). This conceptual framework brings together epistemological acumen and physical capabilities in a way that helps highlight the centrality of performance in the *Zhuangzi*. *As a hunchback*, the cicada-catcher’s successes occur at the *intersection* of his capabilities and the environment; appropriate matching of these two elements of affordances is a prerequisite to success.

5. *Dao*: Living, as a Daoist Lives

What is the relevance of the cicada-catcher story to life more generally? Cicada-catching is such a specific activity, after all. In its intellectual milieu, this story and, indeed, many sections of the *Zhuangzi*, addressed existing approaches to quell unrest. Some of these texts reflect the intentions of court officials then, to address socio-political unrest by implementing standards for human behaviour. Standards for correct behaviours were upheld and affirmed especially in the creation of norms, perpetuated in words (language). There was the so and not-so (*ran* 然, *buran* 不然); possible and not possible (*ke* 可, *buke* 不可); correct and permissible, and wrong and impermissible (*shi* 是, *fei* 非), and so on. From the *Zhuangzi*’s point of view, life was impoverished by these standards because they reduced its plurality to uniformity, by simplistically drawing distinctions according to these seemingly straightforward categories.

The cicada-catcher story, and others like it, offer snapshots of ordinary, yet *masterful*, lives. Is it plausible that the lives these ordinary folk are more enriched that those led by court officials? And would these masters not be better off familiarising themselves with prevailing norms and abiding by them? As noted previously, the *Zhuangzi* addresses both the lives of the officials as well as their misconceived views of government. In relation to the former, the text wonders about the preparedness of these officials to deal with contingencies thrown up in exigent situations. In a passage where Confucius has a conversation with his favoured follower, Yan Hui, some strands of the *Zhuangzi*’s hesitations about official life are expressed. The story appears in a chapter entitled “Worldly Business Among Men”, where Yan Hui announces to Confucius that he is ready to take on a difficult task, that is, to work with the notorious Prince of Wey (*Zhuangzi* 8/4/1-9/4/24). Instead of applauding Yan Hui on his commitment to a worthy mission (as we would expect a Confucian to do), Confucius—here a spokesperson for the *Zhuangzi*—attempts to persuade Yan Hui not to take up the post. Yan Hui reassures Confucius, noting that he has devised plans to deal with this difficult prince, at which point Confucius says, “Goodness, how could that do? You have too many policies and plans and you haven't seen what is needed. You will probably get off without incurring any blame, yes. But that will be as far as it goes. How do you think you can actually convert him? You are still making the [heart-mind] your teacher!” (*Zhuangzi* 9/4/23-24; trans. Graham, *Chuang-Tzu*, 66-7). In the eyes of the *Zhuangzi*, the cultivated heart-mind (*xin* 心) is a symbol of Confucian accomplishment: it is a heart-mind that stands firm on Confucian ideals.[[22]](#footnote-22) Such *acculturation* to a fixed way of thinking was deemed unacceptable to the *Zhuangzi*, as it foreclosed on issues even before a person encounters the issues, just as Yan Hui was proposing to do in his dealings with the Prince of Wey.

The insidiousness of such an approach to life would be compounded if the *people* were expected to live by standards devised by officials who upheld such conceptions of a flourishing life. Such a *dao*, one that is prescribed for everyone, restricts rather than enables. This also helps explain why there are different accounts of mastery in the *Zhuangzi*. They are each a model of how learning and mastery are possible and, *because* norms are activity-specific, we must in life refrain from recommending any one set. It is only in this way that the cicada-catcher story, even though it tells us about *one ordinary activity*, reveals important lessons for life. We should not learn to be *like* the cicada-catcher, but rather, learn in the way he learns. To learn like he does, we may develop our perceptive capabilities so that we can understand the world’s regularities and patterns, and activity-specific norms, as well as its contingencies. In the *Zhuangzi*, the plurality in the world should not be quelled as it offers many possibilities. There is much it has to offer but we need simultaneously to be attuned to it, and open to its possibilities, in order to thrive. The cicada-catcher has *dao*. Do you and I each have (a) *dao*?

Acknowledgements:

Chris Fraser provided many insightful comments on an earlier version of this paper, for which I am extremely grateful.

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1. The character *zhi* “知” in this phrase *wei tiao yi zhi zhi* “唯蜩翼之知” may be translated “to be aware of” but it may also be translated as ‘to comprehend’. [↑](#footnote-ref-1)
2. 仲尼適楚，出於林中，見痀僂者承蜩，猶掇之也。仲尼曰：「子巧乎？有道邪？」曰：「我有道也。五六月累丸，二而不墜，則失者錙銖；累三而不墜，則失者十 一；累五而不墜，猶掇之也。吾處身也若厥株拘，吾執臂也若槁木之枝，雖天地之大，萬物之多，而唯蜩翼之知。吾不反不側，不以萬物易蜩之翼，何為而不得！」 孔子顧謂弟子曰：「用志不分，乃凝於神，其痀僂丈人之謂乎！」*Zhuangzi*,48/19/17-21. All references to the Chinese language *Zhuangzi* text are taken from the *Zhuangzi Yinde*, the Harvard Yenching index, 1956. [↑](#footnote-ref-2)
3. I discuss some of these characterisations in later sections of this chapter. [↑](#footnote-ref-3)
4. See, for example, Dufresne’s discussion (“The Illusion of Teaching and Learning”, 2017) [↑](#footnote-ref-4)
5. In the *Zhuangzi*, this style of questioning, first to frame a question, then to pose its contrapositive, is interesting. If only one question were posed, e.g. “Can skill be learnt?”, a possible interpretation is that the text is in fact making a statement by posing a rhetorical question. (It could, of course, be a genuine question, seeking an answer for its query). However, to first frame a question and then to follow it up immediately with its contrapositive, expresses an open-ended scepticism, that is, one that prompts readers to further consider the issue at hand. [↑](#footnote-ref-5)
6. See, for example, Philip Ivanhoe’s “Zhuangzi on Skepticism” (p. 648), and Harold Roth’s “Bimodal Mystical Experience” (pp. 24, 27). [↑](#footnote-ref-6)
7. Graham writes, “Like all great anti-rationalists, [Zhuangzi] has his reasons for not listening to reason…all reasoning depends on making distinctions, and to reach the conclusion that we should abandon reason for the immediate experience or an undifferentiated world, transforming ‘All are one’ from a moral into a mystical affirmation. It is in ‘The sorting that evens things out’ that [Zhuangzi] takes this step.” (Graham, *Chuang Tzu*, 9). [↑](#footnote-ref-7)
8. Orwell, *Animal Farm*, chapter 2. [↑](#footnote-ref-8)
9. This picture unsettles a dominant conception of propositional knowledge in western philosophy, that it is the foundational element of epistemology. Gilbert Ryle challenged the prioritisation of knowledge-that over knowledge-how in western analytic epistemology more than half a century ago (“Knowing How and Knowing That”, 1946). The debate on the status of knowledge-that remains contentious; for example, the “Intellectualist Debate” centres on whether knowledge-how is primarily a kind of knowledge-that, with the “Intellectualists” holding the affirmative view. Jason Stanley and Timothy Williamson’s defence of Intellectualism is an influential view (“Knowing How”, 2001). See the discussion by Jeremy Fantl (“Knowing-How and Knowing-That”, 2008) and John Bengson and Marc Moffett (*Knowing How*, 2011). [↑](#footnote-ref-9)
10. Timothy Ingold, bringing the insights of ecological psychology to bear on his anthropological work, comments that the idea of knowledge detached from action in context and independent of bodily engagement is problematic. He argues, “[t]o think in these terms, however, is to treat performance, such as that of the English speaker or the bowler in cricket, as nothing more than the mechanical execution, by the body, of a set of commands generated and placed ‘on line’ by the intellect.” (“From the Transmission of Representations”, 135). [↑](#footnote-ref-10)
11. Ellen Fridland presents an interesting account of the *chronological priority* of skill-learning to conceptual thought. She suggests that “it is through the processes of skill learning that intentional actions break free from their domain-specific instantiation environments and begin to exhibit increasing degrees of distinctness and abstractness.” (“Skill Learning and Conceptual Thought”, 77-8). This account is not about the priority as such of skill over conceptual thought, nor is it attempting to reconfigure what Ryle tried to do. However, it harks back to Ryle’s aim to address the unequal weights of knowing-that and knowing-how as well as how they are conceived in explaining knowledge and action. Ryle sought “to turn the tables and to prove that knowledge-how cannot be defined in terms of knowledge-that and further, that knowledge-how is a concept logically prior to the concept of knowledge-that” (“Knowing How and Knowing That”, 4-5). [↑](#footnote-ref-11)
12. Some of this research considers data from experiments in the cognitive and neurological sciences, as well as on robotics. Work on robotics allows researchers to construct robots that appear responsive to environments and seem to engage in adaptive behaviours, yet without a “mind” to explain such behaviours (see, for example, Webb and Consilvio, *Biorobotics*, 2001; and the brief discussion in Wilson and Golonska, “Embodied Cognition is Not What You Think It Is”, 3-4). This research has significant implications for philosophy, include expanding our understanding of adaptive behaviour (and how that compares with existing explanatory accounts), and challenging views of mind that defend the centrality of representational content in cognitive processes (see the discussions by Alva Noë (*Varieties of Presence*; “Experience without the Head”), who rejects the centrality of representations in knowledge, and by Susanna Siegel (Siegel and Silins, “The Epistemology of Perception”; *The Contents of Visual Experience*), who defends it. [↑](#footnote-ref-12)
13. There are many positions on what it means to say that cognition is *embodied*; these views are shaped in part by which philosophical problem ECT is used to address. Some influential versions of ECT include Mark Johnson’s *Embodied Mind, Meaning and Reason*; Andy Clark’s Supersizing the Mind; Shaun Gallagher’s How the Body Shapes the Mind; Richard Menary’s Cognitive Integration; and Andy Clark and Alan Chalmers’ “The Extended Mind”. Views that challenge ECT include Jakob Howhy’s “The Self‐Evidencing Brain” and Frederick Adams and Kenneth Aizawa’s *The Bounds of Cognition*. For an overview of different positions, see Shapiro, *Routledge Handbook of Embodied Cognition* and Wilson and Golonka, “Embodied Cognition is not What You Think It Is”. [↑](#footnote-ref-13)
14. Menary discusses these strands in *Cognitive Integration,* pp. 3-5. He draws on both strands in his proposal for Cognitive Integration, the view that our manipulations of the environment have a normative dimension, embedded in cognitive practices (*Ibid*., 6; see also Menary and Gillett, “Embodying Culture”). [↑](#footnote-ref-14)
15. I discuss the idea of cognitive integration later, in 4.3, which focuses on performance. [↑](#footnote-ref-15)
16. For support for this view, refer to Gallagher, *How the Body Shapes the Mind*; Varela, Thompson, & Rosch, *The Embodied Mind*; Andy Clark, Being There. See also Noë, “Experience Without the Head”; and the collection of papers edited by Richard Menary in *The Extended Mind*, in response to Clark and Chalmers’ article of the same title, “The Extended Mind”. [↑](#footnote-ref-16)
17. Contrast this picture of learning with that implied Confucius’ actions, revealing the latter’s assumption that learning primarily involves the internalisation of knowledge or ideas. Confucius’ simplistic conception of learning threatens to reduce it to “an unproblematic process of absorbing the given, as a matter of transmission and assimilation” (Lave and Wenger, *Situated Learning*, 47). The thesis of situated learning is not simply that one learns by doing but that all learning, even in the formation or acquisition of an abstract principle, is “a specific event in specific circumstances” (*Ibid*., 34). [↑](#footnote-ref-17)
18. For Gibson, these possibilities given in the environment—affordances—would be perceived directly by the animal (think, for example, of an animal foraging for food) and not mitigated by inference or the processing of information received through visual and other sources (Gibson, *The Ecology of Perception*). On direct perception, Gibson notes that: “when I assert that perception of the environment is direct, I mean that it is not mediated by retinal pictures, neural pictures, or mental pictures” (Gibson, *The Ecological Approach*, 147). The assertion that perception is direct is not unproblematic. This debate centres on whether the mind works with *representations*, or directly on the details presented in the environment, as articulated in Gibson’s account. Anthony Chemero and his collaborators draw on Gibson’s work to defend an account of direct perception. For Chemero, direct perception does not involve inferences, whereby the animal first makes inferences about the environment (or mental representations of it) before acting on it. Calling this view “radical embodied cognitive science”, Chemero argues that “Direct perception is perception that does not involve mental representations” (Chemero, *Radical Embodied Cognitive Science*, 114). In a subsequent analysis of direct perception, Chemero and his collaborator, Withagen, argue that “Direct perception is a coupling between the perceiver and its environment, via information in the array.” (Withagen and Chemero, “Affordances and Classification”, 532).

    Refer to Berit Brogaard (ed.), *Does Perception Have Content?* for a collection of papers on the topic of representation. Finally, refer to Clark, *Being There*, for a discussion on how artefacts and representations shape cognitive operations.

    The articulation of the cicada-catcher’s story need not delve into the intricacies of the representationalist debates. The aim here is just to draw out the relation between perception and the environment. [↑](#footnote-ref-18)
19. Stegmaier “Was heist: Sic him Denken orientieren?”, 11; cited in and translated by Johanna Seibt (“Intercultural Dialogue and the Processing of Significance”, 95). [↑](#footnote-ref-19)
20. A significant difference between Chemero’s and Gibson’s account is that, for Gibson, affordances are *possibilities* provided by the environment whereas for Chemero, affordances are *relations*. In Chemero’s formulation of affordances, he states, “translated more loosely and colloquially this means “The environment affords behavior ɸ for the organism” (Chemero, “An Outline of a Theory of Affordances”, 187). This suggests that affordances are *relations*, rather than just relational. Yet in a later formulation, Chemero seems to align affordances more closely with the environment(al features) rather than with the relation between the individual and the environment. In considering the question, “Do Affordances Exist without Animals?”, he writes, “Affordances do not disappear when there is no local animal to perceive and take advantage of them” (Chemero, *Radical Embodied Cognitive Science*, 150). In my view, *because* affordances are relations, they do not *exist* when there is no animal in the environment to perceive and act within that environment. [↑](#footnote-ref-20)
21. These relations, Chemero asserts, are *real* and not simply a projection of the animal’s impressions (of the world) (Chemero, *Radical Embodied Cognitive Science*, 150). [↑](#footnote-ref-21)
22. One important example of the centrality of the heart-mind in the Confucian tradition is Mencius’ heart that does not waver (*budongxin* 不动心), in the notable passage Mencius 2A2 (In Bloom, *Mencius*, 29-32). [↑](#footnote-ref-22)