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技藝與理解

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摘　要

人是如何獲得「理解」？德性知識論的代表人物 Linda Zagzebski 長久來宣稱「理解的獲得來自於對技藝的掌握」。在本文中，作者闡釋 Zagzebski 的宣稱，並指出這宣稱的問題。透過對 Zagzebski 之宣稱的批判性檢視，作者在文後提供另一修改自 Zagzebski 的理解獲得觀點。

關鍵詞：技藝、技巧、解釋、識知、理解

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Technê and Understanding

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Abstract

How can we acquire understanding? Linda Zagzebski has long claimed that understanding is acquired through, or arises from, mastering a particular practical technê. In this paper, I explicate Zagzebski's claim and argue that the claim is problematic. Based on a critical examination of Zagzebski's claim, I propose, in conclusion and in brief, a new claim regarding the acquisition of understanding.

Keywords: technê, skill, explanation, epistêmê, understanding

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Technê and Understanding*

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I. Introduction

Several contemporary epistemologists, particularly Linda Zagzebski (1996; 2001; 2009), Jonathan Kvanvig (2003), and Duncan Pritchard (2010), have urged philosophers to focus more on the very idea of understanding because, as they have argued, understanding is more valuable than knowledge.[1] These epistemologists not only give reasons for the shift of focus in epistemology but also offer their own accounts of understanding. Among these, Zagzebski's account of understanding (1996: Part I, Sect. 2.2; 2001; 2009: Ch. 1 and Ch. 6) deserves special attention due to its broader concern, which addresses the issues of the nature, possibility, and acquisition of

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[1] For an overview of the recent literature on the value of understanding, see Stephen Grimm (2012), in which he examines the three main reasons that philosophers have had for thinking that understanding is more valuable than propositional knowledge: first, understanding is more transparent to the mind; second, understanding reflects or mirrors the world more profoundly; and third, understanding is a greater cognitive achievement.

understanding. Zagzebski identifies several features that distinguish understanding from knowledge; some features are concerned with the *nature* of understanding and others are concerned with the *acquisition* of understanding (a dimension that is often overlooked in the literature). In this paper, my focus is on Zagzebski's account of the acquisition of understanding,[2] especially her central claim that *understanding arises from mastering a technê*. Zagzebski has long argued for this claim, and I have been puzzled by her claim since it first published in 2001. However, no one has ever seriously scrutinized this claim. The claim deserves close scrutiny because if understanding, as epistemologists argue, is more valuable than knowledge and if we desire to have such a higher epistemic good, then a critical study of Zagzebski's account of the acquisition of understanding, which seems to be the only such account available in the epistemological literature, shows us what can and what cannot be a viable way to acquire understanding. The structure of this paper is as follows. In Section II, I explicate Zagzebski's claim. In Section III, I argue that the claim is problematic because the argument for it is either unsound or equivocal. In Section IV, based on the critical study of Zagzebski's account, I suggest a new claim regarding the acquisition of understanding.

[2] For critical reviews of Zagzebski's account of the *nature* of understanding, see, e.g., Grimm (2006) and Pritchard (2010: sec. 4.3).

II. Zagzebski's Account of the Acquisition of Understanding

Zagzebski's account of understanding appears mainly in her article "Recovering Understanding" (2001) and Chapter Six of *On Epistemology* (2009). In "Recovering Understanding", Zagzebski identifies three features of understanding that distinguish it from knowledge:

> [T]hree features of understanding: [i] It is acquired through mastering a *technê*; [ii] its object is not a discrete proposition but involves the grasp of part/whole relations; and [iii] it involves representing some portion of the world non-propositionally. (2001: 242)

In *On Epistemology*, Zagzebski also mentions three features of understanding. The first two of the features are the same as [i] and [ii] above; the third feature is newly added but is not used to replace [iii], which is still endorsed in *On Epistemology*. Here are Zagzebski's characterizations of the features:

> [The first] is that understanding is connected with learning an art or skill, a *technê*. One gains understanding by knowing how to do something well …… This leads to the second idea, which is that understanding is not directed toward a discrete proposition, but involves grasping relations of parts to other parts and perhaps the relation of parts to a whole. …… There is a third feature of understanding that distinguishes it from propositional knowledge ……: Knowledge can

> be acquired by testimony, whereas understanding cannot. (2009: 144-145)

I summarize these four features of understanding as follows (the names for each feature have been added by me):

(i) *The Practical Feature*: Understanding is connected with or acquired through mastering a technê;[3]

(ii) *The Holistic Feature*: Understanding involves grasping part/whole relations;[4]

(iii) *The Non-propositional Feature*: Understanding involves representing some portion of the world non-propositionally;[5]

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[3] A precautionary note should be added here: Zagzebski acknowledges that "[s]ome instances of understanding are so easy that they require nothing more than simple past experience — for example, understanding a stop sign in the United States" (2009: 144). She calls such instances of understanding "easy understanding". Zagzebski is not concerned with easy understanding because she suggests that "the more interesting and significant examples of understanding are connected with skills" (2009: 144). The present paper is not concerned with whether *all* understanding is connected with a skill but with how understanding is connected with a skill.

[4] This feature is endorsed by many contemporary epistemologists, but the terminologies they use in charactering the feature may differ. According to Stephen Grimm, "In the case of understanding, the objects would be something along the lines of 'structures' (Linda Zagzebski), or 'systems' (Julius Moravcsik [1979]), or 'information chunks' (Jonathan Kvanvig [2003]), or 'dependency relations' (Jaegwon Kim [1994] and [Grimm 2006]). While these descriptions differ in various ways, if there is a common idea here it seems to be that understanding is directed at a complex of some kind — in particular, at *a complex with parts or elements that depend upon, and relate to, one another*, and that the mind grasps or apprehends when it understands" (emphasis added, 2012: 105). For Zagzebski, such part/whole relations "can be spatial, such as the relative location of sites in a city, and they can be temporal, as in a musical composition. An important kind of relation is that of cause to effect, or more generally, what Stephen Grimm calls dependency relations" (2009: 144).

[5] This is because, for Zagzebski, propositional structure does not exhaust the structure of reality. For instance, art, music, maps, graphs, diagrams, and causal nexus are portions of the world, and their structures are non-propositional. An understanding or state of comprehension of the non-propositional structures of reality can be acquired, according to the Practical Feature, through mastering a technê. Thus, Zagzebski says that "The *technai* of art, music, and literature can produce a state [of comprehension] that has epistemic value" (2001: 243).

(iv) *The Non-testimonial Feature*: Understanding cannot be acquired by testimony.

These four features can be classified into two groups. Features (ii) and (iii) are grouped together because they concern the nature of understanding. These features as a whole tell us what understanding is: understanding is the state of grasping the part/whole relations of the non-propositional structure of reality. Features (i) and (iv) are grouped together because they concern the acquisition of understanding. Further, (iv) can be treated as being derived from (i) because *if* understanding does involve mastering a technê and *if* a technê cannot be acquired by testimony or instruction alone (but by practice), then it follows that understanding cannot be acquired by testimony. Because my concern in this paper is the acquisition of understanding and because (i) is theoretically more fundamental than (iv), I shall focus on (i).

What does Zagzebski mean by the Practical Feature (I shall use the term as if it were Zagzebski's term)? First, let us see why Zagzebski thinks that the Practical Feature can be used to distinguish understanding from propositional knowledge:

> [U]nderstanding (*epistêmê*) … **has something to do with** *technê* — practical human arts or skills. … Understanding is a cognitive state that **arises from** *technê*, and since *technê* includes certain practical activities that are by no means wholly cognitive, it follows that understanding … is a state that **arises from** practices that are not purely cognitive. (bold emphasis mine, 2001: 240)

Can Zagzebski's aim of distinguishing understanding from propositional knowledge be successfully achieved by proposing the claim that understanding has something to do with or arises from technê and that propositional knowledge does not? At this moment, it appears difficult to answer this question confidently because we need more information about how Zagzebski characterizes the key phrases in the claim, i.e., "having something to do with" or "arising from", to determine whether propositional knowledge has something to do with or arises from technê. Here are two possible cases that undermine Zagzebski's aim of distinguishing understanding from knowledge. First, it is possible that some propositional knowledge "has something to do with" technê. For example, according to intellectualism about knowing-how (or technê), knowing-how is a species of knowing-that. Intellectualism argues that an agent's *knowing how*, for instance, to ride a bicycle skillfully amounts to her *knowing that* such and such is the way for her to ride the bicycle, and the agent entertains the proposition about the way in which she does so under the practical mode of presentation (Stanley & Williamson, 2001; Stanley, 2011). Under the intellectualist account of knowing-how (or technê), whenever an agent possesses a practical technê, he must know or entertain a certain proposition. Here, I do not suggest that intellectualism is correct (for criticism, see Tsai, 2011a, 2011b) but that without any qualification propositional knowledge also "has something to do with" technê, that is, the former constitutes the latter. Second, it is possible that all propositional knowledge "arises from" technê. For example, according to strong anti-intellectualism, knowing-that is a species of knowing-how; in Stephen Hetherington's words, "knowledge that *p* is the ability — the knowledge-how — such as to

respond, to reply, to represent, or to reason accurately that *p*" (2011: 44-5). Again, I do not suggest that strong anti-intellectualism is correct but that Zagzebski's claim that understanding arises from technê needs to be better clarified so that her aim can be achieved.

The claim "understanding arises from mastering a technê" tends to be interpreted as "understanding arises *spontaneously and directly* from mastering a technê". That is, when one has mastered a technê, some sort of understanding naturally but not necessarily emerges, and it emerges directly from one's mastery of that technê. I think that the idea contained in this interpretation is possible and plausible within the well-known model of skill acquisition that has been developed by Hubert Dreyfus and Stuart Dreyfus (1986). According to Dreyfus and Dreyfus, a skill is acquired and developed through five stages: novice, advanced-beginner, competent, proficient, and expert. When an agent achieves the level of proficiency or above, he gains a sort of holistic understanding that "effortlessly occurs" (1986: 28).[6]

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[6] One of the main targets of Dreyfus' phenomenological model of skill acquisition is cognitivism, according to which "*all* mental activity is cognitive — that perception, understanding, **learning** and action are all to be understood on the model of fact gathering, hypothesis information, inference making and problem solving" (bold emphasis mine, 1988: 100). For Dreyfus, "We must be prepared to abandon the traditional [cognitivist] view that a beginner starts with specific cases and, as he becomes more proficient, abstracts and interiorizes more and more sophisticated rules. It might turn out that skill acquisition moves in just the opposite direction: from abstract rules to particular cases" (1988: 102). Dreyfus' five-stage model of skill acquisition can be introduced as follows: (This introduction has been kept as short as possible. For a criticism of Dreyfus' model, see, e.g., Selinger & Crease, 2002).

Stage 1: Novice. Regulative rules are indispensable in the first stage of skill acquisition, and they are usually given by an instructor. But such rules are special, that is, they are context-free. According to Dreyfus, "the instruction process begins with the instructor decomposing the task environment into context-free features which the beginner can recognize without benefit of experience. The beginner is then given [context-free] rules for determining actions on the basis of these feature" (1988: 102). Here, "context-free" is understood in the sense that "[e]lements of the situations to be treated as relevant are so clearly and objectively defined for the novice that they can be recognized without reference to the overall situation in which they occur" (Dreyfus &

To me, the above interpretation is the most possible reading of Zagzebski's claim. Additionally, the idea within the interpretation can be plausible because

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Dreyfus, 1986: 21). Because it is the rules that make a skilled behavior possible at this stage (or in the context-free situation), I call the behavior "rule-based behavior".

Stage 2: Advanced Beginner. A novice's performance improves to the second level "only after the novice has considerable experience in coping with real situations" (Dreyfus & Dreyfus, 1986: 22). "As the novice gains experience actually coping with real situations, he begins to note …… perspicuous examples of meaningful additional components of the situation. After seeing a sufficient number of examples, the student learns to recognize them" (Dreyfus, 1988: 103). In this stage, the student recognizes not only context-free elements but also new, situational elements. What the student relies on in responding to situational elements is "instructional *maxims*" rather than "instructional rules". Dreyfus uses the term "maxim" to "differentiate this form of instruction from the first, where strict *rules* were given as to how to respond to context-free *features*" (1988: 103). Let us call skilled behavior performed at the second stage (or in the real situation) "maxim-focused behavior".

Stage 3: Competence. "With increasing experience, the number of features and aspects to be taken account of becomes overwhelming. To cope with this information explosion, the performer learns …… to adopt a hierarchical view of decision-making. By first choosing a plan, goal or perspective which organizes the situation and by then examining only the small set of features and aspects that he has learned are relevant given that plan, the performer can simplify and improve his performance" (Dreyfus, 1988: 103). Unlike the last two stages, the performer at the third stage encounters problems in achieving a goal. Applying strict rules and maxims are not sufficient to solve the problems; however, the *competent* performer devises a strategy to cope with the problems. I shall call skilled behavior performed at the third stage (or in the problematic situation) "strategy-focused behavior".

Stage 4: Proficiency. In Dreyfus' study, "the proficient performer will be deeply involved in his task and will be experiencing it from some specific perspective because of recent events. Because of the performer's perspective, certain features of the situation will stand out as salient and others will recede into the background and be ignored" (Dreyfus & Dreyfus, 1986: 28). The proficient performer has the ability of "holistic discrimination and association", that is, the ability "to intuitively respond to patterns without decomposing them into component features" (Dreyfus & Dreyfus, 1986: 28). I shall call skilled behavior performed at this stage "understanding-focused behavior".

Stage 5: Expertise. "An expert generally knows what to do based on mature and practiced understanding. When deeply involved in coping with his environment, he does not see problems in some detached way and work at solving them, nor does he worry about the future and devise plans. …… An expert's skill has become so much a part of him that he need be no more aware of it than he is of his own body" (Dreyfus & Dreyfus, 1986: 30). Let us call skilled behavior performed at this stage "intuition-focused behavior". Unlike the proficient performer, who "will still find himself *thinking analytically about what to do*" (emphasis added, Dreyfus & Dreyfus, 1986: 29), an expert "*sees intuitively what to do* without applying rules and making inferences at all" (emphasis added, Dreyfus, 1988: 106).

Given the above construal of Dreyfus and Dreyfus' five-stage model, rules, maxims, strategies, understanding, and intuition respectively are key to determining and manifesting skilled behavior at the various stages. And, as we have seen, in one's acquiring a skill, the role of codified rules fades away gradually, and intuition ultimately takes over as one's skill improves.

it receives support from Dreyfus and Dreyfus's model of skill acquisition. However, I doubt that Zagzebski would accept this interpretation of her claim. The reason for this doubt lies in the following citation:

> [U]nderstanding is a state gained by learning an art or skill, a *technê*. One gains understanding by knowing how to do something well, and *this makes one a reliable person to consult in matters pertaining to the skill in question*. (emphasis added, Zagzebski, 2001: 241; 2009: 144)

Why does an agent become a reliable consultant regarding a technê when the agent gains understanding by knowing how to do something well or mastering the technê? It is not necessary for an expert of a particular technê to be a coach or consultant of the technê (cf. Dreyfus & Dreyfus, 1986). So, why does Zagzebski assert this?

The answer to this question lies in how ancient philosophers such as Plato and Aristotle use the word "epistêmê". Zagzebski finds that Plato scholar Gail Fine (1990) translates the word "epistêmê" in Plato as "knowledge". However, one should be careful to remember that the term "knowledge" here is not understood in the same way as it is generally understood in contemporary epistemology. Zagzebski notes that Fine "stresses that it [*epistêmê*] is a form of knowledge that is closely connected to understanding" (Zagzebski 2009: 143, fn.9; 2001: 238). This Greek conception of epistêmê or knowledge (actually and accurately, understanding) in Plato's philosophy is explained by Fine (and Zagzebski agrees) as follows:

> On the account [of Plato] I have proposed, one knows more to the extent that one can explain more; knowledge requires, not a vision, and not some special sort of certainty or infallibility, but sufficiently rich, mutually supporting, explanatory accounts. Knowledge, for Plato, does not proceed piecemeal; to know, one must master a whole field, by interrelating and explaining its diverse elements (Fine 1990: 114; quoted by Zagzebski in her work of 2009: 143)

Zagzebski endorses Fine's explanation of the conception of epistêmê or understanding and rephrases the explanation in her own words:

> [O]ne does not understand a part of a field *without* the ability to explain its place within a much larger theoretical framework, and one acquires the ability to do that *by* mastering a skill. (emphasis added, 2009: 143-4)

Here are two examples that illustrate her explanation:

> One does not have *epistêmê* [understanding] of an astronomical fact *without* interrelating and explaining its relation to diverse elements within the field of astronomy, and one can do that only *by* mastering the *technê* of being an astronomer. (emphasis added, 2009: 143-144)

> [O]ne does not have *epistêmê* [understanding] of some feature of human psychology *without* the ability to explain how that feature fits into the larger framework of human psychology, and that *requires*

> having mastered the *technê* of the psychologist. (emphasis added, 2009: 144)

In Zagzebski's explanation, an agent's understanding (*epistêmê*) requires his ability to explain or give an account of the technê, and this ability requires the agent's mastery of the technê. Here, Zagzebski introduces an ability unmentioned in our previous discussion of her work, that is, the explanatory ability. This is the ability that makes an agent a consultant of the technê when he gains an understanding by mastering it. Whether an expert of a technê must simultaneously be a consultant of the technê who is able to articulate his reasons for his skilled action is open to debate (for a defense of the view that expertise requires articulacy, see, e.g., Annas, 2011a, 2011b; for a criticism, see, e.g., Stichter, 2007). My purpose is not to settle the debate but to show that Zagzebski's view of the relationship between understanding and technê is not as direct as it might appear. Actually, understanding is *mediated* by the explanatory ability in her account of understanding (especially when it is explained in connection with the ancient notion of *epistêmê*). Thus, Zagzebski will not accept the aforementioned interpretation that "understanding arises spontaneously and directly from mastering a technê".

III. Does Understanding Arise from Mastering a Technê?

After explicating the relationship between understanding and technê by explicating the notion of *epistêmê*, I suggest interpreting Zagzebski's central claim as meaning that "understanding arises *indirectly* from mastering a

technê (through mediation with the explanatory ability)". Can the claim, under this interpretation, be used as a distinctive feature of understanding to differentiate understanding from propositional knowledge as Zagzebski intends? To answer this question fairly to Zagzebski, I shall clarify this interpretation further.

In my explication of Zagzebski's claim, there are two kinds of abilities (broadly construed to include ability, skill, and technê) related to understanding. The first kind of ability is practical ability (skill or technê), such as swimming, riding a bicycle, and playing a piano. The second kind of ability is the explanatory ability, which takes a particular practical ability as its object of explanation. To highlight the difference and relationship between these abilities, the first can be expressed as a "*first-order* practical ability" and the second as a "*second-order* explanatory ability". When characterizing understanding, Zagzebski always makes her point by claiming that understanding arises from mastering (the first-order) technê rather than claiming that understanding arises from (the second-order) explanatory ability. For example:

> [U]nderstanding *requires* the mastery of a [first-order] *technê*, you cannot give someone understanding *without* teaching them the *technê*. (emphasis added, 2009: 145)

A possible explanation of why Zagzebski characterizes the situation in this way — that is, to attribute priority to the first-order technê over the second-order explanatory ability — is that she thinks that an *essential* relation exists between understanding and the first-order technê, although she

does not deny the importance of the second-order explanatory ability. If so, her central claim can be clarified further as "understanding arises *essentially*, though indirectly, from mastering a technê".

However, this clarified claim is problematic because the argument for it is either unsound or equivocal. Let me start with the first problem. Assume that claiming that X arises essentially from Y amounts to claiming that X requires Y. (In her explanation of how understanding is possible, it appears that Zagzebski uses the phrases "arise (essentially) from", "require", and "is acquired by" interchangeably; she also uses expressions such as "one cannot gain understanding *without* …" and "one gains understanding *by* …" to characterize what is required for understanding; see, e.g., the above quotations from Zagzebski. I think that Zagzebski needs to give an explicit specification of what she means by *what-is-required*. I will come back to this soon.) Zagzebski's argument for her claim that "understanding arises (essentially) from mastering a technê" can be constructed as follows:

(P1) One's understanding of a part of a technê requires one's ability to explain the relation of the part to the whole technê.

(P2) One's ability to explain a part/whole relation in a technê requires one's mastery of the whole technê.

(C) Therefore, one's understanding of a part of a technê requires one's mastery of the whole technê.

My criticism of this argument lies in the notion "require" (or "arise from" if one prefers that phrase). Because this argument concerns the acquisition of

understanding, the notion "require" in (P1) is supposed to indicate an enabling condition[7] that informs us of what makes it possible to acquire understanding (rather than informing us about the necessary and sufficient condition for the concept of understanding). Therefore, (P1) amounts to saying that the possession (and exercise) of an ability to provide an explanation or account of the relation between a part of a technê and the whole technê is the means to achieving the end of acquiring an understanding of the part. An explanatory ability, which provides an explanation of the relation between a part and the whole, is something the possession and exercise of which *enables* one to gain an understanding of a part of the whole of which it is a part. When an explanatory ability is successfully exercised, a part-whole explanation, i.e., understanding, is achieved. The notion "require" in (P2) must be used in the same way as in (P1), such that the conclusion, (C), can be uncontroversially derived. Therefore, (P2) is intended to indicate that the possession (and exercise) of a particular technê is the means to achieving the end of acquiring the ability to provide an explanation of the relation between a part of a technê and the whole technê. However, this appears problematic because a technê is not something the possession and exercise of which *enables* one to acquire an explanatory ability. When one successfully exercises a technê such as archery, what is achieved is hitting the target rather than acquiring an explanatory ability. Because (P2) is false, the argument is unsound.

One might respond to the above criticism by saying that the truth of (P2) can be secured. Such a defender might admit that the mastery of a technê is

[7] For a detailed account of enabling conditions, see especially Cassam (2007).

not an enabling condition for acquiring an explanatory ability but insists that the ability still "requires" a technê. This is because, the defender continues, the explanatory ability requires a technê as its object of explanation. The ability to explain a part of a technê and the whole technê cannot be the very ability *per se* if there is no object — here, a technê — for it to explain. In sum, mastery of a technê is a *pre-condition* for exercising the explanatory ability. Therefore, (P2) holds, as was the original desire. Although this defense might make (P2) true, it simultaneously makes the argument commit the fallacy of equivocation because the key word "requires" in (P1) and (P2) is used with different meanings: the former refers to an enabling condition, and the latter refers to a pre-condition. The conclusion (C) is problematic because we have no clear idea of what it really says and what reasons support it.

Thus far, I have proposed two possible interpretations of Zagzebski's claim that "understanding arises from mastering a technê". These are as follows: first, "understanding arises spontaneously and directly from mastering a technê", and second, "understanding arises essentially, though indirectly, from mastering a technê". The first interpretation of Zagzebski's claim is the most probable at first glance, and the claim in the interpretation can be plausible within Dreyfus's framework of skill acquisition. However, the second interpretation and not the first interpretation appropriately suits Zagzebski's text. However, the claim in the second interpretation is problematic because the argument for the claim is either unsound or equivocal.

IV. Concluding Remarks

Based on the aforementioned explication and criticisms, I suggest that Zagzebski should withdraw the claim that "understanding arises from mastering a technê" from her account of understanding. However, I do not think Zagzebski's concern with the origin of understanding is misdirected. Like other philosophers who emphasize the importance of the study of understanding, Zagzebski is concerned with the nature of understanding. However, her concern is broader than that of most others. The questions that she investigates include (Q1) "What is understanding?", (Q2) "Is understanding attainable?", and (Q3) "How do we get understanding?" (cf. Zagzebski, 2009: 8). The Practical Feature can be seen as Zagzebski's answer to (Q3), but this has been shown to be problematic.

I suggest answering (Q3) in the following way: *Understanding arises essentially from mastering the second-order explanatory ability, which takes the first-order practical ability as its object of explanation*.[8] Two abilities are mentioned in this claim. However, we must be cautious about what explanatory power these abilities have. It is only the second-order explanatory ability that explains where understanding comes from; the first-order practical ability provides nothing significant regarding the acquisition of understanding, it is just a pre-condition for the second-order explanatory ability.

To conclude, the aim of this paper is to investigate the relation between technê and understanding and in particular to do this by examining the

[8] For a related discussion, see Tsai 2011b and 2014, where I develop the idea of the dual structure of practical expertise.

Practical Feature of understanding proposed by Zagzebski, which has been expressed by her as the claim that understanding arises from mastering a technê. On the negative side, I have argued that the claim is problematic. Therefore, the Practical Feature is not true. On the positive side, I have suggested that understanding arises essentially from the second-order explanatory ability, the objects of explanation of which are the first-order practical abilities. I hope that these considerations have provided a basis for a promising approach for the further study of the acquisition of understanding.

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