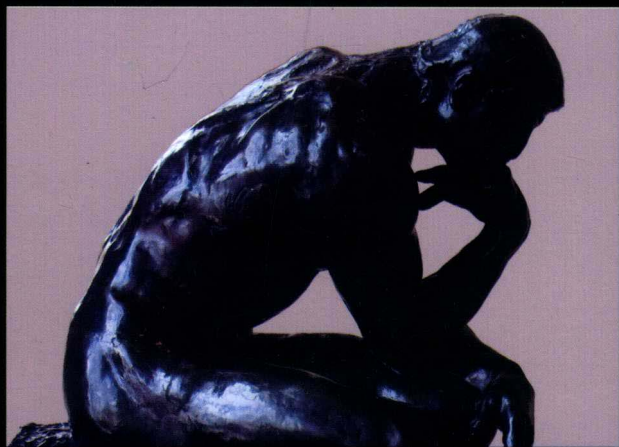


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思想者指南系列丛书

TAKING CHARGE OF THE HUMAN MIND



大脑的奥秘

(美) Linda Elder (美) Richard Paul 著

外语教学与研究出版社
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序 言

思辨能力或者批判性思维由两个维度组成，在情感态度层面包括勤学好问、相信理性、尊重事实、谨慎判断、公正评价、敏于探究、持之以恒地追求真理等一系列思维品质或心理倾向；在认知层面包括对证据、概念、方法、标准、背景等要素进行阐述、分析、评价、推理与解释的一系列技能。

思辨能力的重要性应该是不言而喻的。两千多年前的中国古代典籍《礼记·中庸》曰：“博学之，审问之，慎思之，明辨之，笃行之。”古希腊哲人苏格拉底说：“未经审视的人生不值得一过。”可以说，文明的诞生正是人类自觉运用思辨能力，不断适应并改造自然环境的结果。如果说游牧时代、农业时代以及现代早期，人类思辨能力虽然并不完善，也远未普及，但通过科学技术以及人文知识的不断积累创新，推动人类文明阔步前进，已经显示出不可抑制的巨大能量，那么，进入信息时代、知识经济时代和全球化时代，思辨能力对于人类文明整体可持续发展以及对于每一个体的生存和发展，其重要性将史无前例地彰显。

我们已进入一个加速变化、普遍联系和日益复杂的时代。随着交通技术和信息技术日新月异的发展，不同国家和文化空前紧密地联系在一起。这在促进合作的同时，导致了更多的冲突；人类所掌握的技术力量与日俱增，在不断提高物质生活质量的同时，也极大地破坏了我们赖以生存的自然环境；工业化、城市化和信息化的不断延伸，全方位扩大了人的自由空间，同时却削弱了维系社会秩序和稳定的价值体系与行为准则。这一切变化对人类的思辨能力和应变能力都提出了前所未有的要求。正如本套丛书作者理查德·保罗（Richard Paul）和琳达·埃尔德（Linda Elder）所创办的思辨研究中

心的“使命”所指出的，“我们身处其中的这个世界要求我们不断重新学习，习惯性重新思考我们的决定，周期性重新评价我们的工作和生活方式。简言之，我们面临一个全新的世界，在这个新世界，大脑掌控自己并经常进行自我分析的能力将日益决定我们工作的质量、生活的质量乃至我们的生存本身。”

遗憾的是，面临时代巨变对人类思辨能力提出的新挑战，我们的教育和社会都尚未做好充分准备。从小学到大学，在很大程度上我们的教育依然围绕知识的搬运而展开，学校周而复始的考试不断强化学生对标准答案的追求而不是对问题复杂性和探索过程的关注，全社会也尚未形成鼓励独立思辨与开拓创新的氛围。

我们知道，人类大脑并不具备天然遗传的思辨能力。事实上，在自然状态下，人们往往倾向于以自我为中心或随波逐流，容易被偏见左右，固守陈见，急于判断，为利益或情感所左右。因此，思辨能力需要通过后天的学习和训练得以提高，思辨能力培养也因此应该成为教育的不懈使命。

哈佛大学以培养学生“乐于发现和思辨”为根本追求；剑桥大学也把“鼓励怀疑精神”奉为宗旨。美国学者彼得·法乔恩（Peter Facione）一言以蔽之：“教育，不折不扣，就是学会思考。”

和任何其他技能的学习一样，学会思考也是有规律可循的。首先，学习者应该了解思辨的基本特点和理论框架。根据理查德·保罗和琳达·埃尔德的研究，所有的推理都有一个目的，都试图澄清或解决问题，都基于假设，都从某一视角展开，都基于数据、信息和证据，都通过概念和观念进行表达，都通过推理或阐释得出结论并对数据赋予意义，都会产生影响或后果。分析一个推理或论述的质量或有效性，意味着按照思辨的标准进行检验，这个标准由10个维度构成：清晰性、准确性、精确性、相关性、深刻性、宽广性、逻辑性、完整性、重要性、公正性。一个拥有思辨能力的人具备八

大品质，包括：诚实、谦虚、相信理性、坚忍不拔、公正、勇气、同理心、独立思考。

其次，学习者应该掌握具体的思辨方法。如：如何阐释和理解文本信息与观点？如何解析文本结构？如何评价论述的有效性？如何把已有理论和方法运用于新的场景？如何收集和鉴别信息和证据？如何论证说理？如何识别逻辑谬误？如何提问？如何对自己的思维进行反思和矫正？等等等等。

最后，思辨能力的提高必须经过系统的训练。思辨能力的发展是一个从低级思维向高级思维发展的过程，必须运用思辨的标准一以贯之地训练思辨的各要素，在各门课程的学习中练习思辨，在实际工作中使用思辨，在日常生活中体验思辨，最终使良好的思维习惯成为第二本能。

“思想者指南丛书”旨在为教师教授思辨方法、学生学习思辨技能和社会大众提高思辨能力提供最为简明和最为实用的操作指南。该套丛书直接从西方最具影响力的思辨能力研究和培训机构（The Foundation for Critical Thinking）原版引进，共21册，包括“基础篇”：《批判性思维术语手册》、《批判性思维概念与方法手册》、《大脑的奥秘》、《批判性思维与创造性思维》、《什么是批判性思维》、《什么是分析性思维》；“大众篇”：《识别逻辑谬误》、《思维的标准》、《如何提问》、《像苏格拉底一样提问》、《什么是伦理推理》、《什么是工科推理》、《什么是科学思维》；“教学篇”：《透视教育时尚》、《思辨能力评价标准》、《思辨阅读与写作测评》、《如何促进主动学习与合作学习》、《如何提升学生的学习能力》、《如何通过思辨学好一门学科》、《如何进行思辨性阅读》、《如何进行思辨性写作》。

由理查德·保罗和琳达·埃尔德两位思辨能力研究领域的全球顶级大师领衔研发的“思想者指南丛书”，享誉北美乃至全球，销售数百万册，被美国中小学、高等学校乃至公司和政府部门普遍用于

教学、培训和人才选拔。该套丛书具有如下特点：其一，语言简洁明快，具有一般英文水平的读者都能阅读；其二，内容生动易懂，运用大量的具体例子解释思辨的理论和方法；其三，针对性和操作性极强，教师可以从“教学篇”子系列中获取指导教学改革的思辨教学策略与方法，学生也可从“教学篇”子系列中找到提高不同学科学习能力的思辨技巧；一般社会人士可以通过“大众篇”子系列掌握思辨的通用技巧，提高在社会场景中分析问题和解决问题的能力；各类读者都可以通过“基础篇”子系列掌握思维的基本规律和思辨的基本理论。

总之，思辨能力的高下将决定一个人学业的优劣、事业的成败乃至一个民族的兴衰。在此意义上，我向全国中小学教师、高等学校教师和学生以及社会大众郑重推荐“思想者指南丛书”。相信该套丛书的普及阅读和学习运用，必将有利于促进教育改革，提高人才培养质量，提升大众思辨能力，为创新型国家建设和社会文明进步作出深远的贡献。

孙有中

2016年春于北京外国语大学

Forward

To live well is to live as a reasonable and ethical person.

Yet humans are not by nature rational or ethical. Humans are predisposed to operate in the world in narrow terms of how it can serve them. Their brains are directly wired into their own pleasure and pain, not that of others. They do not automatically consider the rights and needs of others.

However, humans have the raw capacity to become reasonable and ethical persons, to develop as fair-minded skilled thinkers. But to do so requires:

1. Understanding how the mind works.
2. Using this understanding to develop skills and insights.

This guide addresses the first of these requirements. It lays the conceptual foundations necessary for understanding the mind, its functions, its natural propensity toward irrationality, and its capacity for rationality.

It is designed for those interested in developing their potential to be fair-minded reasonable persons, concerned with how their behavior affects the lives of others, concerned to develop their full humanity, concerned with making the world a more civilized and just place.

It is designed for those willing to transform their thinking to improve their decisions, the quality of their lives, the quality of their interpersonal relationships, and their vision of the world.

It is intended to provide an initial map to help interested persons begin to free themselves from the traps their minds have constructed. It begins to detail the intrinsic egocentric and sociocentric tendencies that give rise to irrationality in human life and human thought. It points the way toward mindfulness and self-understanding through critical thinking.

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The Human Mind: Thinking, Feeling, Wanting

As humans

we live

in our

Minds

Understanding the Human Mind: The Big Picture

*The mind is its own place
and in itself
can make a hell of heaven
or a heaven of hell
– John Milton*

Everyone thinks. It is our nature to do so. But much of our thinking left to itself is biased, distorted, ill-founded, or prejudiced. Much of our thinking leads to problems in our lives. Much of our thinking leads to cruelty and injustice. Of course, the mind doesn't just think; it also feels and wants. What is the connection? Our thinking shapes and determines how we feel and what we want. When we think well, we are motivated to do things that make sense and motivated to act in ways that help rather than harm ourselves and others.

At the same time, powerful emotions or desires influence our thinking, help or hinder how well we think in a situation. At any given moment, our minds (that complex of inner thoughts, feelings, and desires) can be under the sway of our native irrationality or our potential reasonability. When we are ruled by our irrational tendencies, we see the world from a narrow self-serving perspective. We are not truly concerned with how our behavior affects others. We are fundamentally concerned with getting what we want and/or with validating our beliefs and views.

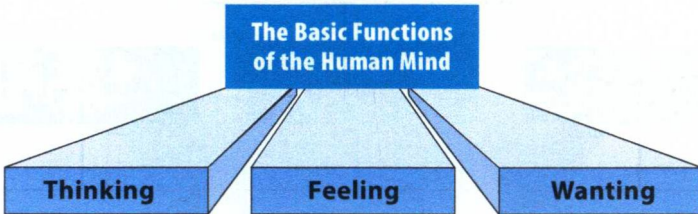
The key to understanding human thought then, is, to understand its essential duality: its capacity for irrationality (being trapped in egocentric and/or sociocentric thought with its attendant self-deception, self-delusion, rationalization, and so forth) and its capacity for reasonability (freeing itself from self-delusion, myth, and illusion).

Though thinking, feeling, and wanting are, in principle, equally important, it is only through thinking that we take command of our minds. It is through thinking that we figure out what is going wrong with our thinking. It is through thinking that we figure out how to deal with destructive emotions. It is through thinking that we change unproductive desires to productive ones. It is fair-minded reasonability that frees us from intellectual slavery and conformity.

If we understand our mind and its functions, if we face the barriers to our development caused by egocentric and sociocentric thought, if we work upon our mind in a daily regimen, we can take the steps that lead to our empowerment as thinkers.

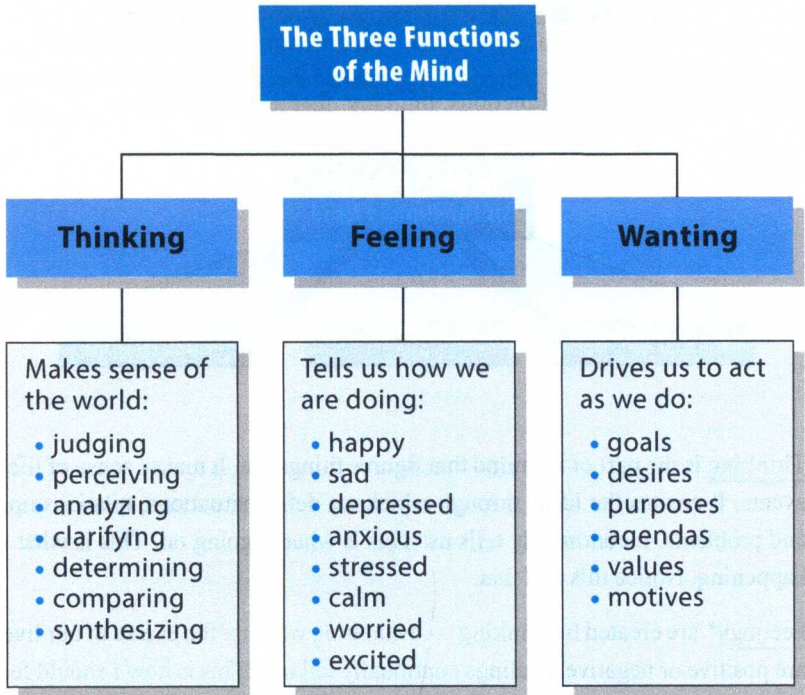
The Mind's Three Distinctive Functions

The mind has three basic functions: thinking, feeling, and wanting.



- Thinking is the part of the mind that figures things out. It makes sense of life's events. It creates the ideas through which we define situations, relationships, and problems. It continually tells us: This is what is going on. This is what is happening. Notice this and that.
- Feelings* are created by thinking — evaluating whether the events of our lives are positive or negative. Feelings continually tell us: “This is how I should feel about what is happening in my life. I’m doing really well.” Or, alternatively, “Things aren’t going well for me.”
- Our desires allocate energy to action, in keeping with what we define as desirable and possible. It continually tells us: “This is worth getting. Go for it!” Or, conversely, “This is not worth getting. Don’t bother.”

* When we speak of feelings, we are not referring to emotions caused by dysfunctional biological processes such as problems in brain chemistry. When emotions are caused by imbalances in brain chemistry which people cannot control themselves, clinical help may be needed. When we speak of feelings, we are also not referring to bodily sensations, though feelings often accompany bodily sensations. For instance being “cold” might cause you to feel irritable. Recognizing the feeling of irritability might lead you to do something about being cold, like putting on a jacket. Finally, though the terms “feelings” and “emotions” might be used in some cases to refer to different phenomena, we use these terms interchangeably in this guide.

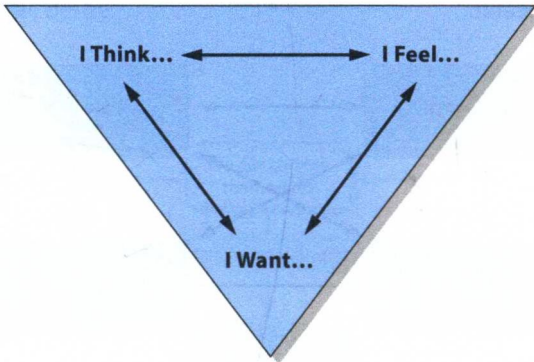


Essential Idea: Our mind is continually communicating three kinds of things to us:

- 1) what is going on in life,
- 2) feelings (positive or negative) about those events, and
- 3) things to pursue, where to put our energy (in light of 1 and 2).

The Dynamic Relationship Among Thinking, Feeling, and Wanting

There is an intimate, dynamic interrelation among thinking, feeling, and wanting. Each is continually influencing the other two.

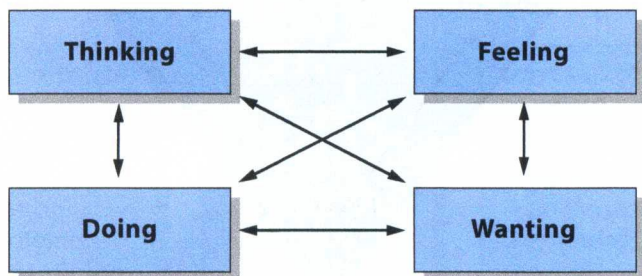


For example, when we think we are being threatened, we feel fear, and we inevitably want to flee from or attack whatever we think is threatening us. When we feel depressed, we think that there is nothing we can do to improve our situation, and we therefore lack the motivation to do anything about our situation. When we want to improve our eating habits, it may be because we think that our diet is causing us harm and we feel dissatisfied with our diet.

Though we can consider the functions of the mind separately (to better understand them), they can never be absolutely separated. Imagine them as a triangle with three necessary sides: thoughts, feelings, and desires. Eliminate one side of the triangle and it collapses. Each side depends on the other two. In other words, without thinking there can be no feelings or desires; without feelings, no thoughts or desires; without desires, no thoughts or feelings. For example, it is unintelligible to imagine thinking that something is threatening you and might harm you, wanting to escape from it, yet feeling nothing in relationship to what you think and want. Because you think you might be harmed and you want to flee, you necessarily feel fear.

Behavior as a Product of the Mind's Functions

Thoughts, feelings, and desires continually interact, and produce behavior as a result of that interaction. To understand this, consider the example on the previous page about eating habits. Suppose you feel dissatisfied with your diet. You want to improve your diet because you think that by doing so you will improve your health.



You therefore behave in the following ways:

1. read about different diets (behavior),
2. come to conclusions about the best diet for you, then change your diet accordingly.

After a few weeks you notice that you feel better physically and are losing weight. You now feel satisfied. You think that your diet is improving your health. You therefore want to continue with the new diet.

But then after a few more weeks you think: "I don't want to eat any more salads and tasteless foods. I can't keep this up for the rest of my life! There must be a diet available that is not boring." You therefore act on that thinking. Again you consider different diet possibilities, finally deciding upon a new diet. The process begins again, with thoughts, feelings, desires, continually shaping behavior.