

CONCEPTUAL & HISTORICAL ISSUES IN PSYCHOLOGY

Brad Piekola

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HISTORICAL CONCEPTUAL ISSUES

LEARNING OBJECTIVE

In this chapter we will look at the philosophical roots of psychology including some examples of how these basic concepts can be found in modern psychology. Two broad branches of metaphysics—**ontology** and **epistemology**—will be the focus. More specifically we will consider:

- The **mind–body problem** (including **reductionism** and **holism**)
- **Appearance versus reality**
- **Rationalism** versus **empiricism**
- **Realism** versus **anti-realism** (including **relativism**, **constructionism**, **skepticism**, and **phenomenology**).

By connecting these to modern psychology you should come to appreciate how these issues were merely repressed in the turn to scientism and have remained implicit throughout.

FRAMING QUESTIONS

- Why should Greek philosophy be of a concern? What does it have to do with modern psychology?
- What philosophical issues are embedded in modern psychology? Where do questions of ontology and epistemology appear?
- Why are subjectivity and free will problems in psychology?

INTRODUCTION

In this chapter we will be considering the philosophical roots of psychology. Some would argue that psychology has nothing to do with philosophy, but the emergence of psychology as a discipline involved the wedding of philosophical subject matter to physiological method (Koch, 1985a). Traditional philosophical problems like the mind–body problem, questions of knowledge and what could be known, continued to be issues. Initially, psychology continued to be categorized as a division of philosophy rather than a science. Ebbinghaus (1911), who initiated research into memory, considered psychology to be the handmaiden and servant of philosophy. This association was further indicated by the titles of the first two journals devoted to the new approach: Bain’s *Mind*, founded in 1876, and Wundt’s *Philosophische Studien* in 1881 (Boring, 1929). By the 1890s a ‘new psychology’ based on experimentation was being advocated as a replacement for the old philosophical psychology (Boring, 1929). There were many in psychology who wanted to distance themselves from philosophy altogether and to become an experimental discipline freed of uncorroborated fanciful speculation.

The tradition of disciplined reasoning about human affairs, the method of philosophers, was being derisively dismissed as ‘armchair psychology’ (Koch, 1985a). Psychologists, it was argued, would have to learn the scientific method and move from the armchair into the laboratory (Heidbreder, 1933). In this process psychology would leave behind a vast history pertaining to psychological knowledge that existed in the humanities and in natural language categories (Koch, 1985a). Respect for scholarship would dwindle as the emphasis on empirical practices arose. The creation of the psychological laboratory was significant in this transformation in that it signified the intention of psychologists to become recognized as members of the naturalistic, experimental sciences (Hilgard, 1987). It further signaled the separation of psychology from speculative philosophy.

The eradication of philosophy from psychology was not immediate, but the process was well under way by the early 1900s. By that time a number of psychologists were contending that the scientific-experimental practices of chemistry and physics were equivalent to a philosophy of science unfettered by worthless **metaphysical** haggling (Robinson, 2000a). The ascendancy of experimentalism, and to some **scientism**, was prefigured in these discussions. The founder of the *American Journal of Psychology*, G. Stanley Hall, was proposing that the ‘new psychology’ should be focused on the physiology of mental states and adopt natural science methods, eschewing metaphysics. The journals were filling with laboratory reports that adopted technical terms drawn from biology, physiology, and physics, and had no resemblance to the ‘old psychology.’ In their efforts at being scientific the proponents were zealously disavowing any affiliation with philosophy.



The apex of the transition, at least in North America, was best reflected in **John Watson's** (1878–1958) 'Behaviorist Manifesto': "The time seems to have come" he wrote, "when psychology must discard all reference to consciousness; when it need no longer delude itself into thinking that it is making mental states the object of observation" (1913a, p. 163). Watson preferred his students to have nothing to do with the mind–body problem but admitted that consciousness was a tool psychologists worked with (presumably in objective observation). Nonetheless, the question of the proper use of consciousness was a matter for philosophers, not psychologists. Despite psychologists' assertions of their liberation from philosophy, that did not mean that they in fact had cast off their metaphysical shackles. Not all were convinced that philosophy could be left behind.

Boring (1929), in his history of experimentation in psychology, acknowledged that "psychologists have never succeeded in avoiding metaphysical discussion" (p. 249). One's facts, according to Vygotsky (1934/1986), such as experimental results, are examined from the perspective of some theory and, because of that, cannot be extricated from philosophy. Even observations would come to be judged as **theory laden** by philosophers of science, meaning that what is selected for observation is under the direction of some theory (Greenwood, 1990). Vygotsky (1934/1986) further asserted that the avoidance of philosophy is itself a philosophy and may lead one into inconsistencies. As Heidegger (1933) judged, Watson's emphasis on objective phenomena was itself a metaphysical issue. Such an assertion involved **epistemological** knowledge claims about an external world that was accessible to all (a claim that remains contentious to this day). Furthermore, Watson's dismissal of consciousness as a topic of concern for psychology did not rid it of the matter. It slipped back in through the method of observation which implicitly involves awareness of what is being observed (Price, 1960).

As you may have inferred from the foregoing, in this chapter we will be examining the philosophical roots of psychology. The issues to be discussed were explicit in the 'old psychology' and implicit in the 'new.' No matter how much one may protest that psychology has liberated itself from philosophy, philosophical concerns still inhabit psychological practices and explanations and should be exposed. Koch (1985b) queried "Are we conceptually independent of philosophy?" and answered "Most of our ideas have come from the twenty-six centuries of philosophy preceding the birth of our partition myth" (p. 90). To Hume (in Report of the Secretary, 1909) "psychology without philosophy is blind" (p. 66). Or, as Dewey (1920/1948) expressed it, theory (think armchair speculation) is empty and valueless unless tested in practice; but practice without theory, conversely, is a mere agglomeration of meaningless facts. The question you should be asking yourself is whether psychology should do without metaphysics when, as William James (1890/1950) put it, "Metaphysics means nothing but an unusually obstinate effort to think clearly" (p. 145).

2.1 ON THE NOTION OF GREEK PSYCHOLOGY

There has been a tendency among historians of psychology to trace the roots of psychology to the ancient Greeks. Hunt (1993), for example, proposed that the formation of psychology as an academic discipline had been foreshadowed for a long time; the Greek philosophers had delineated its subject matter. This idea is no longer as acceptable as it once was. The problem to Smith (2005) rests with the fact that there was no social activity called psychology at the time. Just because perception and memory were being studied and discussed does not mean that this was ‘psychology.’ The term psychology was not in use at the time. Nonetheless there has been a false assumption that because people over the ages have been studying memory, perception, or thinking they were referring to an unchanging realm, the knowledge of which remains constant. Terms like ‘mind,’ ‘perception,’ ‘memory,’ and ‘emotion,’ from the perspective of constancy, would be in reference to **natural kinds** (rather than such psychological categories being **human kinds**). If such terms refer to biological processes, uninfluenced by cultural developments, the designation may hold but, as Smith contended, even though such terms were in use in the past does not mean that they held the same conceptual meaning as is current. To assume so is to fall into the danger of **presentism**, of reading the present into the past. That psychologists and ancient Greeks used the same terms does not mean the Greek usage was psychological. What Smith questioned was what a history of psychology could be before there was a social activity called ‘psychology.’

Although there had been long discourse regarding human nature and mental processes, there was no actual discipline called psychology until the mid-1800s (Richards, 1996). What discussion there may have been was neither scientific nor experimental. Furthermore, the proposition that the questions being asked have remained the same, and that just the methods have changed, does not hold unless one believes that the early Greeks were asking the same questions that psychologists ask. Richards was not suggesting that there is no connection historically, but that these predecessors were not engaged in what psychologists have been pursuing. That their inquiries led to discussions of topics like perception or child development, and provided terms that modern psychologists adopted, certainly establishes a historical connection. The issues contemplated, however, were in reference to a different context and had a different purpose. As Danziger (1990a) explained, that terms remain contemporary should not suggest that their usage in past discourse referred to objects that remained the same and therefore reflected real, natural (hence constant) objects. It is quite possible that this neglects radical changes in the objects under discussion over time. Historians of psychology therefore need to examine and compare the different usages of the terms and attend to local contexts (sociohistorical) before doing a comparison (Smith, 2005).

I am not going to be so bold as to challenge the foregoing concerns, but still intend to take you back to the ancient Greeks—not as psychologists but as philosophers, particularly with respect to the modes of explanation that they developed. The problem of explanation is an important methodological issue that has been a key aspect of science historically, and psychology, of course, lays claim to being a science (Tolman, 2011). It is a matter of what assumptions one works from regarding what exists, what is fundamental, how true knowledge is to be acquired, and so on. Mainstream psychology, the dominant approach, is full of

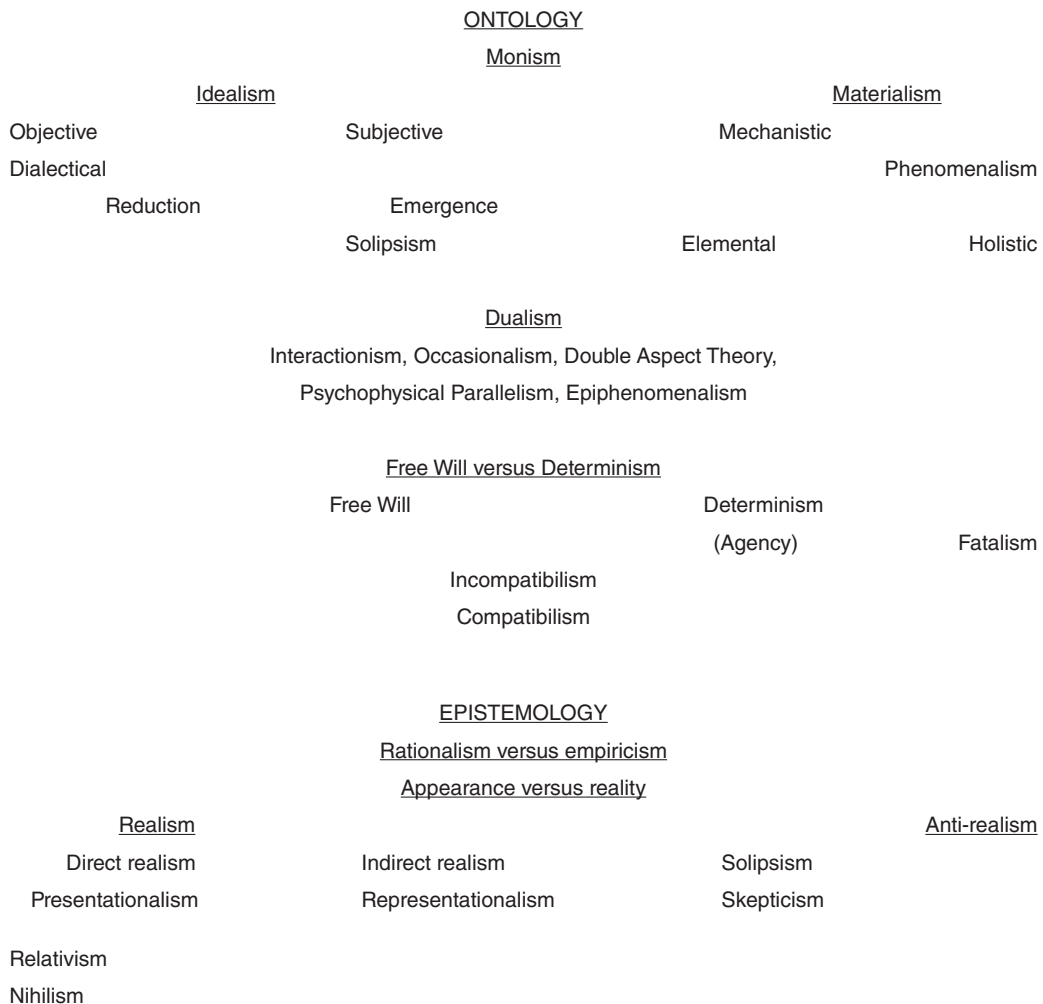


Figure 2.1 Categories of philosophical concepts for psychology

empirical generalizations devoid of anything that resembles an attempt to explain the facts obtained. At best, the causes of obtained experimental results are intended to serve that purpose. Rather than giving an explanation, descriptions of phenomena are drawn upon in the service of, or in lieu of, explanation (Brown, 1963). The methods of explanation are classifiable in a number of ways, for instance the type information that is drawn upon in explaining a phenomenon: genetic or developmental findings, intentions, functions, and empirical data. A further classification scheme unmentioned by Brown, but implicit in the foregoing, is in terms of the ontological and **epistemological** foundations that precede any inquiry. Psychologists, as Sanford and Capaldi (1964) determined, maintain (or should maintain) a particular interest in epistemology and in methods since both apply to matters of sensory processes, perception, and how the world is conceptualized (and thus explained). That is our current concern, the core themes of which are denoted in Figure 2.1 and are organized into categories.

2.2 THE TRANSITION TO THE PHILOSOPHICAL

When the Greek city states appeared around 800 BC they preserved aspects of mythology and religion from antecedent times (Bryant, 1986). These practices involved ritualism, sacrifices, and magic that were intended to avert the retribution of gods and disaster, such as drought, and to reap benefits through worship. The central themes were fertility cults, nature spirits, and various deities. The belief in nature spirits reflects a type of explanation known as **animism** and explanations of natural phenomena in terms of human qualities, like gods controlling lightning or rainfall, is called **anthropomorphism**. At the beginning of the 6th century BC a new kind of social being appeared—the philosopher intellectual—and their efforts after understanding led to the development of rational ways of thinking. All attempted to move beyond supernatural beliefs and adopt **naturalistic** explanations of physical phenomena. In medicine, explanation had been accounted for on the basis of the inculcation of illness by the gods; such supernatural influences gradually came under suspicion (Falagas, Zarkadoulia, Bliziotis, and Samonis, 2006). Under the influence of Hippocrates (approximately 460–370 BC), explanations were being sought in terms of natural phenomena to account for disease. Detailed histories of patients were developed including age, sex, behavior, and the environment, as well as a meticulous examination of the patient. In consequence, the treatment of illness became more a matter of observation and experimentation and the maintenance of careful records. Successes and failures would in the end lead to better understanding of a disorder and of corrective procedures, however primitive by our standards.

BOX 2.1

THE FIRST PERSONALITY THEORY

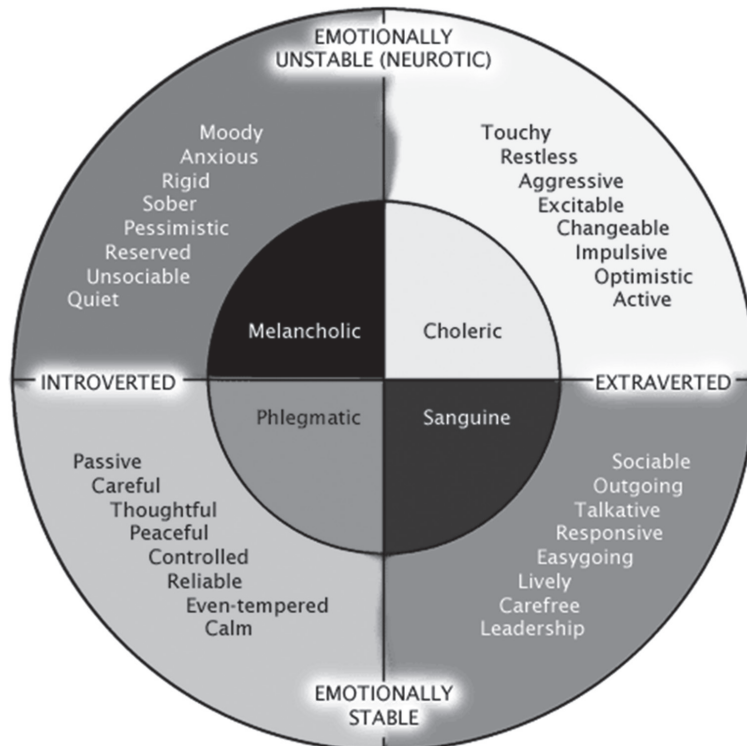
Despite the dismissal of the notion that the Greeks were doing psychology, there is one area of modern psychology that they did have an influence on and that is personality (or character as it was originally termed). Besides his medical work, Hippocrates observed that people tend to display stable characteristics that differentiate them from one another and that these fell into four distinct categories (which are now called 'types'). This, according to Allport (1961), was momentous in the history of psychology since it was the most ancient psychological theory known.

In an attempt to account for the observed similarities and differences, Hippocrates offered a biological explanation based upon excesses in hypothesized humors (bodily fluids roughly comparable in conception to hormones). These were blood, black and yellow bile, and phlegm. The sanguine type had an excess of blood and was characteristically hopeful. The melancholic (black bile) was overly sad. The choleric (yellow bile) was irascible and the phlegmatic (not mucous, a pituitary product) tended toward apathy. That humors did not exist is irrelevant. What matters is the introduction of typological explanations and explanations of personality sought at the biological level.

Hippocrates' theory clearly influenced modern psychology. For instance, in his research with dogs, Pavlov (1928, in Hothersall, 1995) identified four types of nervous system based on the speed and strength of classically conditioned, learned associations. Depending on how quickly they learned the association, and the degree to which the acquired response was subject to discrimination and generalization, the dogs were classified as sanguine, choleric, melancholic, or phlegmatic. There is a further affinity in the work of Thomas and Chess (1977) on the influence of temperament (innate constitution related to emotional stability) on personality, which led to the identification of three types—difficult, easy, and slow-to-warm-up. The best parallel, though, is found in Eysenck (1970, in Cervone and Pervin, 2010). Eysenck identified what he considered to be the two basic dimensions of human personality—neuroticism and extraversion/introversion—and he showed how they related to the Hippocratic classification scheme (see Figure 2.2). Eysenck recognized that the humoral causes of the old theory had been repudiated but he showed how its typological insights could be incorporated into his own approach.

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Eysenck, H.J and Eysenck, M.W. *Personality and Individual Differences*. Plenum Publishing, 1958.

Figure 2.2 Eysenck's connection with Hippocrates

Eysenck and Eysenck, 1985 ©: With permission of Springer

The first philosophers

The birth of philosophy in Greece is associated with Thales of Miletus (640–550 BC), who turned away from supernaturalism and sought within nature a means of accounting for natural processes (Lamprecht, 1955). Thales and other Milesian philosophers abandoned traditional mythology, although the existence of cults and the worship of gods persisted among the general public for many centuries (Lloyd-Jones, 2001). In their explanations the Milesians drew

upon the materials available to them and, being technologically primitive, that was provided by their unaided senses (Fuller, 1945).

Two questions confronted the Milesians and they were dealt with in ways that never became outmoded: (1) ‘What is the universe in reality?’; and (2) ‘How is experience generated by it?’ (questions of ontology and epistemology). Ontologically they were preoccupied with ‘*physis*’ or nature at its most basic level. They aimed to explain the phenomena of the world by seeking their origins in what was most essential (Waterfield, 2000). In doing so they introduced a concern with **substance** or the fundamental basis of all that is, that existed prior to everything. Epistemologically, they were interested in the role of perception in knowledge and what could be known—the relation between the knowing subject and the known object (Wright, 2009). The Milesians had no notion of the possibility that our sensory experiences could deceive us regarding objective reality and were thus **realists**, but doubt would soon arise (Fuller, 1945).

The Milesians introduced the idea of first principles (what would become known as **metaphysics**) and were seeking knowledge of a material nature (hence they were **materialists**). The first principle that concerned them was that from which all existing things are formed, a ‘substance’ which persists despite qualitative changes (Waterfield, 2000). There would be disputes regarding how many there were (introducing the issues of **monism**, **dualism**, and **pluralism**) and what their nature was. For Thales it was water (monism). It is unknown why he chose water but it is speculated that the necessity of water for life may have been a factor (Fuller, 1945). For Heraclitus (535–475 BC), on the other hand, the underlying unity of things was fire; not the fire of common experience, but an ethereal fire of the heavens (symbolic or metaphoric). Heraclitus was known for stressing change (**Becoming**) and fire may therefore symbolize the universal process of transformation. To Anaximander (610–546 BC) the ultimate substance was what he referred to as the ‘Boundless’; it underlays all that is (Lamprecht, 1955). For Pythagoras (570–495 BC) number was behind everything in the world—an underlying mathematic ordering principle.

Undoubtedly, to the modern understanding, with our knowledge of the Big Bang and energy, the ancient Greeks sound primitive and simplistic in singling out water or fire. I must ask you to remember that they did not have the advantage of thousands of years of accumulated inquiry to draw upon. They were starting with basically nothing and had to rely on their sensory impressions, their observations, and their capacity to think. That Thales was wrong in his speculations about water, to the historians Garraty and Gay (1972), was trivial compared to the importance of his endeavor to establish nature as a comprehensible order.

When Heraclitus proposed that everything is in constant flux he introduced a problem for those attempting to develop a conception of what is true. According to Parmenides (approximately 515–450 BC), it was not possible to have knowledge of that which is changing continuously (Stace, 1920). He argued as follows:

- How can one know with any certainty that which may be something different tomorrow?
- In order to arrive at a true understanding one must seek what is eternal, constant and abiding (**Being**), amidst change.
- The material world revealed by the senses is of ‘Becoming,’ of appearance and illusion.
- Truth, which is in ‘Being,’ is revealed not by the senses but by reason.

Upon epistemological grounds this was challenged by Parmenides. Whereas others had relied upon their observations to develop their theories of knowledge (**empiricism**), Parmenides was the first to go beyond merely stating his position but to support it with logical reasoning (Fuller, 1945). The ultimate determiner of truth was reason, and when the senses conflicted with reason it was reason that prevailed (**rationalism**). For the first time a distinction was made between reason and sense, and the problem of epistemology and the **appearance versus reality** distinction was introduced. Whereas **materialism** maintains that reality is discovered through sensory experience, Parmenides represents **idealism** because the ultimate principle of ‘Being’ is a concept, an abstract thought discovered by reason rather than through the senses (Stace, 1920). Materialism and idealism, while different, are both **monistic** positions.

The first **pluralist** was Empedocles (495–430 BC). All things, he proposed, are composed of four ultimate particles or roots—fire, water, earth, and air (Lamprecht, 1955). This is a form of **elementalism**. Change occurs at a macroscopic level, the level of ordinary experience, but it is at the microscopic level that these roots exist. Roots are changeless but they come together and separate through the forces of love and hate (think attraction and repulsion), and that accounts for manifest change. Things change through the redistribution of the unchanging particles. Developing this, the early **atomists** Leucippus (ca. 5th century BC) and Democritus (460–370 BC) replaced the roots with a pluralism of atoms (indestructible and indivisible elements) which differed in size and shape. Atoms are inherently in motion, obviating the need to posit love or strife, and they existed within a void. The atoms were permanent and unalterable (satisfying Parmenides requirement) and their coming together accounted for the qualitative changes associated with growth, change, and decay. Leucippus was the first to introduce the idea of **mechanism** (and by implication **determinism**) with the notion that atoms undergo change of place and rearrangement in a wholly mechanical way (Fuller, 1945). Leucippus and Democritus were complete materialists in that everything for them was just a collection of atoms (Waterfield, 2000). The mind or soul was conceived of being composed of fiery atoms that possess the greatest mobility and provide movement to living beings. As the fiery atoms come together with mass they become alive and conscious and as they lose mass they pass into sleep and, with further losses, coma and death (Fuller, 1945). To Democritus qualitative differences are explained by **reduction** to quantitative differences and qualitative change was explained by reduction to spatial movements. A discussion of the distinction between elementalism and reductionism is provided in Box 2.2.

BOX 2.2 REDUCTIONISM, ELEMENTALISM, AND ATOMISM

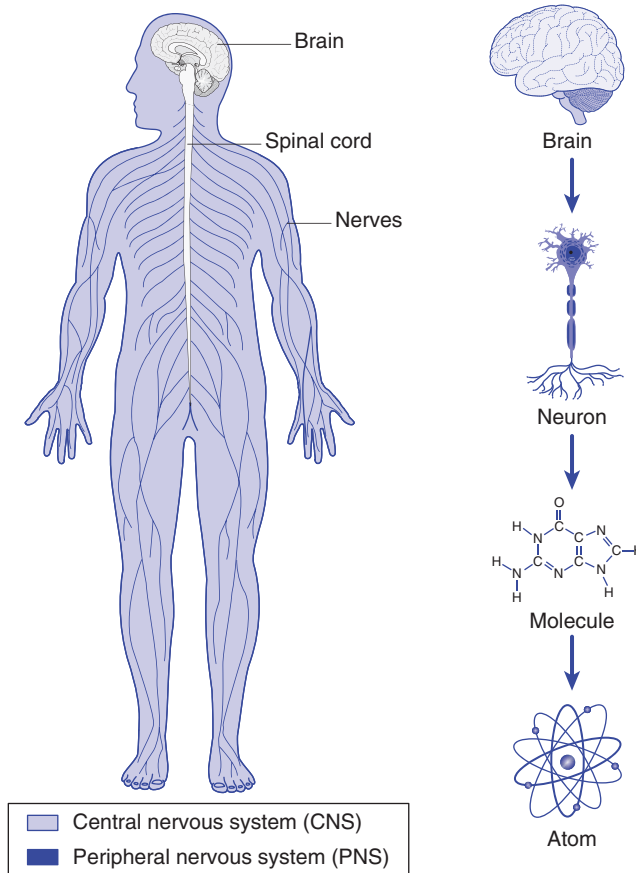


Figure 2.3 The peripheral and central nervous systems

To appreciate the difference between elementalism and reductionism I must remind you of the concept of 'levels of organization' since the distinction applies here. A level represents a position within an organized phenomenon whereat each member of a level

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(Continued)

shares in the essential features, qualities, and properties that distinguish it from higher and lower levels. Furthermore, the incorporation of the lower level into the higher involves 'emergent' characteristics that accompany the increase in complexity.

Consider the human body. While the body functions as an organized whole, analysis has identified various subsystems (nervous, respiratory, gastro-intestinal, and cardiovascular) that, while interconnected, can be differentiated by the functions they enact. These systems have been analyzed into further component parts (cellular, intra-cellular, molecular, and atomic). Elementalism seeks to understand a complex phenomenon by breaking it up into component parts. Each system of the body (respiratory, reproductive) is an element of the organism (within each system the organs are elements and within them the cell elements). All these components are biological and remain at the same level. These elements are non-reductive. In Figure 2.3, the nervous system is a whole but it includes the brain, spinal cord, and peripheral nervous system as elements. So too is the neuron an element since it remains at the biological level.

Unlike elementalism, reductionism involves two different domains or levels of organization and explains the higher level in terms of the lower-level phenomena. Explaining the functions of cells, tissues, organs, and so on in terms of molecular functions and properties would be reductionist (as in Figure 2.3, the molecules—chemical and atoms—physical are reductive). So too would be the explanation of higher mental functions in terms of the underlying biology while ignoring the influence of the sociocultural-historical level in their development. The impact of language, of ideas and meanings, would be lost in such an explanation. The significance of this was expressed by White (1942):

With words man creates a new world, a world of ideas and philosophies. In this world man lives just as truly as in the physical world of his senses. Indeed, man feels that the essential quality of his existence consists in his occupancy of this world of symbols and ideas—or, as he sometimes calls it, the world of the mind or spirit. (p. 372)

Therein lies the problem of reductionism—a dismissal of the significance and inherent uniqueness of emergent phenomena. 'Atomism,' lastly, represents both reductionism and elementalism in that all phenomena, mental or otherwise, are explained by the arrangements of atoms which are elements of the physical level.

Levels of integration, by incorporating lower levels into a larger, organized whole, represents 'holism.' Analysis into elements can occur within such a stance, but emphasizes that such elements are abstractions, products of analysis, and that they possess only intellectual independence.

When Parmenides distinguished between reason and sense, appearance and reality, he introduced what has remained an epistemological problem that still confronts modern psychology—to what degree, if any, do we have access to an objective reality? That became an issue that the next group of Greek philosophers would take up.

The problem of subjectivity

Whereas the previous discussion was focused on a search for first principles, a starting point or foundation for arriving at knowledge, the next group will begin to challenge that very possibility. Collectively they are known as **sophists** and **skeptics**. Through their clever arguments they questioned whether solutions to the problem of what ‘is’ could ever be achieved or known. Examining the claims of their predecessors, they noted how at variance they were with each other regarding what was fundamental and concluded that their assertions were extravagant and unjustified. In this they introduced epistemology as their central interest. Compared to the naturalists the Sophist movement was essentially humanistic in shifting interest from physical nature to humans (Lamprecht, 1955).

Leading the change, Protagoras (5th century BC) observed that people differed in their determinations of what was true and concluded that speculations on metaphysics had no worth (Fuller, 1945). There is no appeal possible to some universal standard (such as objective reality) regarding what is or is not. The ‘truth,’ furthermore, changes as opinions alter over time. What ‘appears’ to be true or false to an individual is the only truth or falsehood that can be acknowledged, and that is variable. To Protagoras “Man is the measure of all things.” What is real is what is experienced by the senses and, if what is real is only what is provided through the senses, reality means different things to different people (Lamprecht, 1955). What one person perceives as real may be so for that person but it may not be for another. This introduces the epistemological position of **relativism**. Once the individual becomes the measure of everything there can be no appeal to anything beyond personal experience, and personal experience varies over individuals. Rather than some independent truth, what is true is relative to the individual.

Plato (427–347 BC) responded to Protagoras with the ‘self-refutation argument.’ As a relativist, it was argued that Protagoras would have to admit the truth of those who contend he was in error and that his own position was therefore false (Burnyeat, 1976). To Burnyeat it may be a false doctrine to Protagoras’ opponents, but that does not necessitate Protagoras conceding his own position as false and theirs as correct. He is asserting the truth for the person making the judgement, but that does not commit him to endorsing it as true for him.

Gorgias (483–375 BC) carried the reasoning of Protagoras a step further by discounting the possibility of communicating one’s beliefs to another. Like Protagoras he contended that

WHAT DO YOU THINK?

Is what you believe to be true contested by others? Is it possible that what is true for one person may be false to another? If so, are there any problems with that?

there was no real existence beyond appearance (Waterfield, 2000). The senses could be of no avail as the senses were known to deceive—the apparent bending of straight sticks in water for instance (Fuller, 1945). Reason was no help since the power of reason to know any reality, other than changing sensible experiences, was contested. (Given the impossibility of knowing objective reality this becomes an example of **solipsism**, an **anti-realist** perspective, since one is locked within a realm of subjectivity.) Even if it were possible to know objective reality, Gorgias believed that one could not communicate what one knew to another. That was because language is the means of sharing ideas, but language, in the conveyance of ideas, is just noise. With vision, for instance, a spoken word about what was seen and the audible sensation produced by speaking could convey nothing of the optical sensation associated with sight. Whatever one's idea of truth may be, the words by which it is communicated are not like the truth, and one cannot be certain that the words create a concept in the mind of another that resembled one's own. With that his solipsism becomes the position known as **nihilism**. Words were deceitful since they were not the things being referred to (Waterfield, 2000). So it was, too, with words regarding some real world. In the final analysis, the human condition is not of knowledge but of belief. There is, however, as Waterfield noted, a possible inherent contradiction in this. If what Gorgias is proposing linguistically can be comprehended, that would mean his belief could be communicated to another, as I am doing in writing this (and assuming you understand). He is relying on the possibility of communicating to communicate the impossibility of communicating.



Plato's
forms

Plato would develop the aim of Parmenides to seek truth in permanency; and that was not to be found through sensory experience. The world of experience, of particular things that are changing and variable, for Plato was unreal (Lamprecht, 1955). He posited, instead, the existence of a realm of '**forms**' or pure ideas, fixed and permanent, the reality of which underlies the imperfect manifestations of sensory experience (mere appearance). This is in line with Parmenides' argument for truth in 'Being.' Plato reasoned that there must a permanent, non-changing realm that truth can rest upon, but sensory impressions are variable. Sometimes the very same object looks large and sometimes small (the effect of distance). He thus reasoned into existence a realm of idea from which, and to which, knowledge and truth are derivable and referred. Knowledge became a matter of recollection, of regaining access to forms (pure ideas), which one had before the soul entered the body. These ideas were innate or inborn and, because of that, represent an example of **nativism**.

Whereas Plato believed reason (rationalism) could reach beyond false sensory impressions and grasp what was real, the Skeptics like Pyrrho (360–270 BC) promoted disbelief in sensory experience and extended it to thinking (Fuller, 1945). Whatever was true was simply beyond the reach of the human mind. As above, every statement regarding true reality can be countered by an opposing proposition that is just as well founded, and thinking cannot decide between them. Those who made claims of certain truth against the falsehood of others were simply **dogmatic** (Palmer, 2000). Truth had not been discovered but that did not foreclose on further inquiry. The rational thing to do, they argued, was to suspend

all judgment (Fuller, 1945). Assertions as to truth and falsehood were merely opinions. Avoiding arguments of self-refutation by asserting the truth of their position, they did not claim the certainty of uncertainty. Their position, they argued, was probable rather than established. Having left open the possibility of future surety, the Pyrrhonian skeptic did not stop seeking the truth.

Epicurus (341–270 BC) and his followers rejected the position of the Skeptics. They contended that the charge of self-refutation was still open in that if nothing could be known one could not know that nothing can be known (O’Keefe, 2010). The Skeptics were not, however, proposing truth but an attitude of suspended belief. Having no doctrine, their doctrine could not be self-refuting. A different challenge came in the form of the ‘argument from concept formation.’ To develop their position, the skeptic must have some knowledge—the knowledge of terms (‘knowledge,’ ‘true,’ ‘false’) and their meanings. Furthermore, concepts are acquired empirically. As a result of recurring experiences with classes of objects a concept develops for that phenomenon. The skeptic, by verbally stating a position, demonstrates knowledge of word meaning, as well as how the senses reliably connect to the world (to that I would add the reality of those to whom they communicate).

Additionally, the ‘inaction argument’ challenged that if one did not trust the senses there would be no reason to act one way or another (such as avoiding cliffs). Appearance can still be a criterion for acting. Epicurus argued that if the senses are doubted one has no criterion for distinguishing true from false. A distinction was therefore made between sensations and judgments based upon sensations regarding objects. Judgments, opinions or preconceptions, form from repeated sensory impressions and these are confirmed or disconfirmed by subsequent experience. That is the basis of our acting successfully or not in the world. There is reason, then, to rely on the senses.

The problem of free will

Leucippus and Democritus had, in their atomism, advocated determinism. At the human level this posed a difficulty since it implied that what people do is not within their determination and relieves them of **agency** or **free will**. While aspects of the problem had been under discussion already, it was Epicurus who clearly recognized a problem and, most likely, initiated the free will controversy (Huby, 1967). Before that, Plato and Aristotle (384–322 BC) had acknowledged the part played by heredity and experience in human conduct, but they failed to consider how that could lead to determinism. In the context of criminal responsibility, Aristotle had discussed voluntary and involuntary actions. He made the case that every action is voluntary that is initiated by the actor. Involuntary actions suggested the idea of a defense upon the basis of determinism (and, therefore, non-responsibility) but Aristotle passed over it. Free will seemed obvious to him since people clearly initiate actions but, where Aristotle left the issue at that, Epicurus recognized a problem.

Epicurus mostly accepted the atomistic theory of Democritus, but was reluctant to accept complete determinism (and the related idea of **fatalism**). He accepted that only atoms exist, and that all else comes to be through their interactions, but saw a problem in the account of Democritus (O’Keefe, 2010). To Democritus, atoms flew about the void in all directions, colliding and combining, but he failed to account for that motion. To achieve that, Epicurus added the properties of weight and swerve to atoms. Due to weight, atoms move downward at an equal rate (an intuition of gravity?) but, under those conditions, they could not collide (their movements would be perpendicular—Fuller, 1945). To allow for interaction, swerve, unpredictable shifts in direction, was added. That introduced an element of unpredictability to motion and was the means by which Epicurus avoided absolute determinism and fate. Epicurus thus established the problem of free will versus necessity (the modern perspective will be dealt with in Chapter 12).

The Stoics (see **stoicism**) rejected the notion of free will and put forward a position that mixed base materialism and religious idealism (Duncan, 1952). They rejected the idea of a transcendent god, outside of the world, arguing that God was within the world, directing its events. The capacity to act and be acted upon belongs to corporeal phenomena only, so God must be corporeal too, pervading the material realm (a position known as **pantheism**). This reflects their effort to avoid dualism of body and soul or corporeal and spiritual but still preserves what was of value in idealism, especially reason. They believed in a completely rational yet material universe. Every event is under the control and direction of reason and therein lies destiny. One cannot know one’s ultimate destiny but, while the individual may try to resist it, it is preordained and happens for a reason. Acceptance and detachment were advised for peace of mind since resistance was futile. In this they were the first to propose complete determinism since Democritus had not addressed the problem of free will other than by implication (Gould, 1974). This of course renders the notion of choosing, to resist or accept, problematic since choice is illusory under complete determinism.

In the foregoing I have tried to introduce some central issues in the history of philosophy that still play a part in modern psychology. There are other issues that arise in modern philosophy that will also have a bearing on recent explanations and practices, but I will leave those to later chapters where their impact has greater immediacy. For now, we will consider how the topics we have considered can be found in the ‘new psychology.’

2.3 PHILOSOPHY IN PSYCHOLOGY

In revealing ontological and epistemological issues in psychology the treatment will not be exhaustive, space precludes that. I will try to indicate the pervasiveness though by beginning with a consideration of the widespread practice of experimentation. In conducting

an experiment there is an implicit assumption of realism. One measures the adequacy or inadequacy of the tested hypotheses against an objective reality that is presumed to exist and is accessible. Also, ontologically, the majority of experimental psychologists are ‘materialists.’ Whatever psychological phenomena may be, it is generally assumed that they do not involve some non-material, spiritual or ideational substance but a brain process, which does not mean that idealism does not exist; where it does, it is usually unintentional. This is indicated by theories of perception.

The British psychologist Michael Eysenck defined perception as “the processes involved in producing organized and meaningful interpretations of information from the environment” (2000, p. 259). This implies that we have access to the environment of which we are informed and which is therefore knowable—a realist proposition. Similarly, perception is “the conscious experience of objects and object relations” (Coren, Ward, and Enns, 1994, p. 17). Fine; no problem. According to Tavris and Wade, however, perception is “the process by which the brain organizes and interprets sensory information” (1997, p. G-8). This has anti-realist connotations and leads to idealism. Whereas materialists maintain that ‘reality’ is discovered through the senses, idealists consider the sensory world ‘appearance’ (Stace, 1920). What we have access to are not the things sensed, but sensations (even those not directly); we are without access to an objective reality, hence anti-realism. Confined to subjectivity, what are known are the organized and interpreted sensations, not objective phenomena. In such ‘constructionist theories of perception’, perception is the end result of an inferential process (Eysenck, 1990) and what we ‘know’ is the result of inferences, not things as they are in the world. I don’t suggest that this was what was intended. I am sure that constructionists believe themselves materialists and realists, but their explanations push them into anti-realism and then idealism.

Ontology and psychology

Monism, dualism, and pluralism

Materialism is a common stance in psychology. It is evident in biopsychology and neuropsychology where cognitive functions and motivation are explained in terms of cerebral processes, the limbic system, neurochemicals, and hormones. Another example would be the computer modelling or computational strategy in cognitive psychology to account for human information processing as analogous to computer data analysis. Mental processes are computational processes of the organism, not of a mind. In personality psychology, McCrae and Costa (2003) offer a materialistic account of personality that is also elementalistic and reductionist. They claim the structure of personality is composed of five universal ‘basic tendencies’ (elements) that account for patterns of thought, action, and feeling which are biologically based (reduction). All attempts to account for psychological processes in terms of biological processes are materialist in nature.

Idealism is less pervasive but it does exist. An obvious example of idealism in psychology can be found with advocates of phenomenology. According to Kendler (2005), phenomenologists focus on the subjective nature of consciousness. It is basic to human existence and, because of that, phenomenology precedes psychology as a natural science. Experience of the world depends on consciousness. Without it there would be no experience and without experience there would be no science. On the other hand, it is further proposed that what we do occurs within the internal world from which we cannot escape. Primacy is thus given to mind and that is idealism. When one is locked within the realm of subjectivity, in the realm of mind one is pushed into solipsism and idealism. That is what happened to Gestalt psychology as well.

Despite doing research into perception, which suggests access to objective reality, Gestalt psychologists focused on immediate experience as their subject matter. Immediate experience, what is perceived, is not an aspect of the real world, of objective reality. Writing of the physical world, Köhler (1947) proposed that “it can never become directly accessible to me” (p. 19). Gestalt psychologists are thus trapped within a phenomenalist subjectivity.

Materialism and idealism are monist positions but, while not common, dualism has had its representatives in psychology. One recent example is Eccles (1989), a Nobel laureate for neurophysiology. Eccles modernized Descartes’ interactionist theory of mind and body—that mind and body are two separate substances, completely independent, but which influence each other through the interface of the pineal gland. Eccles replaced the pineal gland with a hypothesized ‘Liaison Brain.’ The Liaison Brain, located in the cerebral cortex, was the basis for the mutual influence of what was called World 1 (the physical realm) with World 2 (subjective experience, consciousness). Eccles also went beyond dualism, in conjunction with Popper, in adding a third realm: World 3, or the world of culture. The addition of World 3 provides an example of pluralism (although I may be stretching things to consider culture a substance).

Elementalism, holism, and mechanism

There are many versions of elementalism in psychology. McDougall (1908/1950) emphasized instincts that were thought to be separate impulses toward different types of actions. More recently, motor neurons, sensory neurons, and interneurons can be considered elements of the nervous system and traits as elements of personality. Titchener (1898) wrote that he was seeking the ‘structural elements of the mind’ which he independently grouped as sensations (and subsequently, ideas) and affection (feelings). William James (1842–1910) and the gestalt psychologists argued against elementalism in psychology by taking a holistic position. Thought, to James (1890/1950), presents itself to us as a unity and it is in analysis and abstraction that the so-called elements enter. In the gestalt tradition, likewise, Cassirer (1911, in Ash, 1998) regarded elements to be conceptual discriminations rather than an underlying reality of conscious phenomena.

Mechanism is also well represented in psychology. Broadbent (1958), a pioneer in cognitive psychology, drew upon communications engineering (specifically telephonic systems) to discuss limitations on attention in terms of input, limited capacity processing, and output which he believed would be found to be based on physiological structures. The multitudinous sensory input was more than could be attended to and, so as not to be overwhelmed, a filtering mechanism was hypothesized, which selected some for attending to and excluded the rest. This led to the information processing approach to cognition which is based on computer analogies. You may recognize it in terms of memory flow diagrams involving input, short-term and long-term storage modules, and control processes of encoding and retrieval. The mind is an information processing mechanism that operates like a computer. Similarly, ‘connectionism’ is a ‘brain metaphor’ model of the mind intended to replace the ‘computer metaphor’ model (Rumelhart, Hinton, and McClelland, 1986) which, nonetheless, was itself based on a computer simulation of hypothesized brain mechanisms.

Pythagorean psychology

The Pythagoreans established the notion that mathematical regularities underlie all phenomena (Winthrop, 1960). The faith in the underlying mathematical order was strengthened by Galileo and Newton and has led to its adoption in the social sciences. That is not to suggest that there is some sort of numerical mysticism in psychology, but that there is a reliance on the search for mathematical order in psychological phenomena. Few would go so far as Murphy (1967) in proclaiming himself a Pythagorean (given its number mysticism), but would possibly agree with him that psychology has been captured by mathematical obsession. I am not about to suggest that the use of statistics is any way Pythagorean. In those instances where theory is driven by mathematics, however, rather than mathematical regularities being discovered in psychological phenomena, I would contend that the Pythagorean spirit is represented.

Consider the use of ‘factor analysis’ by Raymond B. Cattell (1905–1998) to create a theory of personality structure that was supposed common to all people. Mathematically, factor analysis takes very large data sets and bundles them on the basis of statistical relatedness into smaller, underlying, unifying dimensions called factors that are conceived of as independent (at least in Cattell’s usage). For this he used the more than 3,000 trait terms (terms describing qualities of a person, like affiliative or pugnacious) identified by Allport and Odbert in 1936 (Cattell, 1966). I won’t go into the details, but Cattell mathematically reduced the list of descriptive terms to 16 Personality Factors that were unitary (a single, uniform entity). Does this represent the true nature of personality, or is it a fabrication determined by statistical procedures being given primacy? To some personality psychologists like Allport (1937), personality is a unified whole with which factor independence is inconsistent. Given unity, “factors often seem remote from psychological fact, and as such they risk the accusation that they are primarily mathematical artifacts” (p. 245). Sometimes the factors don’t even

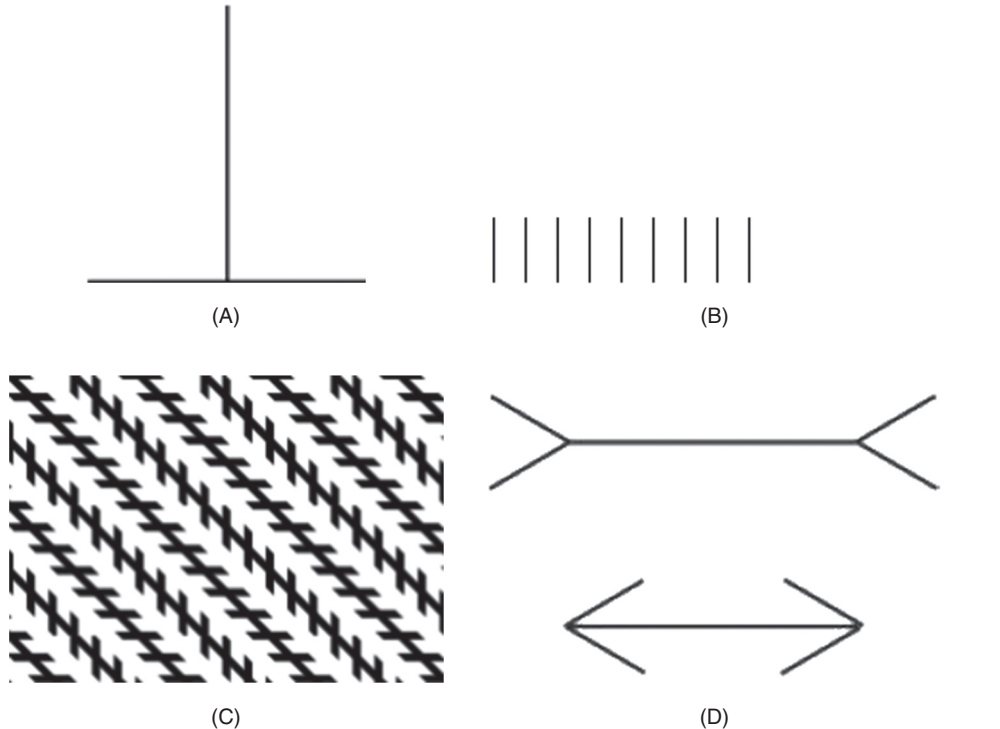
make psychological sense. For example, Endler, Hunt, and Rosenstein (1962) found three factors: interpersonal, inanimate, and the third they named ‘ambiguous’ because they could make no sense of it. To give credence to what makes no sense, and this is the point in terms of Pythagoreanism, is the assumption that an underlying mathematical order guides inquiry and explanation.

Appearance versus reality

The distinction between appearance and reality enters into psychological inquiry most clearly in sensation and perception. From the outset, a major area of concern for psychologists was the susceptibility of humans to illusory perception. Various illusory line drawings were being produced through the last half of the 19th century (see Figure 2.4) that demonstrated a discrepancy between the actual physical stimulus and its perception (Murch, 1973). Such disparities led Helmholtz in 1866 to introduce a distinction between the ‘distal stimulus’ and the ‘proximal stimulus.’ The distal stimulus referred to the objective object or event (think reality) and the proximal stimulus referred to the sensory representation of that stimulus in the nervous system (appearance).

The same general issue found its way into personality theory too. Endler (1984) proposed that, in doing research, one cannot conclude that an experimenter’s perception of a situation will accord with that of an experimental participant. That meant that each individual’s interpretation would have to be considered. A distinction had to be made between the ‘actual situation’ (reality) and the ‘perceived situation’ (appearance). As Block and Block (1981) noted, each person’s experience is unique and due to solipsism we are not in a position to appreciate what the meaning of a situation is for any individual. While solipsism is certainly a danger, if one is proposing that the perceived situation allows no access to objective reality, what Block and Block are really addressing is the ‘problem of other minds.’ That is the proposition that no one can have personal access to another person’s subjective experience, only their actions, and will therefore never appreciate what their subjectivity is actually like.

I should point out that there is the possibility that appearance and reality are not wholly opposed. Leontyev (1981b) proposed distinguishing between ‘meaning’ and ‘sense.’ Meaning is the socially developed and transmitted understanding that is passed from one generation to the next (based on access to a common reality). Sense is an individual’s personal attitude or understanding based upon unique experience with the matter of concern (appearance). While pro-life and pro-choice advocates can agree that abortion is the cessation of pregnancy, their subjective sense is different. Pro-life supporters believe that aborting a human embryo is the murderous taking of life, whereas the pro-choice lobby believes it is the right of a woman to decide, before an embryo can be designated a person, whether a pregnancy is wanted and not be forced into motherhood.



- (A) Vertical-Horizontal Illusion (1852): Despite being the same length the vertical line appears longer.
- (B) Oppel Illusion (1854): Despite being the same length the filled-in portion appears longer than the blank portion.
- (C) Zöllner Illusion (1860): Despite being parallel the hatch-marked lines appear to converge.
- (D) Müller-Lyer Illusion (1889): Despite being the same length the upper horizontal line appears longer than the lower.

Figure 2.4 Early illusions

You may have noticed that the reality/appearance distinction also involves the problem of knowledge or epistemology. This is because some suggest that all that can be known are appearances. There is more to psychological philosophy than ontology.

Epistemology and psychology

It is safe to say that most experimentalists, if not all, intend to be realists. In practice they are both rationalists and empiricists in their search for knowledge. Many adopt the

‘hypothetico-deductive method’, which is an approach to conducting research which advocates formulating predictions as a result of deduction from a theory (based on prior observations—empiricism), testing them experimentally and assessing them through comparison with obtained results. The formulation of deductions involves reason (rationalism) and the conclusions of acceptance or rejection is based on the experienced results (empiricism). The whole procedure is based on the realist assumption of an objective reality which is accessible and knowable. Their practice, what they do, is realist, but when it comes to their theories (explanations) they may slip into anti-realism. We already noted this with perception theory and saw how that can lead to skepticism and solipsism. Then again, there are others who take this stance intentionally.

One position which is intentionally anti-realist is that of phenomenological psychology because their starting point is consciousness (a reasonable but problematic commencement). Kendler (2005), mentioned previously, proposed that science begins with experience, but then restricted what was available in arguing that “We operate in an internal world from which we cannot escape” (p. 320). In his phenomenological approach MacLeod (1944) made the case that “all psychological data become ‘subjective’” (p. 200). Objectivity and subjectivity are properties of the perceptual field within which subject (self) and object are points of reference. Subject and object share in the characteristic of being segregated aspects of a common perceptual field. If what is known is the perceptual field, we are trapped in subjectivism; and skepticism and solipsism follow from that. There is, however, a form of subjectivism that is not anti-realist or at least aspires to some form of realism.

Modern theories of perception tend to promote **indirect realism**. The adherents believe that there is an objective reality that acts upon the senses but which is inaccessible. As a result, what is known of reality are the mental representations (the ideas and images) formed through sensory experience. This is also known as **representationalism**. As Helmholtz originally put it, the ideas produced by vision are formed due to an impression being made upon the eye. As a result, “*such objects are always imagined as being present in the field of vision as would have to be there in order to produce the same impression on the nervous mechanism*” (Helmholtz, 1867/2000, p. 2, emphasis in original). What the object is exactly we do not know. The ideas we have of things are only symbols that we use to regulate activity in order to achieve desired results which are judged effective if the expected sensations arise.

This contrasts with **presentationism**, which is the proposition that the world presented to experience is the world as it is (**direct realism**). The mainstream theory of perception is representationalist, but it was challenged during the mid-twentieth century by Gibson. He had begun as a representationalist but then began to marvel at the degree of success people have operating in a world to which they have no access. How remarkable it is that there are so few car crashes when driving is based on best guesses about traffic flow. To correct this, Gibson (1979/1986) developed an ‘ecological approach’ to perception. According to Gibson perceptual systems evolved because they are designed to give us access to objective phenomena and are adaptively beneficial.

Psychology also has its relativist representatives. Scarr (1985) maintained that every person has their own version of reality of which we try to convince others. So-called scientific facts cannot be separate from the individual scientist; they are not discovered, they are invented. What makes one scientific theory better than another is its persuasive power (not in its agreement with reality). Gergen (1985), in his **social constructionism**, argued that the supposed objective criteria by which events and entities have been identified are either non-existent or highly constrained by social contexts, by history and culture, and are thus socially constructed. Social constructionism makes a number of assumptions that challenge the assumption that knowledge is objective and ahistorical.

To begin with, science does not reflect the nature of the world. What is taken to be an experience of the world does not determine the terms through which the world is understood. The words an individual uses to make sense of the world, rather than being a reflection of reality, are socially constructed artifacts transmitted through communication. An examination of changes in historical understanding (accepted meanings), or cultural variations in explanatory concepts, testifies to the primacy of the social in knowledge and explanation. In consequence, the degree to which any understanding is maintained over time is due to processes of social negotiation and persuasion. What any particular group considers to be reality is socially constructed. What is considered true is conditional upon the historical moment and the social group, not objective reality—and that is relativism.

Gergen (1997) developed his anti-realism further in proposing that the social constructionist rejects a realist metaphysic; the world as experienced is not the world as it is. Science which posits an accessible and knowable reality is dismissed. There is nothing objective that can disprove any belief system. All that any theory can be measured against are just the social conventions of shared meanings that vary between groups. Given no accessible reality to affirm or disaffirm beliefs, there is no ground for silencing any community of believers. That is not a demand for putting an end to science though, just so long as it is conceived of as yet another form of discourse and meaning construction. Theories (beliefs, understandings, explanations) do not correspond to anything ‘real’ against which claims to truth or adequacy can be assessed.

To Hibberd (2001), Gergen has adopted the form of skepticism called ‘nihilism’ because he rejects empiricism and realism (Hibberd’s usage of nihilism here leaves out the aspect of incommunicability). Social constructionism, to Hibberd, is silent regarding what exists because description is a language game and completely constrained by language. Claims to knowledge are only relevant to discursive practices within a closed language system which does not represent reality or truth. We cannot talk about what occurs or exists, but only converse about the ‘talk-about-things.’

Given the rejection of objectivity, the social constructionist makes no statement regarding actual affairs beyond oneself. That raises a difficulty for me since Gergen does allow for communities of believers and for persuasive arguments. Presumably the communicants

exist in objective reality and are accessible to each other. If so the door opens to the rest of the objective field since that is where the communicants are to be found. Not only that, communication implies an objective medium. As Gibson (1966) pointed out, besides the stimuli provided by the natural world (which Gergen rejects), humans respond to symbols like language; but there are no symbols that do not have their basis in material processes. The verbal symbol is conveyed by sound waves and the written symbol is conveyed by light waves. There is thus an implicit realism in communicating that contradicts Gergen's main assertion.

In his analysis of constructivism, Tolman (1980) allowed that theories are constructed but that did not mean that theories could not reflect objective reality. Granted observations are theory laden—guided by assumptions regarding what constitutes knowledge, what acceptable methods are, and what inferences are permissible. In that sense it is fair to say that knowledge is relative, given different assumptions, but that does negate objective reality, its accessibility, or its reflection in theory. The issue is whether the skeptics are correct or whether we can make a rational connection to an objective reality. The problem and the answer, to Tolman, lie in the assumptions one starts with. All philosophies (and psychologies) begin with an initial premise that is ultimately unjustifiable. For those who opt for subjectivism it is the undeniability of consciousness that has to be asserted. For the materialist it is objective reality that cannot be denied and which has to serve as a basis for knowledge. One position is not more justifiable than the other. Neither position has a preferred status. It is just as difficult to prove the existence of material reality beyond subjective experience as it is an unobservable mind or consciousness. Nonetheless, depending on the choice made, there are consequences that follow and reasons for preference.

In choosing consciousness as a starting point one is confronted with the accompanying difficulty of making objective reality accessible, beyond its experience, and the attendant problems of anti-realism. Traditional materialism, on the other hand, has failed to adequately account for consciousness and mental phenomena, other than to dismiss them altogether as non-existent or reduce them to some material phenomenon like neural mechanisms. That is a dominant stance among neuropsychologists. While most psychologists are unaware of it, I would be remiss to not remind you that the theory of levels of integration (Chapter 1) was a materialist solution to this difficulty. The issue will be more fully covered in Chapter 6 when we deal with the mind–body problem.

The intent of this chapter has been to indicate the philosophical roots of psychology and the continued existence of philosophical issues in psychology. It seems fitting therefore to close with the following quote from Koch (1985c): “Our problems, concepts, terminology, questions have grown out of the history of philosophy; and any position, theory, model, procedural decision, research strategy, or lawlike statement that we assert presupposed philosophical commitments” (p. 944). I hope I have demonstrated that.

SUMMARY

- Psychology may not be traceable to ancient Greece but its philosophical roots can be.
- The 'new psychology' may have repressed philosophical issues but that did not mean liberation from them. There can be no question that psychology incorporates epistemological considerations.
- The scientific method is inherently epistemological and psychology has given special status to it as a means of establishing objective truths. There is in that an assumption of access to an objective realm which reflects philosophical realism.
- Not all share in this realist conviction. Anti-realism in the form of relativism, skepticism, and nihilism has representatives in modern psychology.
- Psychologists have not freed themselves from ontological considerations either. While the majority adopt a materialist stance, their explanations at times lead them into subjectivism and that, in the end, renders their stance idealist. Some, the phenomenologists, intentionally assert subjectivism as their starting point and are ultimately idealists.
- Despite protestations to the contrary, psychology has not liberated itself from inherent philosophical considerations. An awareness of these issues, in place of their dismissal, may better serve psychologists in their efforts to explain their subject matter and avoid the logical pitfalls to which they have been vulnerable.

SUGGESTED READINGS

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