5 From Hume to Kant via Wittgenstein

Hume’s thesis that associative psychology is the cement of the universe so far as our consciousness of the natural and human worlds is concerned was a gauntlet thrown down before theorists of mind of his and subsequent eras. It reduces all non-linguistic human conception, judgments, and inferences to processes fully as affect-driven and devoid of propositional or other logical structure as presumably drive non-human animal intelligences and govern both human and animal passions. In so doing, it effectively cuts the ground from under all claims of human exceptionalism since the universe represented by the human psyche becomes, in all fundamentals, no different from that of animal psyches generally. The challenge facing Hume’s opponents, then, was to show that associative psychology suffices in neither regard, and so to identify what makes human intelligence psychologically unique—or at least more exceptional than Hume would have it.

The Humean challenge is two-sided. The first is the claim considered in the previous chapter that the explanatory power of associative psychology has been grossly underestimated, being nothing less than the cement of every creature’s representational universe, humans included. The second, which I shall explore now, is his thesis that conscious mind by itself is incapable of supporting any other kind of representation. This relates particularly to propositional thought, its logic, and the languages that are its vehicle: any representation that depends on these is not a mental representation at all—a consciousness with dedicated neural correlates—but something else entirely. In particular, all are, in Hume’s view, dependent on convention, and therefore irremediably sociological.

Conventional vs. Psychological Representation

Behavior is governed by established conventions when there is “agreement . . . without the intervention of a promise . . . [as] men who pull the oars of a boat do it by an agreement . . . though they have never given promises to the other,” as “gold and silver become the common measures of exchange,” and as “languages are gradually established by
human conventions without any promise.” Conventions arise whenever a person implicitly comes to rely on another to respond to an action he or she performs with a particular answering action, both are sensible of “a like interest” in perpetuating the routine, and that interest “is mutually expressed and known to both.” When others, observing them, conform their behavior to theirs because they share, recognize, and make known the same interest, the convention spreads; and if its spread is far and deep enough to endure in a population across generations, it becomes established convention. If the artifice of established convention is taken away so that everything is left to nature to regulate, oarsmen cannot then avoid chaotic motion, gold cannot serve as a medium of exchange, and, above all, language becomes a complete nonstarter. And generally: whenever nature fails to regulate behavior but a need for behavioral regulation is felt, human social conventions artificially fill the void.

Linguistic conventions are a species of established convention that fit seamlessly into a web of other social practices that together constitute a society with its own distinctive culture, all embedded in species-wide, uniquely human lifeways. Conscious representations, by contrast, are correlated not to social networks but to neural ones, and so are as informationally blank where conventions are concerned as they are regarding their neural correlates. From Hume’s perspective, the propositional thought characteristic of human populations is on all fours with crows flying in murders and dolphins swimming in pods: collective social practices no more discoverable from individual participants’ neurons than from the consciousness correlated to them. To be sure, putting socially constituted conventional meaning to use involves considerable neural activity, including much that is conscious. But that does not make the conventions themselves any less incapable of existing in an individual isolated consciousness, independently of the infrastructure of collectively established practices. Hume’s view of language is thus in complete harmony with the far more developed conventionalism of the twentieth-century philosopher Ludwig Wittgenstein, who, in the *Philosophical Investigations* and other late period writings, equated propositional thought—science and mathematics not excepted—with conventionally constituted moves in *language games* embedded in distinctively human forms of life.

It is vital to recognize that the thesis defended by Hume, Wittgenstein, and others concerns human understanding, not human knowledge (Chapter 2). It does not reduce the truth of uncontroversial factual reporting, established science, and demonstrated mathematics to mere “truth by convention.” What a home run is may be determined by baseball’s conventions, but when a batter hits a pitch into the left-field upper deck it is factually, in objective truth, not merely conventionally, a home run. Similarly, when mathematicians devise demonstrations or scientists theorize, observe, and experiment, the knowledge that results is factual, objective truth, not true merely by convention. Nevertheless,
by contrast with sensations and associative relations, mathematical and scientific understanding is fully as convention-dependent as the understanding of games like baseball, and so just as impossible unsupported by the infrastructure of collectively established human social practices. Yes, mathematics and science have their own special coinages—integrals, matrices, constants, fermions, bosons, et al.—but then so does baseball. No one has ever taken a single step in mathematics, conceived and executed experiments, programmed a computer, built a nuclear reactor, or done anything else in the least scientific except by relying, implicitly and explicitly, on the broader language spoken by their contemporaries and handed down by their forebears. Mathematical and scientific understanding, like convention-dependent human understanding generally, are social inheritances comprehensible only in and through the broader language in which they are indelibly embedded, the social infrastructure on which language depends, and the species-wide lifeways that define uniquely human behaviors. Indeed, linguistic convention is so indelibly bound up with our humanity that Wittgenstein famously averred that “if a lion could speak, we could not understand it.”

This book’s brief does not allow me to provide a full résumé of human social conventions and the myriad ways they are essential to language. It is sufficient to recognize that linguistic representation is not bound by the constraints that bind psychological representation to all and only such contents of consciousness as one’s own, strictly personal experience has disclosed, with no more relation or unity among these contents than single, isolated acts of representation are capable of conferring. Linguistic convention could not be more different, as Wittgenstein’s comparison of language to a city illustrates:

Do not be troubled by the fact that [my two invented languages] consist only of [primitive building site] orders. If you want to say that this shows them to be incomplete, ask yourself whether our language is complete;—whether it was so before the symbolism of chemistry and the notation of the infinitesimal calculus were incorporated in it; for these are, so to speak, suburbs of our language. (And how many houses or streets does it take before a city begins to be city?) Our language can be seen as an ancient city: a maze of little streets and squares, of old and new houses, and of houses with additions from various periods; and this surrounded by a multitude of new boroughs with straight regular streets and uniform houses.

Languages are like cities in being multi-generational collective enterprises that exist to accommodate and facilitate all the activities taking place within them. Cities do this with bricks and mortar, paving and cable, vehicles of various kinds, multifarious distribution systems, sundry services, communication networks, and much else, all planned and regulated
at the micro- (individual), meso- (group), and macro- (citywide) level. Languages do it through conventions—rules everyone tacitly agrees to abide by. Linguistic conventions are a particularly strong building material in that, almost uniquely among conventions, everyone has an interest in always conforming to them and no one is ever tempted to flout them, since to do so is to veer straight into incomprehensibility; and who would ever want what they take the trouble to say not to be comprehended? Equally importantly, linguistic conventions are myriastically versatile and endlessly adaptable. Some are constitutive of meanings, others of grammar and syntax, and still others of phonology, but that barely scratches the surface. Linguistic conventions are constitutive of orders, requests, desires, statements, and questions. They constitute the discourse of teaching, learning, and testing, of story-telling, reporting, and jesting, of legal briefs, business prospectuses, and economic programs, of competitive sports, board games, and military drills, of theatricals, dances, and cho- rales, and so on and on. They are constitutive of the formulae used in calculus and chemistry, rocketry and artillery, bookkeeping, and metric conversion. Linguistic conventions of myriad kinds, connected in numberless, interlocking, multi-layered ways, make possible all the cooperative, competitive, and other kinds of coordinated verbal behavior that together go to make up language. And like the city in which we are born, conventions are not something we each individually have to create from scratch like experience, but are a common inheritance passed down from generation to generation, silently modified in manifold ways to suit the expressive needs of each.

Nor does the analogy end there. Crucially, just as everything that takes place in a city is situated at a particular node in a citywide network and determined accordingly, every act of conventional representation takes place at a convention-constituted node in the wider network of language and is informed thereby. Thus, according to the nodes to which other conventions directly connect it, the passageways they provide to remoter nodes, and all manner of language-wide connectivity in which they embed it, each such representation has additional, multi-layered meaning, grammatical relatability, and syntactic orderability conferred on it. This makes conventionally constituted meaning, logic/grammar, and syntax inherently holistic, and so inherently impossible to capture by purely psychological representations which, by their very nature, are not situated in or informed by a preexisting, meaning- and structure-conferring network. On the contrary, the inviolable rule in the case of the latter is that no content, relation, or order exist except in and through the single acts of representation responsible for bringing them into psychological being. Psychological representations are thus prototypical hermetic isolates, as confined to the individual, isolated, wholly private consciousness of the psyche doing the representing as their neural correlates are to the brain responsible for producing them.
Nor is there any equivalent in psychological representation to the land cities require—land of the appropriate sort for building cities atop—or its linguistic analogue: the wider social infrastructure and species-wide lifeways on which human conventions generally and linguistic conventions more particularly wholly depend. Instead, the representing subject has to produce the underlying land for its structures—the understanding that supports them—along with the structures themselves. This is just to say that psychologically generated representations have only so much and no more meaning or structure than the subject doing the representing puts into them: they connect up with others only insofar as the subject produces a connection between them, have complexity only insofar as the subject synthesizes them from simpler ingredients, and combine to form unities only insofar as the subject fashions a unity from them. Nor is there ever anything other than fallible memory to ensure such subjective accretions to representation get preserved. Thus, in the absence of the holistic representations constituted by linguistic conventions, there is little if anything to distinguish human understanding from non-human animal varieties—just as Hume maintained.

None of this is to deny that there exists a certain continuity between psychological representations and at least some socially constituted conventional ones. For example, conscious representations distinguishing between one, two, many, big and small, more or fewer, etc. seem to lie within the scope of non-human animal understanding. Although not conventional, and so lacking the logico-grammatical character that fits them for linguistic use, they are on a continuum with convention-based elementary representations of quantity and number that have this character. Similarly, representations can be generalized purely consciously by means of customary resemblance associations—the sortals of human-animal natural consciousness—without requiring conventions or being in any way logically or grammatically fitted for inclusion in propositions. Nevertheless, such generality seems continuous with the logically and grammatically structurable variety characteristic of convention-based linguistic generality. Or, again, the loss of vivacity affect from a previously believed idea—disbelief in the reality of what is represented in it—is on a continuum with the logical act of denying a proposition—disbelief in the truth of something that cannot be represented except via linguistic propositional logic and grammar. And much the same is true of conscious and convention-based logically and grammatically structurable representations of sensations like pain (“Ouch! That hurts!”), sensibly detectable patterns like shapes (“That is a cube, not a sphere”), as well as emotions, desires, and much else.

But however great the appearance of a continuum, it should not obscure the very real and fundamental difference between conscious representations in the individual, isolated psyche and culturally established, socially constituted conventional representations. There is nothing in any
individual’s consciousness corresponding to the latter. Even such con-
scious representations as may be needed to operate with conventions
(joint attention et al.)\(^7\) are only ancillary to one’s actions’ conformity
to the socially established norms that shape both others’ expectations
of one and one’s expectations of others. Stripped of all relation to exist-
ing conventionally prescribed verbal and non-verbal social practices,
conscious representations lose whatever linguistic meaning and logico-
grammatical fitness their seeming continuity with non-mental repre-
sentations might be supposed to confer. For intrinsically and of themselves,
they are altogether devoid of all properly linguistic attributes, and so
are, in the most literal linguistic sense, senseless. Conversely, a machine
devoid of consciousness that was programmed to perfectly imitate how
humans operate with their conventions would rightly be adjudged to
have mastered the same non-psychological representations we do; and if
it were designed to look and act like a human, we would probably find
it impossible not to accept it as one of us—even if we were convinced
that it lacked everything that makes conscious representation possible.
In short, for Hume, and Wittgenstein after him, conscious representa-
tion and linguistic propositional thought are not two species of the same
genus but different things altogether, one part of nature and purely psy-
chological, the other irreducibly sociological and as artificial as military
protocol and rules of the road.

**Humean Skepticism**

Accepting that psychological and conventional representation cannot
be understood as species of a single genus does not prevent one from
acknowledging that linguistic conventions are no less perfectly fitted to
expressing what’s on our minds than heavy fur-lined gloves are perfectly
fitted to keeping hands warm in a Siberian winter. It is thanks to all that
language makes possible that there were shoulders for Newton to climb
upon to see further, just as it is language that enables any of us to see so
vastly much more than did our pre-linguistic ancestors and non-linguistic
animal relatives. But this is not because language is some kind of mental
enhancement like an additional sense or psychological capacity would be.
Instead, it is merely a toolbox of cultural implements that allows knowl-
edge to be pooled and expanded further, faster, in more ways, and more
reliably than it otherwise could. In particular, we must guard against
being deceived by the near perfect adaptedness of linguistic tools to our
expressive needs into taking them as proof, or evidence of any kind, of
the existence, or even the possibility, of a corresponding conscious repre-
sentation. Indeed, from Hume’s point of view, the dependence of linguis-
tic representation on convention is proof of precisely the opposite.

A case in point of the need for caution is the method of definition favored
by Rationalists like Descartes, Spinoza, and Leibniz.\(^8\) They sought to allay
any suspicion that a term is merely an artifact of language, with none but verbal validity, by supplying a description capable of satisfying the kind of strict canons of definition that guide mathematics and science. Such definitions were purported to be proof positive that the term in question has extra-linguistic, objective meaning—a meaning in principle grasped by the psyche even in the absence of language and capable of being instantiated without reference to language or anything else inextricably bound up with human sociality.

That is precisely what Hume questioned. He doubted whether descriptions in language, however rigorous and canonical, can ever constitute evidence of the psychological realizability or language-independent instantiability of a representation. The **locus classicus** of Hume's critique is the putatively objective (consciousness-independent) concept of cause and effect, regarded by many in his day as so entirely unimpeachable as to be indubitably objectively valid. While descriptions of the concept varied, virtually all converge on the following features:

If X is the cause of Y, then the existence of X **necessitates** the existence of Y such that it is **impossible** for Y not to exist if X does and **impossible** for Y to exist if X does not. If experience seems to offer counterexamples, it is merely because X or Y or both have been misidentified—i.e. either one's candidate for X is not the (complete) cause of Y or one's candidate for Y is not the (complete) effect of X. Yet, even if we never successfully identify the cause and/or its effect, since it is self-evidently impossible for any object, action, or movement to come into existence without **some** cause necessitating its existence, every existent Y must have a unique existent X as its (complete) cause, and every existent X must have a unique existent Y as its (complete) effect.

If only for argument's sake, let's grant that this definition captures something central, even indispensable, to the objective concept of cause and effect. How, Hume would have us ask, does *that* prove that a purely psychologically generated conscious representation corresponding to the concept is possible?

Hume's argument that it does not and cannot—that it is not any kind of evidence at all for the concept's psychological realizability—starts from the observation that consciousness of a causal relation between any two items is possible only if they can be represented as existing separately. We cannot, for example, represent mountains as causes of valleys or valleys as causes of mountains because mountains cannot be conceived at all without also conceiving adjacent valleys and vice versa. Only items that can be conceived to exist without the conception of the one's existence requiring the conception of the existence of the other are candidates for causal relation. If I can conceive the dram of whiskey I drank last
night separately from the mass extinction at the end of the Permian, then I can conceive that very dram as having caused it. If I can conceive of leaping 10 miles into the air, descending 500 miles through solid earth, and returning faster than light speed to where the leap began, then I can conceive myself performing this precise sequence of actions. Conversely, since I can conceive fire to exist without having to conceive smoke as existing, I am free to conceive fire as the cause of rose fragrance and tequila as the cause of smoke. I am similarly free to conceive ipecac as the cause of earthquakes rather than vomiting, or the dust mote currently wafting past as the cause of the Big Bang. Anything can be conceived to cause anything so long as consciousness of the existence of the one does not logically necessitate consciousness of the existence of the other.9

What Hume noticed that no one previously had, or at least not recognized as important, is that the distinctness presupposed by the foregoing definition of cause and effect as an objective relation cannot be combined in thought (i.e. psychological representation) with the necessity of the relation. The separate conceivability of X and Y implies the conceivability of one existing without the other, or indeed either existing without anything else ever existing, which is precisely what representing X and Y as necessarily connected in an objective relation of cause and effect precludes.10 This sets up the following predicament: for X and Y to be candidates for causal relation, their existence must be distinct in a sense that precludes causal relation, whereas not to be distinct in this way precludes them from being candidates for causal relation in the first place. Or, more generally still: if a representation is psychologically impossible, then its logical possibility is moot, and if it is logically impossible, then its psychological possibility is moot.

By contrast, the interlocking, multi-layered semantic, logico-grammatical, and syntactic representational structures possible within the preexisting framework constituted by linguistic conventions are not in the least constrained by psychological impossibility. So, if the definition of the objective relation of cause and effect is supported therein, then even if its psychological impossibility is conceded, it is linguistically just as meaningful as the equations of calculus and the laws of physics—or, for that matter, my horoscope from last Tuesday, the Ten Commandments, and der Ring des Nibelungen. After all, if, as seems to be the case, the psyche has nothing to take the place of convention in the economy of representation—nothing able to perform the same or comparable functions—then no representation dependent on convention is ever, strictly speaking, possible purely psychologically. All of which simply serves to underscore Hume’s general point: the definability of a concept has nothing to tell us about its possibility as a psychological representation. And more particularly: unless one can refute Hume’s skeptical argument against the psychological possibility of the objective concept of cause and effect, any hopes placed in canonical description as a method of proving the extra-linguistic meaningfulness of this or any other representation that requires that necessity
be combined with distinctness in a single act of thought must be acknowled-
ged to be completely unfounded.

Kant Stopped Dead in His Tracks

Hume’s skeptical reasoning struck Kant like a thunderbolt. He credited it with waking him from his “dogmatic slumber” by showing that the concepts of objects and their relations he had thitherto regarded as most indubitable of all—not just cause and effect but all the purportedly objective categories of traditional metaphysics—are in fact all psychologically impossible inasmuch as each posits an extra-logical necessary relation between items presupposed as distinct. The concept of substance-accident is a case in point. To conceive X to be an accident of Y, X and Y must be conceived as distinct in existence. For if there were no more difference in their existence than there is between that of mountain and valley, the relation would be purely conceptual (logical) and not a real relation of existence at all. Yet, if conceiving X to be an accident of Y implies that the existence of X depends on that of Y, then the existence of X must be conceived to be necessarily connected to that of Y, i.e. impossible apart from it. Since this contradicts the presupposed distinctness of the existence of X from that of Y, the category of substance-accident is likewise revealed to be fully as vulnerable to Hume’s skeptical argument as that of cause and effect.

But what alarmed Kant most is that the same reasoning, unbeknownst to Hume, extends to the necessary relations affirmed in mathematics. We need look no further than “2 + 2 = 4” to understand how. No one disputes that the equality between the determinations on either side of ‘=’ is a necessary relation. But Kant, donning his Humean skeptical hat, noted that the representation of the sum of 2 and 2 is as distinct from the representation of 4 as both are from the cube root of 64, the difference between 1,043,742 and 1,043,738, and an infinite number of other numerical representations that partake of the same necessary relation of equality. So, the question again becomes how representations presupposed as distinct can possibly be necessarily related. To see why they cannot, simply take any pair of representations from this infinite number: even if you analyze each till kingdom come, because of their distinctness, you will never find the other in it; and if the other is nowhere present in it, how can their equality be found there either? The skeptical thrust of this question emerges from the fact that mathematical cognition has nothing beyond these representations on which to focus; yet, if they are truly completely distinct, there is no option but to look beyond them to discover their necessary relation. And what is there outside distinct mathematical representations to relate them other than experience? Yet, whereas experience can relate objectively distinct existents or matters of fact in contingent relations, it can never issue in the kind of objective, purely intellectual a priori necessary relations that mathematics is celebrated
for being uniquely capable of yielding. The most experience can do is
provide the kind of faux necessity Hume ascribed to internal experience
of the purely subjective, affect-constituted associations effected by cus-
tom (which Kant branded “a bastard of the imagination”). But if any
psychological representation of the necessity of objective mathematical
relations is precluded, doesn’t that leave only the conventional kind? And
doesn’t that reduce objective mathematical necessity to a mere artifact of
language, with none but verbal validity, like conventionally constituted,
socially grounded representations generally?

Hume’s skeptical reasoning, as extended by Kant to mathematics
and construed to encompass its conventionalist as well as its empipo-
psychologist dimension, may therefore be encapsulated as follows.
(1) To deny the distinctness of the relata is to deny the objectivity of the
relation. (2) However, to affirm the distinctness is to preclude the neces-
sity of the relation. Consequently, (3) no relation can be both objective
and necessary, and (4) this applies as much to mathematical necessity as
to physical or any other ostensibly necessary relation of the distinct. Thus,
(5) all putatively objective necessities without exception are purely seman-
tic and logico-grammatical in character, i.e. merely verbally valid linguistic
artifacts impossible apart from convention and its social infrastructure.

The implication of Humean skepticism that no objective relations are
necessary and no necessary relations objective seemed to Kant at once
irresistible and unacceptable:

In this way, the principles of Hume’s empiricism lead inescapably to
skepticism even in respect of mathematics, and consequently in all
scientific employment of reason. . . . Whether, amidst so horrible an
overthrow as the one we have seen of the crowned heads of cognition
[mathematics, science, and metaphysics], the common employment
of reason will come through any better and not instead be caught
up irrevocably in this destruction of all knowledge, so that a universal
skepticism would have to follow from these principles (which of
course would concern only the learned)—that is for each to judge.

Kant, of course, judged that it would. So, to combat a skepticism that he
himself had made universal, he thenceforth made it his principal order of
business to prove the extra-linguistic, psychological possibility of objec-
tive necessary relations in the guise of what he termed synthetic a priori
judgments. For with mathematics providing incontrovertible evidence of
their actuality, the real mystery for him lay in their possibility.

What Humean Skepticism Does and Does Not Target

To say of a psychologically impossible representation that the only repre-
sentational reality left to it is as an artifact of language, possible only in
and through social convention, is to say that the representation has the same legitimacy and validity—no more, no less—as meaningful discourse generally. Viewed through the lens of Kant’s extensions of Humean skepticism, however, isn’t this just to say that mathematics, science, metaphysics, and everything in common, everyday knowledge that would be rendered unrepresentable in the absence of linguistic conventions have the same—no more, no less—legitimacy as religious discourse, astrology, new age spiritualism, cosmogony, stone age mythology, science fiction, fantasy, and any other species of discourse that makes sense to at least some group, some subset of a population of speakers, now or at any point in the history of language?

The answer is yes and no: yes so far as understanding is concerned, no with respect to knowledge (this distinction was introduced in Chapter 2). If indeed the representations of customary-association-transcending mathematical, scientific, metaphysical, and ordinary understanding are as psychologically impossible as Hume’s psychologism implies, then it seems that they have, and can have, none but the merely verbal validity that appertains to linguistic artifacts constituted entirely by semantic, logico-grammatical, and syntactic social conventions. But this is to take nothing away from any of them as knowledge, much less to deny the manifest superiority in practical consequence of science and mathematics in particular to all other forms of language-dependent human understanding, from religion and astrology to gossip columns and recipes. Indeed, Humean skeptics are just as ready as the most ardent epistemological maximalists to applaud and endorse the value of scientific and mathematical knowledge for the simple reason that human knowledge is not their target. Instead, their quarrel is with anyone who claims that these or any other species of knowledge incorporate, or in any way involve, representations whose meaning and validity transcend anything that is possible psychologically or conventionally. Their counterclaim is that representations that can be explicated neither psychologically nor by linguistic convention are devoid of meaning, mere unintelligible nonsense masquerading as sense, notwithstanding any illusions to the contrary. In a word, the true target of Humean skepticism is platonism.

The Anti-Platonist Thrust of Hume’s Skeptical Challenge

Hume’s skepticism regarding objective understanding was strongly opposed in his own day and continues to be in the post-Wittgensteinian present. The opposition principally takes the form of what is often termed platonism. Originally, this meant the ideas, or forms, that Plato regarded as fully objective, mind- and society-independent representations—the beautiful itself, the good itself, intelligence itself, power itself, life itself, etc.—which function as archetypes with respect to both
particulars—beautiful, good, intelligent, etc. people and things—and mental representations—consciousness of the beautiful, good, etc. Insofar as the human psyche partakes of the preexisting framework supplied by these archetypal forms, its representations are held to be genuinely objective, and are otherwise merely subjective ephemera. Equally influential is the Aristotelian variant that naturalizes platonism: instead of particulars partaking in archetypal forms existing apart, forms are immanent to matter, i.e. internal to and inseparable from it. Forms transform what is otherwise indeterminate, undifferentiated matter into mental and physical particulars with a definite nature, or essence, while matter gives real existence to forms that are otherwise pure abstractions, altogether lacking in reality (i.e. in contrast to Plato’s forms, they are not even so much as possible existents in their own right).

Aristotelianism was the dominant view until the early modern era, when the rediscovery and translation of Plato’s surviving writings resulted in something of a mix and match. For example, Descartes may be categorized as predominantly Platonic, Spinoza roughly equal portions Plato and Aristotle, and Leibniz more Aristotelian. Although Locke and Berkeley are often portrayed as Aristotelians, this tends to be exaggerated to the extent that the psychological character of their philosophies is downplayed or ignored. Nevertheless, Hume was the first major Western theorist of understanding to break free from platonistic influences completely and devise a purely psychologistic account of understanding that rejects representational objectivism in all its forms. Kant built on that legacy, a bird of the same psychologistic feather as Hume. But then the pendulum began to swing back. Hegel excised Kant’s psychologism and, especially in his Science of Logic (which will be considered in the conclusion), fused what remained into a novel blend of mainly Aristotle, Plato, and Spinoza. Since then, as philosophy has become more and more anti-psychologistic, platonism has enjoyed a revival. Today’s preeminent variant, at least among philosophers, stems mainly from Frege’s analysis of language, which treats linguistic (including mathematical) sense and meaning as objectively prior to and independent of both psyche and society, and so as both phylogeny- and consciousness-independent.

Contemporary scientific platonism ranges across a spectrum remarkably similar to that of the seventeenth century. At one end there is platonistic transcendentalism, where objective representations exist phylogeny- and consciousness-independently on their own as an archetypal realm of laws of nature to which all mental and physical particulars ectypally conform. Physicist Max Tegmark’s view that physical reality is simply mathematics viewed through an imperfect empirical looking glass is an evident exemplar of such transcendentalism, but by no means the only one. At the other end is Aristotelian immanence, where objective representations are given real existence by some kind of material substrate that they in turn mold into the mental and physical particulars of ordinary
and scientific experience. A good example is evolutionary biologist Ernst Mayr’s praise of Aristotle for anticipating the embodied genotype, but any view of information as phylogeny- and consciousness-independently objective but requiring physical embodiment falls into this category.  

Hume’s skeptical challenge to platonism is propelled by his psychologism. It is fine to claim that objective representations independent of linguistic and other social conventions exist. But unless human understanding has some means of accessing them, they just as well might not exist so far as we are concerned, as inaccessible representations are necessarily nothing to us, and so can have nothing whatever to do with any of the representations actually used by philosophers, mathematicians, scientists, priests, therapists, beauticians, and everyone else. Yet, our access to them cannot be through conventional representation if, as platonists suppose, they are completely independent of human culture and lifeways and would in principle remain accessible to human psyches even if all trace of these were effaced from our experience. So, how else could we have access to them except psychologically, i.e. through some special mental faculty in the wholly private world of the individual, isolated consciousness?

Psychological answers were easier to propose when creationism was still in vogue among scientists and philosophers. Malebranche, for example, supposed that, in addition to our natural psychological endowments, human understanding gains access to Platonic archetypes through a miraculous illumination vouchsafed by God. Descartes, Leibniz, and others supposed that ectypes of these archetypes are an innate endowment bestowed on human souls by a beneficent Creator. Since either way we are obliged to introduce the supernatural into human psychology, such notions retain little more appeal today for philosophers and scientists of mind than telepathy, clairvoyance, or prophecy.

Contemporary platonists tend to duck the question of the psychological accessibility of their purportedly phylogeny- and consciousness-independently objective representations. Instead, they are apt to point to the incontestable objectivity and truth of human knowledge—as if that sufficed to refute a variety of skepticism targeted specifically at the supposed phylogeny and consciousness independence of human understanding and not at all at the veracity of human knowledge. The point of Humean skepticism is that if it is accepted that human psychology is in no fundamental respect different from non-human animal psychology, and that the non-psychological contents of human understanding are linguistic artifacts constituted by convention, culture, and distinctly human lifeways, then none of the contents can be supposed to transcend phylogeny- and consciousness-dependent human nature and artifice, and so none can be objective in anything like the platonist sense. More particularly, it is a skepticism that implies that exactly the same knowledge might be attainable by means of an understanding completely
incommensurable with our own, equivalent solely in epistemic outcomes (the ability to build skyscrapers, perform organ transplants, etc.). The objectivity and truth of knowledge are therefore no argument for the objectivity and truth of human understanding if, as Hume, Wittgenstein, and others maintain, everything in the latter that goes beyond the natural (i.e. non-supernatural) endowment of the human-animal psyche is no less ineluctably human, albeit artificial rather than natural.

Objective understanding as contemporary platonists conceive it consists of intelligible (e.g. mathematizable) information that exists wholly independently of both human nature and artifice, and indeed of the psychological and social phylogeny of creatures generally. To that extent, they are exactly like the forms of Plato and Aristotle: human-animal consciousness- and convention-independent representations that, when combined appropriately, yield the “eternal truths” that mathematicians discover and physicists asymptotically approach. Since such truths, if they really exist, transcend convention, mastering language cannot by itself suffice to access them. Ultimately, therefore, the skeptical challenge cannot be avoided: how is it possible for our serendipitously evolved, ephemeraly existent mammalian understandings to access representations that exist wholly independently of us, both evolutionarily and culturally?

When pressed for an alternative to convention, some platonists gesture in the direction of genetics, i.e. natural rather than supernatural innate representational endowments. But since it seems most unlikely that evolution could ever issue in psychological capacities that serve no other purpose than to produce the phylogeny- and consciousness-independent representations platonists deem indispensable to mathematics, science, and other highly sophisticated branches of knowledge, most seem content to leave the matter sufficiently vague to obfuscate the problem that emerges when psychologistic/conventional and platonist models of “objective” understanding are sharply contrasted. For so long as it is left vague, the unassailable epistemic warrant of conventional objectivity can surreptitiously bleed into platonism’s prime-matter molding forms and confer a patina of the same unassailability on the latter. That is why Hume, Wittgenstein, and others with similar views insist so strongly on highlighting the difference between linguistically based understanding grounded in human language games embedded in no less distinctively human forms of life, on the one hand, and platonism’s unsubstantiated, well-nigh mystical conception of an objective understanding that altogether transcends psychology and convention—a conception exemplified perfectly, according to the later Wittgenstein, by his own earlier *Tractatus Logico-Philosophicus*—on the other hand.

Platonists must either yield to the Humean/Wittgensteinian skeptic or show how the human psyche, independently of both convention and outright supernatural intervention, is able to access the representations requisite to understand and know phylogeny- and consciousness-independent
eternal truths mathematically, employ them empirically in the quest for scientific truth, and apply them in whatever other modes of cognition to which they may be deemed indispensable (eternal moral truths? religious truths? etc.). Innatism, again, is not an option. Aside from the absence of evidence, there remains the question of how the capacity for such representation can plausibly be supposed to have evolved from minds that lacked it. How, in particular, could it do so completely independently of creatures’ social development, much less have evolved in creatures with no social lifeways at all? One has to imagine that consciousness, starting from being minimally distinguishable from the perfect insensibility of something like Locke’s oyster, then evolving the neural correlates for the kind of consciousness that Berkeley and Hume explained by customary association, could suddenly blossom into the fully equipped understandings of a Gauss or Einstein, all completely independently of human sociality and the conventional representations made possible by it. To me, such a hugely improbable, phylogenetically non-adaptive saltation seems a bridge too far. It thus can still fairly be said that, with innatism excluded, platonists have no satisfactory solution to the accessibility problem, and so must cede the game to the Humean skeptic.

Of course, the Humean skeptical challenge is only as good as the psychologism and conventionalism underpinning it. My focus in the remainder of the book will be on Kant’s attempt to show that Humean associationist psychology is a nonstarter unless supported by a transcendental psychology of pure (= strictly a priori) representational capacities of sense, imagination, and self-consciousness. The a priori psychologism he grounded on it purports to give the platonistic impulse its full objective due by showing that representations and truths may be brought to consciousness that transcend anything possible through convention or empirical psychology, yet without obliging one to have recourse to innate endowments discontinuous with human phylogeny, much less anything of a supernatural character. A purely subjective psychological “objectivity” that is nevertheless sufficiently robust to quell the urge to embrace any form of evolutionarily and psychologically unsustainable platonism, even in the cases of logic and mathematics: that is the promise of Kant’s response to Humean skepticism.

Notes
1. T 3.2.2 ¶10. Although Hume’s ostensible topic is property, his examples, including language, leave no doubt that the scope of his analysis extends far more widely: “I observe that it will be for my interest to leave another in the possession of his goods provided he will act in the same manner with regard to me. He is sensible of a like interest in the regulation of his conduct. When this common sense of interest is mutually expressed and is known to both, it produces a suitable resolution and behavior. And this may properly enough be called a convention or agreement between us, though without the
interposition of a promise, since the actions of each of us have a reference to those of the other and are performed upon the supposition that something is to be performed on the other part. . . . Nor is the rule concerning the stability of possession the less derived from human conventions that it arises gradually and acquires force by a slow progression and by our repeated experience of the inconveniences of transgressing it. On the contrary, this experience assures us still more that the sense of interest has become common to all our fellows, and gives us a confidence of the future regularity of their conduct: And 'tis only on the expectation of this, that our moderation and abstinence are founded. In like manner are languages gradually established by human conventions without any promise.”


3. Contrary to the common assumption, Hume did not equate linguistic meaning with ideas in the mind. Like Locke before him, he left no doubt that socially established conventions are the prime determinants of linguistic meaning: see HTC chapter 3 and KEUU chapter 8. The respective roles of consciousness and convention in linguistic meaning come through with particular clarity in a letter he penned to a cousin, cited and discussed in KEUU chapter 4-C.


6. The only exceptions are maximally simplified “languages” like the ones consisting entirely of building site orders that Wittgenstein invented expressly for purposes of contrast.

7. See note §2 earlier in the chapter.

8. See chapter 1 note §11.

9. “That impious maxim of the ancient philosophy, Ex nihilo, nihilo fit [from nothing nothing comes], by which the creation of matter was excluded ceases to be a maxim according to this philosophy. Not only the will of the Supreme Being may create matter, but, for aught we know a priori, the will of any other being might create it, or any other cause that the most whimsical imagination can assign. . . . The falling of a pebble may, for aught we know, extinguish the sun, or the wish of a man control the planets in their orbits. . . . Anything may produce anything. Creation, annihilation, motion, reason, volition; and
these may arise from one another or from any other object we can imagine” (E 12.3 ¶32n & ¶29 and T 1.3.15 ¶1; see also T 1.4.5 ¶¶ 30 & 32).

10. The laws of physics may make separate existence impossible, but if a cosmology like that favored by physicist Lee Smolin is correct, these laws can change, thus permitting the separately conceivable to exist separately as well. By contrast, no change in the laws of nature can permit a mountain to exist without a valley or vice versa.

11. PFM 258.

12. CPrR 52.

13. Jim Baggott, for example, defends Aristotelian immanentism in physics: “The scientific interpretation acknowledges that information is not much different from other physical quantities. But, as such, it is a secondary quality. . . . ‘Information is physical’ means that information must be embodied in a physical system of some kind and processing information therefore has physical consequences. Take the physical system away, and there can be no information. . . . The metaphysical interpretation suggests that information exists independently of the physical system, that it is a primary quality, the ultimate manifestation of an independent reality. ‘Information is physical’ then acknowledges that in our empirical reality of observation and measurement, information comes dressed in a clothing of physical properties. This is a bit like suggesting that heat or temperature are the ultimate reality, existing independently but projected into our empirical world of experience in terms of the motions of physical objects” (Farewell to Reality, London: Constable & Robinson Ltd., 2013, p. 258). David Deutsch takes a similarly Aristotelian immanentist view of mathematics.