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An Empty Holy of Holies

Natural Theology in the Light of Brain Laterality

What it may mean for the concept of God to be taken either analytically or holistically may seem obvious at first. An analytic composition highlights a pluralism of components of some kind, while a holistic conception focuses on unity. The distinction between polytheism and monotheism would seem to reflect just this sort of division.

Extreme forms of monotheism and philosophical monism (Spinoza and Parmenides, for example) seem to annihilate real differences among the distinguishable entities of our experience. Hegel, who insisted on real differentiation in one's conception of absolute reality, included Schelling in this group. He characterized Schelling's "Absolute" reality as the "night in which all cows are black," that is, as a monism from which real differentiation was stripped away.

A monotheism may be holistic, on the other hand, insofar as it preserves some such differentiation between different "modes" of God—thereby taking God to be a "whole" of such distinguishable functions, roles, or "parts." Trinitarian Christianity can still be treated as monotheistic despite the differentiation that is essential to its theology. Even

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classical monotheists like Spinoza retained a fundamental differentiation in God/Nature, with God understood as active and Nature as passive. Schelling's view was not dissimilar. We can even include the dualism of yin/yang in this category of "differentiated holism."

While my account of Judaic monotheism in this chapter does stress its analytic/digital character, we have to keep in mind that even orthodox Judaism retained some measure of differentiated (analog) content—not to mention the more overtly analog nature of the more esoteric Judaic Kabbalistic tradition (as we shall see).

Judaism and the Spirituality of Reason

I want to propose a *cognitive* interpretation of the emergence of Judaic monotheism (and, indirectly, Islamic monotheism). I'll rely again on the distinction between two fundamentally different conceptions of representation: one intuitive/holistic—which favors an *analog* model of rational cognition; and one serial/analytical—which favors a *digital* model.

While both Hellenism and Judaism may have been instrumental in setting western civilization on the path to reason and law, it is the digital/analytical conception of God as a single universal Judge, I would argue, that provides the foundational axiom for the moral logic of the Hebrew Scriptures. That is, in monotheism, God came to be *represented* differently.

The Romans, it is sometimes said, lacked the aesthetic and intellectual sensibilities of the Greeks. The Romans' talents lay elsewhere, in civil affairs and engineering, for example. Different cultures embody different cognitive styles, and if circumstance should determine that the flowering of the talents of a given people should coincide with opportunities for influence on the world-stage, that particular culture can define an entire era.

And so, philosophical theory is forever associated with the Greeks and statecraft (along with engineering) with the Romans. Something in the cultural character of Italy in the fifteenth century provided much of the foundation for the Renaissance, but these achievements were assimilated by different cultures. In this sense, we are all Greek and Roman and Italian.

What we've inherited from Judaism may be viewed in the same light. The extraordinary talent of a people who played a relatively minor role in Mediterranean political life combined with circumstance to produce another foundational contribution to western civilization—Judaic morality and monotheism.

The emergence of monotheism, like the birth of Greek philosophy or the evolution of modern science, is often taken as one the milestones in the course of western civilization—progressing from mythic naivete to rational maturity. Even Marx and Freud, who questioned this simple view, still shared much of its general orientation, for they sought to establish a "science" which would finally displace the romantic delusions of the past.

Nietzsche and Heidegger and more recent philosophers of history, however, have questioned western devotion to reason in a more fundamental way. This more radical tradition, to which non-western spiritual disciplines and psychologies have contributed, has suggested that other elements of human consciousness may have been concealed (or even repressed) beneath the apparent progress of—and devotion to—reason.

Even today, "spirituality" or "religiosity" is often enough held apart from all that is theoretical, scientific, logical or rational in human knowledge. We tend to associate what is most distinctive in religious consciousness with the experience of the transcendental and the mystical. In doing so, however, we risk depreciating the spiritual value of reason itself. We find this value prominent in Judaism.

The Emergence of Monotheism

There are a variety of historical factors that have been associated with the emergence of monotheism. Consider, for example, the development of religious forms

- from myth-making prehistoric cultures to more urban societies;
- from bronze-age to iron-age societies;
- from what might be called "robust" to "decadent" societies.

From Prehistoric to More Urban Societies

In primitive societies, divinities and rituals embodied quite basic material hopes and fears relating to survival, fertility, war, clan interests and the like. In animistic and polytheistic systems, sacred and divine forces often reflected the variety of natural forces.

As society developed, with more time for higher cultural pursuits, religious forms became purer—more "spiritual," one is tempted to say. Religious accounts of experience may also be joined or even replaced by more theoretic or philosophical accounts, where the explanatory principles are less mysterious and more abstract still.

In the evolution of monotheism, the person of Yahweh in its mature form probably represented such a distillation, consolidation and spiritualization of earlier forms, Yet this was not enough, for other religious systems experienced similar changes without the unique result we find in Judaism and Islam.

From Bronze-Age to Iron-Age Societies

This major historical shift may be nothing more than a continuation of the transition from primitive to more sophisticated forms, just described, but here we can add some new elements, including the transition from fertility-goddess cults to pantheons in which a male divinity is dominant.

This dramatic move in religious consciousness (which is associated with equally dramatic social and political changes in the eastern Mediterranean) has always been the subject of highly speculative theories of human cultural change:

Hesiod's account of the decline of human fortunes from the Golden and Heroic ages to the Iron age was perhaps the first such theory.

Norman Brown (1959) proposed a Freudian explanation of mankind's Oedipal transition to the iron age as the age of the Father, with its attendant loss of innocence and more sublimated (spiritualized) morality of guilt.

Julian Jaynes (1977) went so far as to suggest that this turn in human culture at the beginning of the iron age represented nothing less than the

birth of human consciousness as we know it, coincident with significant neurological changes in the organization of the cerebral hemispheres. The religion of the Israelites probably experienced such a change in the same general time frame, that is, between the age of Moses and that of David.

The fact that a strongly patriarchal religion with a single Father God is associated with Moses is commonly seen as a reading-back into those early times of the more developed religion after the exile. Yahweh may even have had a female consort (Asherah) in the bronze age—although the earliest Israelites were perhaps less given to the cult of the fertility goddess than their Semitic neighbors, the Canaanites/Phoenicians.

No doubt the strong masculinity of the person of Yahweh and his position as the single supreme Father of his people contributes much to our general conception of early monotheism, but here again, this may not be decisive, for other cultures—the Greek, for example—evolved central Father-divinities without developing monotheism.

From "Robust" to "Decadent" Societies

This third pattern of religious change is often found in the decadent periods of major cultures, which are often enough a fertile time for "transcendental" religious cults that focus on repentance and imminent judgment.

When the material order of a culture decays, one looks to more transcendent ideals—in compensation, perhaps. A decadent Rome in late antiquity nourished the growth of Christianity, just as the shattered political structure of Native American tribes may have encouraged the rise of the transcendent "ghost-dance" religions. Transcendent religious and aesthetic ideals thrive in oppressed cultures—in Poland for much of its modern history, for example, or among the Jews of the Babylonian captivity.

Monotheism may thus in part be viewed as the response of a people to a state of continual political tension, crisis and homelessness; theirs would be a moral victory ensured by the only true, universal God (*see* Lang 1983). Yet here again, there is more in the monotheism we find in Judaism.

An Analytic Conception of God

A key to understanding the distinctive nature of Judaic monotheism is the function of Yahweh as an ultimate moral judge. Monotheism (and its system of law) may be taken as an achievement which, like other developments and inventions (arithmetic, the alphabet, algebra, evolved legal systems and excellence in commerce) by other Semitic peoples (Assyrians, Babylonians, Canaanites/Phoenicians, Carthaginians, Arabs), may reveal a cognitive style tied more to formal reasoning and systematic rationality than to iconic imagination. This can also be associated with the serial, analytical processing of the left cerebral hemisphere—which energized the emergence of civilization itself.

I add two cautions here about such an approach:

First: Few generalizations concerning the distinctive style of a whole culture can be demonstrated to the degree that might be possible in matters of a narrower and less global character. We would be hard pressed to define in precise and unambiguous terms, for example, the peculiar qualities of the Renaissance or the Enlightenment, yet few would deny that there is something qualitatively distinctive about them or that even imprecise characterizations may be useful and informative. While the explanations I offer may help establish the plausibility of this cognitive interpretation of monotheism, they are not, of course, enough to confirm it.

Second: There is always a danger of taking differences in cultural style as more fixed and absolute than they really are—a distortion all the more serious if a chance exists that such differences could become the excuse for judging a given culture to be superior or inferior to another.

Rejecting prejudicial judgments must not, however, lead us to the opposite extreme of denying the existence of cultural differences *per se*—a denial which can be equally destructive of genuine understanding among peoples. It should also be evident that, for the purposes of striking a contrast between cultural styles, it will be the differences and not the similarities that I will stress.

Intuition and Inference

Hellenic and Judaic conceptions of reason seem to favor analog and digital models, respectively. (This distinction was the focus of Chap. 7.) Sensation rests on analog empirical intuition, where data are given immediately—that is, without steps, without inference. Intuition at the intellectual level is also often characterized as immediate, without inferential steps—a kind of intellectual "sight." The elements of an intuited content are not grasped in any strict order or sequence (which is essential for inference and digital processing), but more or less simultaneously or holistically.

The sequencing of symbols and symbolic operations is prominent in such digital representations as language (syntax and literal meaning more than non-literal comprehension), mathematical analysis, chess, and the performance of music—while holistic apprehension is more evident in analog functions: aesthetic perception, drawing (not writing), language (non-literal meaning) and the more intuitive aspects of musical appreciation.

Those for whom reason is inherently tied to inference and linear thinking may find the products of intuition and imagination to be suspect and unreliable. Yet it has also been argued that reason is better identified with intuitive insight than with intellectual calculation. I will examine such a view, taken by Pierre Duhem, shortly. I must first consider a complication, however, that threatens to confuse matters.

Fast vs. Slow Inference

The facility and speed with which someone carries out digital calculations may lead to the mistaken impression that no calculations occurred at all—that the cognition was an "all at once" intuition. We need only think of the chess master's quick grasp of the proper sequence of moves, or of the algebraist's similar insight.

Those not adept at calculation, on the other hand, may need to take their steps painstakingly "one at a time" in order to achieve a result that one adept at formal reasoning could gain more quickly. Yet this does not

mean that the chess master or mathematician relies on holistic non-sequential processing while the plodding calculator operates only inferentially. It's just the opposite.

"Multi-tasking" is sometimes included among the holistic talents of the right hemisphere—the idea being, I suppose, that it is taken as the ability to grasp a set of tasks all at one, as it were. I think, on the contrary, that it represents the ability to *sequence* one's tasks—and that one's inability to do so can make the experience frustrating or even overwhelming.

The "Geometric" and "Finesse" Minds

This may be appreciated by considering Blaise Pascal's distinction between *l'esprit de géométrie* and *l'esprit de finesse*—a contrast, I think, quite parallel to that between an analog and digital "mind" (1950 [1670], §§ 247–250).

The "geometric" mind needs a clear and immediate understanding of the principles with which it is concerned, while the "finesse" mind does not. This can be compared to the analog mind's need to keep in touch with clearly imaginable ideas and the digital mind's ability to calculate at a far remove from what is provided holistically in imagery.

Because intellectual intuition may be taken as the conceptual equivalent of analog perception, Platonic or Cartesian theories, which rely on such an intuitive apprehension of truths, may be characterized as predominantly analog models of reason. Inference and deduction in Descartes' system clearly play a subordinate role to this fundamental intuition, and inferential dialectic is similarly subordinate to intuition in Plato's.

French vs. English Physics

Pascal's distinction was appropriated and developed by the scientist, historian and philosopher of science Pierre Duhem (1861–1916) for the purpose of striking a contrast between the methodologies of French and English physics.

Duhem, however, tended to favor those examples of the geometric mind that stress exclusively intellectual operations and those of the finesse mind that stress mostly perceptual operations. For this reason, he initially sees the geometric mind as more abstract and the finesse mind as tied more to sensuous memory and capable of holding in its "imagination" a collection of disparate objects (1962 [1914], pp. 55–56). He thus seems to tie the contrast between geometric and finesse minds to the contrast between abstract thought and imagination—just the opposite of what I am suggesting.

Let me try to turn this around. The finesse mind, Duhem observes, is found in diplomats and generals like Napoleon who can grasp a multiplicity of details and use their judgment to take appropriate courses of action. Yet he includes the chess player among those talented in finesse. This reveals his error—mistaking the quick grasp of a situation replete with detail (a battlefield or a chessboard) as an intuitive act of an analog mind, when it is really, I think, the *quick* apprehension of appropriate digital sequencing.

Those unable to apprehend such sequencing quickly may have to resort to laborious, step-by-step operations to confirm a result more quickly achieved by a digital mind, but these slow deductions are really the signature of the analog mind's incapacity for quick sequencing, not evidence for any facility in such calculation. Descartes' emphasis on deductive reasoning, therefore, does not automatically qualify his approach as digital.

Duhem himself enables us to correct the misleading impression that finesse/digital minds quickly apprehend sensual details (thereby *appearing* analog) while geometric/analog minds abstractly generate deductions (thereby *appearing* digital) by singling out what he takes to be one of the greatest tools of finesse—algebra. Instead of *deducing*, he observes, algebraists *calculate.* (Yet from a strict mathematical perspective, calculation is in fact deduction, and so Duhem's meaning is distinctively different.)

> The algebraist is not concerned with analyzing abstract notions and discussing the exact scope of general principles, but simply with combining skillfully, according to fixed rules, signs capable of being drawn as he writes. In order to be a great algebraist, there is scarcely any need for intellectual

> strength; a great ampleness of mind [*finesse*] suffices, for skill in algebraic calculation is not a gift of reason, but an ornament of the imaginative faculty. (p. 76)

It's now easier to see the source of Duhem's misidentification. He sees "deduction" and "analysis of abstract notions" as operations that provide essential *insight* into the nature and meaning of specific phenomena (which would make these processes *analog*), while the "imaginative faculty," which he takes to be the agent of calculation, is seen as that which gives up such insight for the benefit of productive manipulation and successful sequencing of symbols (a *digital* process).

This, in fact, bears directly on the purpose of Duhem's discussion, which is to decry the short-cut methods of English physics (which have lost touch with the referent/meaning of their algebraic formulations), and re-affirm the reasonableness of French physics (which at every step demands clear and distinct insight into the meaning of the formal expressions used) (pp. 78–81). It's almost as if Duhem would relegate a good algebraist (or chess player?) to the ranks of excellent calculating accountants.

The English do rely on models; but we shouldn't be misled again into thinking of these as mere analogs, for they include highly algebraic versions that permit them to calculate results without comprehending them. The French demand such comprehension, by which Duhem means a grasp of the meaning of all expressions used at any time.

It is surprising that Duhem did not embody the contrast he was striking between English and French physics in the persons of their two most prominent early representatives—Newton and Descartes. Of course, had he done so, he would not have been able to sustain his case for the strengths of French over English methods in the way he wanted …for Newtonian physics was a clear victor over Cartesian physics.

Both Fontenelle and Diderot, in their classic comparisons of Newton and Descartes (*see* A. Vartanian 1953, pp. 141–42), realized that the demand for clear and distinct intellectual insight into the meanings of physical terms (like gravitational force) actually hindered a productive employment of scientific method. The maturation of this method in Newton's algebraic theory was the great victory of digital calculation over analog insight.

Duhem claimed that algebraic calculation is "not a gift of reason but an ornament of the imaginative faculty." This turns upside down the view that excludes intuition from reason by taking reason as a calculus.

These, then, are the two conceptions of reason (related to analog and digital modes of representation) that are relevant for appreciating some of the cognitive differences between Hellenism and Judaism.

Dual-Processing Theories

Before leaving the subject of digital vs. analog talents in algebraic calculation vs. geometric insight, I want to add a remark on what are referred to as *dual-processing* theories (found mostly in cognitive psychology).

These theories suggest that our mental functions divide into two distinct systems, called "System 1" and "System 2" by Stanovich and West (2000). In the abstract to his 2003 study, J. S. Evans described this distinction this way:

> System 1 is old in evolutionary terms and shared with other animals: it comprises a set of autonomous subsystems that include both innate input modules and domain-specific knowledge acquired by a domain-general learning mechanism. System 2 is evolutionarily recent and distinctively human: it permits abstract reasoning and hypothetical thinking, but is constrained by working memory capacity and correlated with measures of general intelligence.

This description might equally apply to Freud's *id* and *ego* and to the analog and digital characteristics of the right and left human cerebral hemispheres.

System 1 cognition has also been described as fast, automatic and involuntary—an unconscious process that we do not control. System 2 cognition, in contrast, has been described as slow, deliberate, and voluntary—a conscious process.

I think it might be well to consider the possibility that some abstract thinking like algebraic calculation and chess may qualify as System 1 processes—where "moves" may require little deliberation and refection

and therefore can be fast and relatively automatic. This might even apply to the performance of music.

While digital processing may be relatively automatic and fast, analog processing may require patience and a breadth of vision to grasp a "big picture" or overall meaning of complex data.

Speed, therefore, may be an independent variable. While a primarily intuitive individual may apprehend whole structures or designs ("big pictures") more quickly than a primarily analytic individual who may be unable to advance beyond the individual pieces to the whole, an analytic individual may be able to more quickly discriminate and sequence individual parts than an intuitive individual.

Greek Geometry and Semitic Algebra

Pascal might well have expressed the basic contrast he intended as that between the "geometric mind" and the "algebraic mind." Where the spatial imaginability of geometric figures in Greek mathematics may indicate their analog disposition, the formal algebraic or arithmetical systems which Semitic mathematics developed appears to show their digital preferences.

The Greeks, Otto Neugebauer (1969) observed, tended to solve arithmetic problems geometrically while the Babylonians tended to solve geometric problems arithmetically (pp. 45, 149). Freud (1955) [1939] actually considered the suggestion that the anti-iconic attitudes of the early Israelites (later found in Arabic culture as well) may have enabled them to contribute to the invention of the (digital) alphabet (p. 51). Greek culture seems to have a richer heritage of pictorial art than other contemporary cultures of the eastern Mediterranean. Where we do find significant early Judaic art, as for example at the synagogue at Dura, we find Hellenistic influence.

Oswald Spengler (1926) suggested that the geometric imagination of the Greeks was manifest throughout their creation of ordered forms in all domains, perhaps most especially in their spatial art and in Platonic metaphysics (ch. 2). He contrasts this to the "Faustian," "algebraic" thinking of modern man (p. 34). Werner Jaeger (1945) makes almost the

identical assertion in his discussion of the Greek compulsion to see the cosmos as a whole, in contrast with the "calculative" methods of modern science (p. xxii)—the contrast between holism and analysis.

Greek vs. Hebrew Thought

Spengler's contrast of static Greek and dynamic modern sensibilities is also found in Thorlief Boman (1970), but Boman locates this contrast more specifically in the difference between Greek and Hebrew thought. He argues that Greek perception of the world is essentially spatial and static in character and that *seeing* (the pre-eminently spatial sense faculty) is the model for both sensible and intellectual apprehension:

> Principles and symbols in the earliest Greek philosophy were visually construed and are not concepts in the later European meaning; the same is true of the *elements* of pre-Socratic thought and of the Ideas of Plato. (p. 115)

The True must also be Beautiful. Boman goes on to remind us of Aristotle's assertion in the *Protrepticus* that *theoria* is to be esteemed more highly than other faculties, just as sight is higher than other sense faculties. Time itself, to be rendered intelligible, had to be spatialized (Plato described time as the "moving image" of eternity). In all of this reliance on vision and space, we can recognize the preferences of the analog style.

Boman suggests that Hebrew perception and thought, on the other hand, are more temporal. He goes to great lengths to exhibit the essentially dynamic character of Hebrew verbs and insists that "motionless and fixed being…does not exist for them" (p. 31).

Yet even here, Boman may not be correct that it is the *temporal* nature of Hebrew thought that distinguishes it from Greek thought. Rather, it may be its deductively rational (as opposed to the intuitionist) character that is a more plausible basis for these differences. It is because sequencing of symbols is vital for digital processing that a one-dimensional timeline, where things proceed in sequence without reversal (as opposed to a multi-dimensional spatial medium), is a more likely medium for such processing. (This is a distinguishing characteristic of left-hemisphere cognition.)

Inference and reasoning in general also lend themselves to such linear representation, for sequencing is likewise vital to both. As I argued in Chap. 7, cognition that involves holistic (analog) apprehension more and element-sequencing less is more easily represented in two and three dimensions—spatially, for example.

Greek epic is expansive—a vast plain of events in which all can be surveyed at once, at least from the point of view of the destiny which orders all ends. Hebrew epic, in contrast, is filled with individually decisive moments of psychological unpredictability. Because so much is concealed (often including the nature and will of Yahweh), the burden on individual responsibility of inferring and pursuing the right course becomes acute.

While the differences between digital and analog styles might lead us to expect the higher achievements of the early Hebrews to be more abstract and intellectual than those of the Greeks (in the way, for example, that algebra is more abstract than geometry), we should remember that the moral and practical sense which may be Judaism's greatest contribution was itself codified in a predominantly digital or formal system.

This contrast between the theoretical Greeks and the practical Jews was the basis for what Matthew Arnold (1965) called "Hellenic" and "Hebraic" elements in culture. It is, he suggested, the difference between intellect and energy, between a desire to see the whole of things and the compulsion toward proper conduct and obedience (pp. 163–5). For this reason, he observed, the Hellenic mind is expansive and spontaneous while the Hebraic mind is concentrative, strict, and consistent.

The digital conception of reason valued by Hebraic thought caused it to fasten, as Arnold put it, on the "one thing necessary" to achieve its aims (as relentlessly as a chess master pursues a mate). While each conception of reason had its strengths, Arnold observed, each was also in danger of succumbing to characteristic extremes.

The moral/legal system of the Hebrew Scriptures is certainly as great a digital achievement as Babylonian and Arabic algebra. For the contemplative mind, right action flows naturally from true seeing. The practical mind is not as sanguine about the efficacy of intuition and is more sensitive to what can go wrong—to moral failure, sin and guilt. The basis for faith is not "vision"; and without direct insight into the nature of God,

we are thrown back onto our fallibility, finitude and doubt—which is the defining dimension of the *moral*. What we are not able to *see* or directly experience, we must *infer*. This is also a basic contrast between the analog and the digital—between right and left hemispheric cognition.

Moral involvement moves beyond analog contemplation to a digital preoccupation with responsibility, compulsion and *execution*, which require a temporal sequencing of a kind proper to the moral dimension. Moral reasoning hinges on such linear sequencing no less than does logical implication; in each, one must be ever mindful of the necessary connections between successive acts. The necessity that logicians seek to preserve in their inferences appears in the moral order in the context of retribution and compensation in accordance with universal law. This moral world is filled with analyses of antecedents and consequents.

The righteous path is outlined by the moral logic found in the Hebrew Scriptures. In the service of moral action, all manner of behavior and right action are added, including dietary practices and other detailed regulations of everyday life. Such a corpus of rules, Albright (1968) observed, represents "the greatest existing monument of empirical logic"—a logic "more exact than formal logic in some important respects" (p. 177).

Monotheism and Moral Logic

Yahweh is the embodiment and guarantor of this moral logic. This, Lenn Goodman (1981) has suggested, is the end result of the development of monotheism itself. A dialectic leads from multiform diverse pantheons to more transcendent and nobler ones:

> The gods of the sky and justice triumph inevitably over the tellurian and sylvan gods of terror and panic fear, since justice can rule, preside, create order where divinity *per se* can only peer forth from its lurking places. (p. 6)

The crucial next step is the purging of the aboriginal elements of evil and irrationality from the concept of God. In the end, Yahweh leaves behind the sensuous colorful content of other divinities and comes to be

identified with his highly transcendental role as moral Judge. Yahweh's will is known—he is called to do justice, "a demand addressed less to God than to the (moral) logic of the concept of God" (pp. 9–11). There is only one Justice and therefore one God; two "justices"—a double standard—would be incompatible with the meaning of Justice.

Without the mediation of a metaphysics or logic, and from the thrust of moral ideas alone, the Israelites, Goodman claims, achieved an outcome comparable to but more consistent than that of the theoretical monism of Greek ontology as formulated, for example, by Parmenides (p. 21).

Goodman provides an interpretation of Yahweh's testing of Abraham which is consistent with this view and with the interpretation I am proposing. He rejects the suggestion that this episode centered around some nonrational Kierkegaardian "leap of faith." Rather, it is the very rationality of the situation in which Abraham found himself that Goodman takes to be the key.

It is not blind allegiance, but the "strengthening of Abraham's conviction in this inner logic of a Perfect God" that is the point (p. 15). Abraham could believe the angel's report that Yahweh was just testing him (rather than believe Yahweh's original command) because the angel's report was consistent with this new concept of a God who is just without exception. Abraham had to come to know that "God is Good" is analytic (necessary by definition) and hence universal (p. 16). This moment, whenever it may have really occurred, was a decisive breakthrough in the spirituality of reason.

This new attitude is evident throughout the Scriptures, each time a supplicant is perplexed by the fact that he or she has followed the right path but is still beset with trials and suffering. We often find such an afflicted individual taking the tone of a student catching a teacher in an inconsistency and insisting on the rules, in sharp contrast to the tolerance shown by the followers of other gods to their frequent whimsy and arbitrariness.

Such situations are often resolved, as in the case of Abraham, with the realization that Yahweh had set a riddle for his people by means of which they are to be educated, much in the way a father will toy with and challenge his son's trust for the same purpose. The father can delight in the

son's demand that the father be consistent. The price of such consistency can be high. In the end, Paul Tillich (1951) observed, Yahweh "proves his universality by destroying his nation in the name of principles which are valid for all nations—the principles of justice. This undercuts the basis of polytheism" (p. 227).

The Israelites were the chosen people of Yahweh, but Yahweh was not a partisan God; if he were, he would be but one among many such gods. His singularity is born of his universality, which in turn is the embodiment of impartial Justice. This system of Justice, recognizing also the halo of mercy and loving kindness that surrounds it, resembles in certain respects the formal systems found in logic and mathematics. Such a moral system is the link between a predominantly digital conception of reason and monotheism.

The intensely interactive component of the relation between Yahweh and his people must not be underestimated. In such authentic interchange, the sequencing of move and counter-move resembles a kind of moral chess or, better, the gaming one finds in marketplace bargaining. It was through such successful bargaining, for example, that Abraham won a commitment from Yahweh to spare Sodom even if it held a mere ten righteous souls. Abraham reminded Yahweh that, according to universal Justice, the Lord of all the universe could not destroy the innocent with the wicked.

This sequencing of moves governed by fixed rules is also found in contests with equals on the battlefield (or in friendlier arenas, as in the exchange of riddles between Solomon and the Phoenician king Hiram).

"Historical facts," Mircea Eliade (1954) observed, "become 'situations' of man in respect to God and as such they acquire a religious value that nothing had previously been able to confer on them" (p. 104). Eliade suggested that it is monotheism itself that may entail the linearity and irreversibility of historical time—the substitution of a linear, digital sequence of historical events for a cyclical, analog cosmos.

A formal, religiously based, moral system may rest on monotheism much as formal logic and mathematics rest on the principle of identity. *God is God* can have as little real content as *A is A*. The "emptiness" of this God is the basis for Yahweh's ineffability. Jews were treated as atheists not simply because they denied the gods of others, but also, Goodman

suggests, because of Yahweh's invisibility (there is no analog representation in art or otherwise of He Who Is). Goodman reminds us of Maimonides' insistence that even children should be instructed from a very early age that God is not a person or thing—that "he knows God best who knows and can demonstrate that he knows Him least, who knows that only when the Sanctum is empty of all things and notions can it be most truly said to be the dwelling place of God" (p. 22).

The same argument might be made regarding the Law of Yahweh: it is not the content or details of this Law that was the point of its devotional analysis; rather, the foundation of the Law was the concept of Law itself. What focused devotion was a digital text, not an analog icon.

Yet spiritual life can no more be reduced to contemplation of a vacuous God than the practice of formal logic can be reduced to the contemplation of the principle of identity. Logic and mathematics are exceedingly complex elaborations of the consequences of this latter principle. The contentlessness of God does not, therefore, condemn the believer to an empty religious experience. Moral and mathematical life are made interesting by exploring the rational implications in complex directions of what is an absolutely simple principle. While Yahweh is simply He Who Is, the principle of reason that is embodied in his law can generate extraordinarily rich and varied effects.

Tillich (1951) presents the Trinitarian conception as that which preserves a living content in the concept of God—in contrast with what he calls the "exclusive monotheism" of Judaism (Vol. I, 228–9). Goodman would counter that Christianity, by reintroducing a visible (analog) dying God, may have sacrificed some of the gains achieved by spirituality in its emergence from the mental imagery of its mythic beginnings (p. 27).

The Analog Kabbalah

This need for some relief from the starkness of a strictly digital conception of God and its exacting rationality has been felt strongly within the mystical traditions of Judaism itself. Gershom Scholem relates the story of a scholar of philology who went to Jerusalem to make contact with a group of Kabbalists in order to learn their doctrines. He was told there

would be only one condition—that he ask no questions. Scholem (1969) observes:

> A body of thought that cannot be constructed from question and answer—that is indeed a strange phenomenon among Jews, the most passionate questioners in the world, who are famous for answering questions with questions. Here perhaps we have a first oblique reference to the special character, preserved even in its latest forms, of this thinking which expounds but which has ceased to inquire…(p. 87).

A "thinking which expounds but which has ceased to inquire"—insight without inference, and experience without the discursive benefit of dialogue and analysis—these are analog rather than digital avenues of enlightenment and the Kabbalists were attacked as heretical polytheists who returned to myth from true religion (p. 94).

Yet even within this mystical analog imagery, there is a strong digital undercurrent. Scholem describes a complementarity in Kabbalistic symbolism:

> The processes which the Kabbalists described as the emanation of divine energy and divine light [a spatial/analog image] was also characterized as the unfolding of the divine *language*. This gives rise to a deep-seated parallelism between the two most important kinds of symbols used by the Kabbalists to communicate their ideas. They speak of attributes and spheres of light; but in the same context they speak also of divine names and the letters of which they are composed (p. 36).

This latter mode is digital symbolism, where the syntax or sequencing of linguistic symbols is essential.

Such digital symbolism is tied to *codes*, to expressions which are themselves unlike their referents but which "secretly" represent those referents. The symbols themselves are discrete and individual—it is in their endless *combinations* that one seeks to unlock these secrets. The Kabbalists believed that each aspect of reality was represented by a divine name—a code formed from some appropriate combination of the twenty-two letters of the Hebrew alphabet (Scholem, pp. 166–8). The manipulation of

these combinations was *ipso facto* the manipulation of reality. This is digital magic, and the magic is effective to the extent that the code's reality matches or surpasses that which it was taken to represent.

The letters of the Torah, it was believed, were before creation in no sequence or order at all; creation occurred as the letters arranged themselves. The Torah itself is the magical algebra of creation; changes in history (like the fall of Adam) are reflected in changes in the letter-combinations of this "absolute" Torah (pp. 71–76). It was by discovering the secret combinations of the Torah-code that Abraham earned Yahweh's attention and the right to covenant with Him (p. 170). Scholem relates a story in which an old rabbi cautions a scribe of the Torah: "My son, be careful in your work, for it is the work of God; if you omit a single letter or write a letter too many, you will destroy the whole world" (p. 39).

We can add the magical algebra of Kabbalistic mysticism to the moral algebra of orthodox rationalism as another expression of the spirituality of digital reason.

Reason and Beyond Reason

"The desert is monotheistic." In this judgment, Renan expressed the view that Yahweh was the god of the country, of a conservative people without urban color who needed to resist the pressures of assimilation in order to survive. This need was all the more vital in the face of a continuing threat of political extinction. Such conservatism is a form of ascetic survivalism. Bernhard Lang (1983) sees the origin of monotheism, therefore, in the cult of "Yahweh-alone" which arose in crisis but which remained as the crisis was taken to be permanent (p. 35).

The conservatism of this people was intensified and their self-identity confirmed, thereby enhancing their chances for survival, by the digitalization of the concept of God: a God freed from analog familiarity—aniconic, unseen, hidden, contentless; a God whose system of commandments fostered in his people an unprecedented practice of moral inference; a God whose Justice and Judgment could be no less universal and necessary than the principles of logic; a God who did not remain an aloof object of some timeless intuition, but who constituted irreversible historical time

by the sequences of his moves and his people's counter-moves; a God for whom, like the system of rationality itself, there was no alternative—a God who was *One*.

If it was not Yahweh himself, therefore, then at least it was the *concept* of Yahweh and the moral system it engendered that may have ensured the survival of his people.

Analysis and Holism Together

I explored an analog conception of God in Chap. 6 in the context of a metaphysics of emergence. The digitalization of religious concepts that characterized Judaic monotheism, on the other hand, is best understood in the context of the left hemispheric categories of the lateralized human brain.

If both analog and digital capacities contribute to the fullness of human cognition, then we might look for a similar collaboration in spiritual life. Analog spirituality may provide very different experiences from the digital variety and it will not do to suggest that the history of spirituality is the history of the replacement of the "primitive" analog by the "civilized" digital (or vice-versa). Even if the history of religions often seems to exhibit this pattern, this does not mean that something vital has not been lost or that the analog may not be retrieved (along with the digital) in some more evolved form. This in fact forms much of the challenge that today faces western spirituality in its dialog with its eastern counterpart.