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Pure/Impure

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I have made you an assayer of my people
—A refiner—
You are to note and assay their ways.
They are bronze and iron
They are all stubbornly defiant;
They deal basely
All of them act corruptly.
The bellows puff;
The lead is consumed by fire.
Yet the smelter smelts to no purpose—
The dross is not separated out.
They are called “rejected silver,”
For the Lord has rejected them.¹

The Book of Jeremiah 6:28–29

LEIBOWITZ: In this jeremiad, the prophet berates his people for having gone astray. His language is strong, high, and poetic. And it is interspersed with several passages which indicate substantial familiarity with metallurgy.

An interpretation has been provided by the much-maligned former American President, Herbert C. Hoover, who was a talented, unusually well-educated mining engineer, and by his wife, Lou H. Hoover.^{2, 3a,b} The Hoovers discern in the Jeremiah passages the ancient process of cupellation: an impure mixture of silver or gold with undesired admixtures is melted in a cupel, a shallow dish shaped from bone ash. Lead is added. A blast of air oxidizes the non-precious metals. The base metal oxides dissolve in the lead oxide, which is skimmed off, leaving behind the pure silver or gold. Jeremiah invokes the process metaphorically; the wickedness of his people is so great, they will not be purified. The Hoovers remark:

From the number of his metaphors in metallurgical terms we may well conclude that Jeremiah was of considerable metallurgical experience, which may account for his critical tenor of mind.⁴

Jeremiah's stern criticism caught our eye in its conjoining of a scientific or technological argument and an appeal to purity, a condemnation of mixture. Purity is a traditional feature, indeed a desired goal, of religious systems.

HOFFMANN: That passage from Jeremiah is not as clear as you think. If toward the end the prophet uses a powerful metallurgical metaphor for purity, he undermines

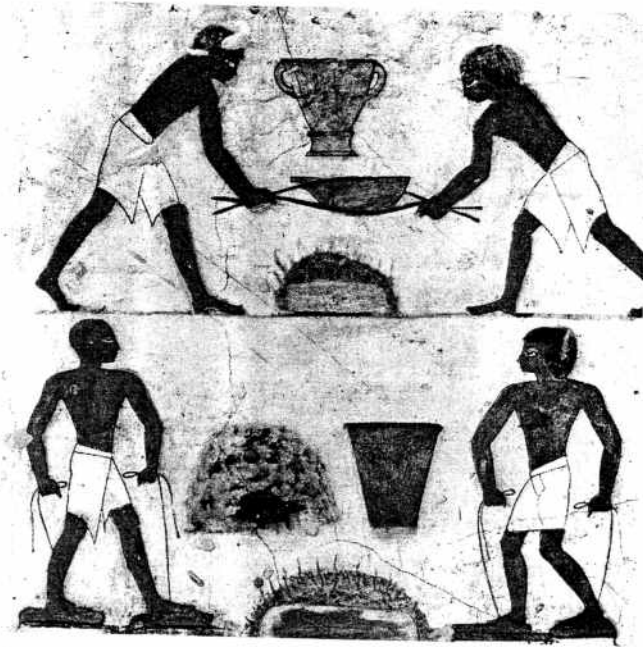


Illustration 1. Wall mural from the grave of Rekhmire at Thebes, 15th Century BCE, showing refining (of gold?) and the foot-driven bellows for smelting. Jeremiah was familiar with these processes.

his aim by invoking iron and bronze near the beginning. Jeremiah's assessment of these metals as "stubbornly defiant" (emphatically repetitive in Hebrew, *sorerey soreyim*) admits their strength, as materials.⁵

And why are they strong? *Because* they are impure, mixtures, alloys. I suspect that Jeremiah, good metallurgist that he was, knew that bronze, in the swords and ploughshares of the Israelites, was a mixture of copper and another metal, tin. And carbon in iron strengthens it; properly processed it becomes steel.

Science teaches us that nothing is pure; moreover that complete admixture is the natural course of events. And chemistry gives us abundant examples of superior impure materials.

So religion squares off against science once again, purity vs. impurity. Or so it seems . . .

I. RELIGION AND THE ASPIRATION TO PURITY

COLETTE: As that word "pure" fell from her lips, I heard the trembling of the plaintive "u," the icy limpidity of the "r," and the sound aroused nothing in me but the need to hear again its unique resonance, its echo of a drop that trickles out, breaks off, and falls somewhere with

a splash. The word “pure” has never revealed an intelligible meaning to me. I can only use the word to quench an optical thirst for purity in the transparencies that evoke it—in bubbles, in a volume of water, and in the imaginary latitudes entrenched, beyond reach, at the very center of a dense crystal.

*The Pure and the Impure*⁶

HOFFMANN: Words such as “pure” and “impure” carry a multitude of meanings. The sense least encumbered with moral connotation is that describing the distinction between objects composed of one substance versus those consisting of a mixture of several. So Vicks Throat Lozenges are a mixture of benzocaine, cetylpyridinium chloride, menthol, camphor, eucalyptus oil, D&C Red No. 27, D&C Red No. 30, flavor, polyethylene glycol, sodium citrate, sucrose, and talc. D&C Red No. 27 is tetrabromotetrachlorofluorescein; D&C Red No. 30 is 6-chloro-2-(6-chloro-4-methyl-3-oxo-benzo[b]thien-2(3H)-ylidene)-4-methyl-benzo[b]thiophen-3(2H)-one, alias “helindone pink CN.”⁷ “Flavor” certainly contains several molecular components. Other examples of mixtures are your breakfast cereal (read the ingredients!) and pure mountain spring water (*certain* to contain, at the parts per million level, calcium, magnesium, chloride, sodium, sulfate, bicarbonate, and organic matter, and at the parts per billion level all kinds of things you don’t want to know about, such as ammonia, borate, fluoride, iron, nitrate, potassium, strontium, aluminum, arsenic, barium, bromide, copper, lead, lithium, manganese, phosphate, and zinc).⁸

From that reasonably neutral starting point of mixture, the meaning of “pure” and “impure” develops. First, there is a metaphorical movement to the realm of the emotions, carrying with it a certain confusion with the ideas of concentration and intensity. A saint, Buddhist or Christian, who meditates intently, is pure in soul. He is not distracted; she is intense.⁹

Second, the movement to the figurative sphere inevitably triggers the association of a positive ethical or moral value to the pure, and a negative one to the impure. To be spotless, unblemished, to be pure in mind, is to approach godliness. “How blest are those whose hearts are pure: for they shall see God,” it says in the Sermon on the Mount,¹⁰ echoing the 24th Psalm:

Who may ascend the mountain of the Lord? Who may stand in his holy place? —He who has clean hands and a pure heart, who has not taken a false oath by My life or sworn deceitfully.

To be pure is to testify to the holiness of God and his people. Purity becomes symbolic, good and *of* God.

LEIBOWITZ: Is there any doubt that purity is a positive good of religion? It is an important factor behind the complex rituals and regulations governing marriage, inheritance, sacrifice, and cooking. Entire tractates of the Talmud, that rich body of initially oral law governing the behavior of observant Jews over 2000 years, are devoted to the rules and regulations of ritual and physical purity. To an outsider the discussion might seem esoteric, a debate between rival rabbinical schools as to how many drops of milk accidentally spilled into a veal stew will cause the dish to become thereby a forbidden milk/meat mixture. But for the Jewish people, every act must be a sancti-

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*ONE OF THE B VITAMINS.

U D

Illustration 2. A 1910 advertisement for Quaker Wheat Berries touting their purity. (Warshaw Collection of Business Americana. Archives Center. National Museum of American History. Smithsonian Institution.)

fication of His holiness. The exhortation to purity is there in the Torah, the Five Books of Moses:

You shall be holy, for I, the Lord thy God, am holy . . . You shall observe My laws. You shall not let your cattle mate with a different kind; you shall not sow your fields with two kinds of seed; you shall not put on cloth from a mixture of two kinds of materials [*shaatnez*].

Leviticus 19:2 and 19

Rationalist attempts to find hygienic or scientific arguments for these rules, or to seek their economic origin abroad. So in *shaatnez*, the prohibition of mixing wool and linen, some people see the ancient struggle between shepherds and farmers. But while these explanations are ingenious, tracing the inevitable interrelatedness of the spiritual and physical world, the reasons for the ubiquity of proscriptive ritual must be deeper.



Illustration 3. The search for *shaatnez*, the forbidden mixture of wool and linen, often uses the tools of modern science. Here is a view of a Brooklyn *shaatnez* laboratory. (Photo courtesy of Cary Sol Wolinsky.)

MARY DOUGLAS: Defilement is never an isolated event. It cannot occur except in view of a systematic ordering of ideas . . . The only way pollution ideas make sense is in reference to a total structure of thought whose key-stone, boundaries, margins and internal lines are held in relation by ritual of separation . . . To be holy is to be whole, to be one; unity, integrity, perfection of the individual and of the kind. The dietary rules [in Leviticus] merely develop the metaphor of holiness on the same lines . . . the underlying principle of cleanness in animals is that they shall conform fully to their class. Those species are unclean which are imperfect members of their class, or whose class itself confounds the general scheme of the world.

Purity and Danger, Ch. 3, "The Abominations of Leviticus"^{11a}

HOFFMANN: In her perceptive 1963 book *Purity and Danger*, Mary Douglas views rites avoiding pollution or impurity as ritual demarcations of the normal from the unnatural. Douglas notes that what disturbs the Lele people of the Congo region about the scaly anteater is that it is *as an animal* abnormal—it is egg-laying, but suckles its young; it is scaly like a fish, but climbs trees; its young are born singly, as those of humans. She constructs a plausible parallel argument for a cultural basis of the prohibited animal species of the Jews, the so-called abominations of Leviticus.

Douglas goes on to argue persuasively that "where the social system requires people to hold dangerously ambiguous roles, these persons are credited with uncontrolled, unconscious, dangerous, disapproved powers—such as witchcraft and evil eye."^{11b} The disordered, or that simply outside the ordered, is not just static and expelled. It spells danger to a stable society. Danger is power.

For a stable society, or a stable form of matter, danger may be as simple as change. In a phase transformation, the precipitous change of one form of matter to another

(for instance water to steam or ice), the beginning (nucleation, as it is called) is always at a locus of disorder, or an impurity.

LEIBOWITZ: Douglas correctly describes the immense importance of separation in the Biblical scheme, and its relationship to purity and holiness. This idea is articulated in the blessing said at the end of the Jewish Sabbath, setting it off from the weekdays:¹²

You have graced us with intelligence . . . You have distinguished between the sacred and the secular, between light and darkness, between Israel and the peoples, between the seventh day and the six days of labor . . . Our Father, Our King, begin for us the days approaching us . . . free from all sin, cleansed from all iniquity.

But an anthropologist analyzing the terminology of purity in a foreign culture through the veil of English will be handicapped.

First of all, highly developed religious systems do make a definite distinction between physical and ritual impurity.¹³ Thus in Hebrew we have *tahor*—pure, clean physically (and spiritually, by metaphoric extension). This can be negated, as *lo tahor*—impure, not clean physically and spiritually. But spiritual defilement, pollution, is described by another adjective, *tamey*. The Biblical candelabra were made of pure (*tahor*) gold, but these might or might not be *tamey*, depending on their contact with a source of defilement (a corpse, a reptile, etc.).¹⁴

Even if an anthropologist studies a culture in terms of its own language, she may be comparing—really confusing—concepts which seem similar but aren't. There are Biblical laws which superficially seem to be about the same concerns: mixtures and impurities. These laws are gastronomic (meat/milk, leaven/non-leaven); about fabric (linen/wool); animal breeding (horse/donkey); marriage (Israelites/neighborly pagan peoples); temporal (*eruv tavshilin*, mixing of holidays and Sabbaths); geographic (*eruv tehumim*, mixing of public and private domains); and metaphysical (impurity due to proximity to sources of ritual defilement). But each concept is embedded in its own legal infrastructure from which it cannot be extricated and compared with others out of their contexts.¹⁵

This problem is endemic to anthropological approaches. In a deconstruction of Indian marriage laws, Wendy Doniger recently observed that "the attempt to rationalize other people's apparent irrationalities is a game that many scholars of religion have enjoyed playing, particularly . . . in this era of moral relativism."¹⁶

Ultimately, the strong claims of religions do not depend on what men and women call reason. This has been the conclusion of Jewish thought—witness the Book of Job, or Rav, a 3rd-century sage, who commenting on a passage from Psalms (18:31), "the Lord's utterance is pure," asserts, "What difference does it make to the Holy One whether one eats unclean or clean substances? It follows that the commandments were given only to purify people."¹⁷

