

Molten, Glowing Metal

In later texts, 'metal' was linked with an attribute of the Divine ~ good rule (VOHU- xSa{ra-), most often called there, the rule to be chosen (Av. xSa{ra- valrya-; Pahl. *Shatvairo*).¹

In the Gathas, there is no specific use of metal as a metaphor for good rule. But I think there is an implied link. First, some foundational information.

In the Gathas, good rule (VOHU- xSa{ra-) is the rule of the true (correct, good) order of existence ('truth' for short). We have already seen that 'fire' is a metaphor for truth.² and metal is mentioned in connection with 'fire' as we will see.

In many dominant religions of today, fire is associated with the punitive fires of hell. But these religions did not exist in Zarathushtra's day.³ And the punitive fires of hell are totally absent from both the Gathas and the later texts, in which fire is never used as a punitive agent.⁴ So I ask that you remove the spectacles of a fiery hell, and look at the evidence with unbiased eyes.

True, in all time periods, fire could inflict painful burns. But in the ancient history of mankind, the discovery of fire and its uses was a transformational milestone that was beneficial. In Zarathushtra's time period people associated fire with survival, and other necessary, beneficial and valued things ~ enabling people to see in the dark; protecting from wild animals and other night-time dangers; necessary for cooking food and making tools; indispensable for warmth during freezing winters. These were the qualities associated with fire in those ancient minds ~ not the punitive torments of a fiery hell in the afterlife ~ an idea that does not appear in any Avestan text.⁵ Let us keep these facts in mind as we navigate the puzzles in this chapter.

In the Gathas, we have the word *ayah-* which means some kind of metal ~ copper, bronze, iron ~ opinions differ.⁶ It appears in only three verses (in Y32.7, Y51.9, and Y30.7). Such archeological evidence as we have to date shows that various processes for making different kinds of metal in lands inhabited by peoples who spoke ancient Iranian languages, spanned a period of many millennia,⁷ We have no hard evidence of Zarathushtra's date, and the Gathas do not mention any specific kinds of metal tools or weapons. But we can tell what he has in mind in using *ayah-*, because of the two adjectives he uses to describe it ~ 'molten, liquid, flowing' (xCUStA-) in Y51.9, and 'shining, glowing' (XaENA-) in Y32.7,⁸ (in Y30.7, he uses neither adjective). So he must have lived in a time when ore was made molten, liqued, flowing, glowing, to produce metal ~ a process that requires fire (his material metaphor for the true (good) order of existence, which includes the enlightening law of consequences and mutual, loving help).

In short, the way he uses metal in the Gathas shows that his focus was not on any particular use of metal (such as a tool or weapon), but on the process of transforming or refining ore which (through fire) was made molten, liqued, glowing, and produced the refined product ~ metal.

The photograph that follows, gives you an idea of what molten metal looks like ~ liquid, flowing, fiery, glowing ~ exactly as Zarathushtra describes it in the Gathas ~ except that the metal in this picture is molten, glowing iron during the iron making process in a blast furnace in or around 2012. However, *ayah-* in the Gathas could not have been iron because the melting point of iron is 1,528 degrees Celsius ~ too high for ancient furnaces (before 513 BCE).⁹ But *ayah-* may have been copper or bronze, which required less heat to achieve a flowing, glowing state.¹⁰



Iron being poured in a blast furnace around 2012.

These two adjectives, **xCUSta-** 'molten, flowing, liqued', and **XaENA-** 'fiery, glowing', do not describe two separate processes. They describe one process ~ the refinement and transformation of ore to metal. There can be no (reasonable) doubt that Zarathushtra uses 'molten, flowing metal' and 'glowing, fiery metal' as a metaphor, because none of the verses in which these phrases are used, lend themselves to a literal meaning. Which brings us to the question ~ what idea(s) does he want to convey through the use of this metaphor.

It has been suggested that in the Gathas, the 'metal' which is the material metaphor for good rule in the later texts, represents the knife used by priests in sacrifices. But this does not accord with the evidence. A knife used in sacrifice is not 'molten/flowing' (**xCUSta-**), nor 'glowing, fiery' (**XaENA-**) which are the only two adjectives associated with metal in the Gathas. Moreover, there is no mention in the Gathas of knives, nor of worshipping Wisdom with animal sacrifice. None at all. Animal sacrifice was a feature of the old Indo-Iranian, pre-Zarathushtrian religions which Zarathushtra rejected (in large part) and which, long after his time, worked their way into his religion to form a syncretized religion (as we see in some later Avestan texts).¹¹

Some scholars have concluded,¹² that the 'molten, glowing metal' of the Gathas reflected a (much later, probably mythical) 'ordeal' whereby if a person was accused of falsehood or wrongdoing and asserted his innocence, molten metal was poured on his chest to determine whether or not he was

telling the truth, or was innocent or guilty of the wrongful act ~ the idea being that if he was innocent he would not be burned by the metal ~ an idea that such scholars probably got from later texts.¹³

Do you think it is credible that a mind as intelligent, rational, and truth-loving as Zarathushtra's would have subscribed to such a silly, reality-defying notion that molten metal would not burn a person if he was telling the truth or was innocent? Even more important, is there a shred of objective evidence in the Gathas to support the conclusion that molten metal was used as a test to determine whether or not a person was telling the truth, or had committed a wrongful act? There is no such evidence. There is only the unsubstantiated interpretation of translators to that effect.

This interpretation does not fit the context of Gatha verses themselves.¹⁴ Nor does it fit the ideas we find in the Gathas. The idea of determining guilt or innocence by a physical ordeal of any kind, is contrary to the thought of the Gathas, which specifically states that the Lord, Wisdom, is solicitous, caring, and that His judgment is informed by truth (aSa-) ~ not by pouring molten metal on anyone's chest.

"...Him who offers solicitude (to us), the Wise Lord who, together with His clever advisor, truth, has judged the just and the unjust." Y46.17, Insler 1975. Here, the 'clever advisor, truth' is a poetic way of saying that Wisdom's judgment is informed by truth.

Nor is this interpretation supported by later texts when they speak of spiritual judgments (as distinguished from secular judgments).¹⁵

In light of this evidence, I question (with respect) whether the translation and interpretation of the 'molten, glowing metal' verses to mean this ordeal of pouring molten metal on a person's chest to determine if he is telling the truth, reflects Zarathushtra's mind-set, as distinguished from the mind-set of such translators.

So we return to the question. What idea does Zarathushtra want to convey through the use of this metaphor 'molten, glowing metal'? I will attempt to show here, with evidence, that this metaphor was intended to evoke the soul refining process in which, through life experiences ~ good and adverse, earned and unearned (including the law of consequences, that we reap what we sow), together with mutual, loving help ~ our good preferences are reinforced, and our bad preferences are changed from within to good ones by increasing understanding. This is one of Zarathushtra's foundational teachings ~ that evil is defeated by changing minds, changing preferences through life experiences.¹⁶

The end result is a wholly good being, one who possesses completely, rules himself in accordance with, and is ruled by, the true order of existence (aSa-), and its component parts (its comprehension, its embodiment, its rule) ~ just as 'pure' metal is the end result of the process of making metal ore molten, flowing, glowing in order to eliminate the 'impurities' in the ore and produce 'pure' metal. In my view, this Gatha idea was the genesis of the later texts' associating metal with good rule, because good rule is acquiring rulership (lordship) over the qualities of the divine, and being ruled by them ~ which is corroborated by the ways in which Zarathushtra uses 'lord'.¹⁷

Let us now look at the Gatha verses in which Zarathushtra speaks of 'metal', to see what he had in mind. In light of the fact that all other available translations are interpretive ~ reflecting the 'ordeal' interpretation, or reflecting the destruction of 'bad' people, I will give you my own translation of the three verses in which Zarathushtra uses 'metal'. In so doing, I will give the Avestan words in these

verses their generally accepted meanings, instead of giving them "legalistic" meanings (as some translators admit they have done. And I will add implied words only in accordance with normal Avestan usage (not to make my translation work). These three verses have been discussed in detail in other chapters in which the linguistics and meanings of each word is analyzed, and the opinions and translations of a group of eminent linguists are compared and discussed.¹⁸

In Y51.9, which appears in the Vohu Xshathra (Good Rule) Gatha, Zarathushtra says, 'The satisfaction which you give, O Wisdom, for both types (of conduct), through your bright fire, through molten metal [aya<hA xCUStA], (is) to be given for clarification among living beings, (is) to be given for) untruthfulness to be destroyed'. (In this way) You save truthfulness.' Y51.9, my translation.

Here Zarathushtra associates 'through-molten-metal' with the preceding "through your bright fire", (both of them instr. sg.). We know that in the Gathas (and later texts) 'fire' is a material metaphor for the true (good) order of existence (aSa-),¹⁹ of which the law of consequences is a part, and that the latter is delivered through the agency of this material metaphor, fire ~ a process which reinforces good preferences, changes evil preferences to good ones, thereby (ultimately) bringing enlightenment, which results in 'satisfaction ... for both types (of conduct)...' (Y51.9) ~ to those who do evil and those who do good, thereby destroying in each person's being the qualities that are wrongful (rACay?>hE dregvaNTem Y51.9), thus saving in each of us the qualities that are in accord with the true (correct, right, good) order (savayo aSavaNem Y51.9).²⁰

How do the metaphors '...through your bright fire, through molten metal...' Y51.9 express these ideas?

Well, it would have seemed to the people of his time period (who had little if any knowledge of the actual chemical composition of refined metals) that in the metal refining process, the impurities in metal ore were eliminated through fire which made the metal molten, liqued, fiery, glowing, ~ transforming and refining the ore (which they saw as a mix of metal and non-metallic substances) into 'pure' metal. In this verse, Y51.9, the phrase '... through your bright fire, through molten metal...' is used as a metaphor which likens the metal refining process to the soul refining process of the true (good) order of existence (fire), through which the wrongfulness ('impurities in the ore) in each of us is eliminated, and the good ('pure' metal) in each of us remains ~ a state of being in which one rules oneself and one's social units in accordance with the true order of existence ~ hence the association of metal with good rule (implied in the Gathas, explicitly stated in later texts).

Let us now look at Y32.7. Here Zarathushtra uses the phrase 'through fiery/glowing metal [XaENA aya<hA]' (instr. sg.). As you can see, my translation includes some implied words (shown in round parentheses) which are not in the GAv. text. These words have been implied in accordance with generally acknowledged GAv. practices which linguists (just to annoy us, naturally) call 'metonymy' and 'ellipsis'.²¹

'Of these wrongdoings, a knowing one professes none (to be) in the right, which through life, through glowing metal, he learns (for himself); through which (lessons) he has listened (to the Word of Wisdom); of which (lessons), Thou, Lord Wisdom, art the end, the Most-Knowing One.' Y32.7, my translation.

Let us set aside for a moment, the intriguing conclusion that the Divine, Lord Wisdom, is the 'end' of a mortal's soul refining process. Let us start at the beginning. The first few words of this verse 'Of these wrongdoings' refers to the wrongdoings mentioned in the preceding verses of this Yasna 32 ~ evil thinking, deceit, disrespect, hateful actions (Y32.3), abandoning reason (32.4), deceiving mankind out of the good way of life by evil thinking and evil words (Y32.5), the wrongdoings used to attain fame (32.6). As you can see, these are thoughts, words and actions that are intrinsically wrong. And our verse Y32.7 starts out by saying that a **knowing one**, (one who knows the teachings of Wisdom ~ the path of the true order of existence) understands that such conduct is not 'in the right'.

The verse continues that a person comes to learn these lessons for himself 'through life, through glowing metal' through listening (to the Word of Wisdom). What does Zarathushta mean by this.

Well let us recall that he uses 'fire' as a metaphor for the true order of existence (aSa-). And here the experiences of life are linked with 'glowing metal' which refers to the process whereby fire is used to eliminate the impurities in metal ore to produce 'pure' metal which (before it cools) is 'fiery/glowing metal'. The GAv. word **srAvi** means 'listen' in the sense of both hearing (the Word of Wisdom/wisdom) and implementing it,²² through the many experiences of life which are generated by the true order of existence (fire) ~ experiences which are unearned, and also earned through the law of consequences (that we reap what we sow), experiences that include mutual, loving help. These are the soul refining experiences which eliminate our wrong ideas and preferences by increasing understanding, changing our thinking, changing our preferences, from a mix of good and bad ones, to ones that are wholly good ~ just as in the metal refining process, fire turns metal ore (a mix of metal and non-metal) into fiery/glowing metal. And the verse ends with a little mini-puzzle 'of which (lessons), Thou Lord Wisdom, art the end, the Most-Knowing One.'

How could Wisdom ~ the Divine ~ possibly be the 'end' of the soul refining process of *mortals*?

Well, the answer lies in certain aspects of Zarathushtra's thought, one of which is his notion of means and ends. His 'means', his path, is the path of truth ~ an incremental attainment of the true order of existence (aSa-) ~ a path that leads to the 'end' which is the complete attainment of the true order of existence, which is the existence of the Divine ~ an idea that he expresses throughout the Gathas in 1,001 lovely ways. Thus, in his thought, the means and the end are the same ~ the only difference being incomplete (in the path), complete (in its end).²³

Let us now look at Y30.7, in which the word 'metal' appears without any adjectives. In the immediately preceding verse (Y30.6), Zarathushtra describes the worst thought of the local deities which generated the destructive actions with which they have afflicted mortal existence. By contrast, in this next verse Y30.7, Zarathushtra describes the advent of divine qualities in mortal existence (the words 'mortal existence' are expressed in the preceding verse and implied in this one). In addition, don't let the awkward **One/one** annoy you. You may like the explanation.

'But to this (mortal existence) One/one comes, with (good) rule [xSa{ra-], with good thinking [vOHU- maNah-], and with the true order of existence [aSa-], and enduring embodied truth [ArmaITI-] gives (them) form, breath. One/one shall be here for the protection of these (mortals), just as (One/one shall be) the first (to so protect) during the repayments through (molten) metal.' Y30.7, my translation.²⁴

This verse has some lovely things to tell us.

It tells us that the advent of the divine in mortal existence consists of consists of qualities that are intrinsically good, ~ truth, its comprehension, its rule, its embodiment ~ qualities which make a being divine ~ reflecting Zarathushtra's re-thinking of the nature of the Divine, that it is not *who* a being is that makes It divine (witness his rejection of the local gods who had both beneficial and cruel qualities). It is *what* a being is ~ the nature of the being ~ that makes it divine, worthy of worship.²⁵ In his thought, to be worthy of worship ~ divine ~ a being has to be wholly good, reasoning, true, straight, beneficial, with no mixture of harmful, cruel, crooked qualities.

Let us take a quick look at '[One/one comes...](#)', and [One/one shall be here for the protection of these \(mortals\), ...](#)'. Why '[One/one](#)'? Well, the Avestan form of the verb 'comes' includes the 3p pronoun, but Zarathushtra does not identify for whom the 3p pronoun stands. Some translators believe that the pronoun stands for the Divine ('[He](#)'). Others think it refers to man ('[he](#)'). The ambiguity is inherent in the language because in Avestan, this 3p pronoun is an implied part of the verb form. But even if the pronoun had been separately inserted, in Avestan script there are no capital letters such as would help us to ascertain Zarathushtra's intent. So we need to look at the context of the Yasna of which this verse is a part, to see what he may have had in mind.

This Yasna is about two ways of being ([maINYU-](#) a grammatically masc. noun).²⁶ The preceding verses are about choices involving these two ways of being (Y30.2), their conflicting natures, choosing between them (Y30.3), what they produce (Y30.4), and how they affect existence and our spiritual evolution (Y30.4 - 5) ~ expressing the thought that the wrongful/false way of being chooses to bring to realization the worst things, whereas the most beneficial way of being ([maINYUC sp/NICTo](#)), chooses truth "[and \(so shall those\) who shall satisfy the Wise Lord continuously with true actions.](#)" Y30.5, Insler 1975. In Y30.6, the verse immediately before ours, Zarathushtra says that the wrongful way of being influenced the local deities (reflected in their teachings) to choose incorrectly. And since they chose the '[worst thought](#)', they acted with rage through which they have afflicted mortal existence.

Then comes our verse (Y30.7), in which he contrasts the good, beneficial way of being in mortal existence, its nature, and how it helps, benefits, mortal existence (in contrast with the afflictions generated from the bad way of being in the preceding verse). This verse is discussed in detail in *Part Six*, so here I will just summarize pertinent aspects of the verse.

Throughout the Gathas, this beneficial way of being ([speNTa-/sp/NICTa maINYU-](#)) is Wisdom's way of being (completely beneficial), and it is also man's way of being (sporadically, imperfectly beneficial).²⁷ Now [maINYU-](#) is a grammatically masc. noun; the Divine is genderless but is referred to generically as masc.; and in Avestan the masc. is also used generically to include men and women. So the unidentified 3p in our verse (Y30.7) could reasonably stand for 3 things:

- ~ the beneficial way of being (which is [speNTa-/sp/NICTa maINYU-](#));
- ~ Wisdom's way of being (which is [speNTa-/sp/NICTa maINYU-](#)); and
- ~ man's way of being (which is [speNTa- maINYU-](#) ~ sporadically, imperfectly).

And therein lies one of the beautiful aspects of this verse. I think Zarathushtra, with triple entendre intends the unidentified 3p to stand for all three ~ for the beneficial way of being, which is Wisdom's

way of being and exists in man as well. This multi-dimensioned understanding of the good, beneficial way of being, and how it works in, and affects, our existence, is one of the things that makes our verse (Y30.7) so beautiful and so meaningful. It tells us that this beneficial-sacred way of being (in the Divine and in mortals) is here ~ ever present ~ to help, protect, all the living, and that it is 'the first (to protect us)' during the difficult life experiences which comprise the soul refining process ~ expressed through the metaphor of '(molten) metal' ~ representing the metal refining process. So for the unidentified 3p, I use a generic pronoun which includes the beneficial way of being in the Divine and in mortals, 'One/one shall be here for the protection of these (mortals), just as (One/one shall be) the first (to protect us) during the repayments through (molten) metal.' Y30.7.

And how are we helped, how are we protected during the soul refining process? In other Gatha verses, we are told that the Divine helps, protects, with the true order of existence (aSa-), with its comprehension (good thinking vOHU- maNah-), with its beneficial embodiment in thought, word and action (speNTa- ArmaITI), with its good rule (vOHU- xSa{ra-}).²⁸

Although the protection may be loving, given with solicitude,²⁹ we are not 'protected' by preventing us from experiencing difficulties. In Zarathushtra's thought, it is through all our experiences ~ difficult and easy, good and bad, painful and happy, earned and unearned ~ that our understanding increases.³⁰ The protection that is ever present is the protection that helps us through the refiner's fire, that increases understanding, that helps the divine within us to grow, which is consistent with Zarathushtra's notion of 'salvation' ~ that we are 'saved' from what is false, wrong ~ from all that is the opposite of the true (correct, right, good) order of existence.³¹

Some scholars think that *aya<hA 'through metal'* was inserted into this verse (Y30.7) in later times, ~ that it was not in the original verse as composed by Zarathushtra. I do not know (for certain) whether the meter bears that out. But even if it was inserted later, it would only be evidence that the ancient teachers of his thought who inserted this word in Y30.7, also understood that Y32.7 and Y50.9 (which do mention glowing/molten metal) used the metal refining process, as a metaphor for the repayments (that we reap what we sow) that are a part of the law of consequences (a transformational process for the soul). In short, if we delete *aya<hA 'through metal'* as a later addition, then in this verse, Zarathushtra says that the beneficial-sacred way of being (in the Divine and mortals) will be the first to protect (living beings) when they experience the (painful) consequences of their actions ('during the repayments'). And if we do not delete it, we get 'during the repayments, through (molten/glowing) metal'. The meaning remains the same, except that we have the added idea of using the metal refining process as a metaphor for the soul refining process.

It is interesting that this idea (in our 3 Gatha verses Y51.9, Y32.7, and Y30.7) of molten, glowing metal being used as a metaphor for the soul refining process, is imperfectly corroborated in the Pahlavi the *Bundahishn* which sought to record and preserve ancient beliefs and traditions, although its authors transmitted them through the spectacles of their own culture and time period ~ more than a millenium after the latest date attributed to Zarathushtra. The *Bundahishn* expresses the idea that at the end of times, everyone will be made pure, all good, by passing through a flood of molten metal. It is important to note that the *Bundahishn* does not state that the molten metal will annihilate evil 'beings'. It states that all the evil *within* each being will be annihilated, which is consistent with the thought of the Gathas.

"Then all men will pass into that melted metal and will become pure; when one is righteous, then it seems to him just as though he walks continually in warm milk; *but* when wicked, then it seems to him in such manner as though, in the world, he walks continually in melted metal." *Bundahishn*, § 20, E. W. West translation (SBE 5, p. 126).

However, in the *Bundahishn* this soul refining process is said to occur as a one-shot, end of times event, which (in that respect) is different from Zarathushtra's use of "glowing/molten metal". In the Gathas, the soul perfecting process is not a one-shot, end of times occurrence. It is an on-going process, through the learning that takes place throughout our lives, through the many and varied experiences of living.

Moulton (commenting under Y32.7) reads "glowing metal" in light of the *Bundahishn*. He thinks it represents:

"the flood of molten metal which is to be poured forth at the last. The righteous ~ so the later apocalyptists put it ~ would pass through the flood as through warm milk, but Ahriman and all who were 'of his portion' would be consumed."³²

He and Bartholomae see "glowing metal" in Y32.7 as a purifying agent that is destructive of evil, not as a test to determine guilt or innocence, or determine if a person is telling the truth, and they equate its result with a "blessing", which is closer to Zarathushtra's thought (except that Zarathushtra does not teach the destruction of people. He teaches the destruction of evil within all people.³³ But Moulton (inconsistently) goes on to express an opinion that is contrary to his own translation of Y32.7 ~ namely that Zarathushtra did not contemplate the annihilation of evil and evil beings because Zarathushtra believed in a permanent hell ~ a conclusion which reflects Moulton's own religious mind-set, which (in my view) so blinds him that he completely misses Zarathushtra's thought (in this respect).³⁴

But (with a fairness and integrity that I love) Moulton also notes Professor Söderblom's argument that the idea of "ayah xCUSta" (molten metal), parallels an old Indo-European "mythus" seen in Norse and Greek saga, which implies the purification and renewal of the world, so that there is no room for an endless hell. (Parenthetically according to linguistic evidence, the Norsemen and the Greeks descended from a single ancestral Indo-European tribe of which the Iranians are also a branch).³⁵ Moulton (a Protestant minister) is not persuaded that this ancient Indo-European idea reflects Zarathushtra's use of 'molten metal' in the Gathas.³⁶

If Moulton has correctly represented Söderblom's argument (and if Söderblom has correctly represented this ancient Indo-European myth), I find Söderblom's argument persuasive. I think it is one of the eternal truths that keep recurring down through the millennia. This is corroborated by ample evidence in the Gathas, and by the idea of the universal renovation ~ fraSO;kereITI- ~ in the later Avestan texts (a concept which appears even in Pahlavi texts, *frashgard/frashkard*), which has its genesis in the Gathas.³⁷

I do not know if Zarathushtra's idea of universal renovation derived from a more ancient Indo-European belief, or if Zarathushtra's thought arose in his mind independently. But it makes no difference who was 'first'. It is quality of the idea that is important ~ the idea that untruthfulness is

destroyed ~ not people who are untruthful ~ since all the living are mixes of truthfulness and untruthfulness,³⁸ (until they evolve to a state of completeness).

In conclusion: In the Gathas, Zarathushtra uses molten, glowing metal as a metaphor for the soul refining process whereby we evolve spiritually ~ rule ourselves and our existence with truth ~ incrementally, and eventually completely.

So once again, we see the beautiful ways in which he weaves the spiritual (truth, good rule) and the material (fire, metal) into a design of existence as he perceives it to be ~ a design in which the evil within all of us is eliminated through choices and experiences which change minds, change preferences, so that only the good, (which is the essence of divinity) remains ~ a refining process that often is painful, but which includes the protection of loving help, ever at hand, through the divine in concept and in being (the Divine, man and all the living), to help us through the refiner's fire.

'One/one shall be here for the protection of these (mortals), just as (One/one shall be) the first (to protect us) during the repayments through (molten) metal.' Y30.7.

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¹ See *Part Two: A Question of Immanence*.

² Detailed in *Part Two: Light, Glory, Fire*.

³ Even the torments of the punitive hells of the Pahlavi *Arda Viraf Namah* were not fiery torments.

⁴ For the Gathas, see in *Part Two: Asha & The Checkmate Solution*; and *The Houses of Paradise & Hell*. For later Avestan and Pahlavi texts see *Part Three: The Absence of Damnation & Hell in Other Avestan Texts*; and *Heaven & Hell in Pahlavi Texts*.

⁵ See *Part Three: The Absence of Damnation & Hell in Other Avestan Texts*.

⁶ On *ayah-*

Insler 1975 translates the word as 'iron'.

Humbach 1991 as 'metal' (Y51.9, Y32.7), and as 'iron' (Y30.7).

Humbach/Faiss 2010 consistently as 'metal'.

Skjaervo 2006 says the word means some "kind of metal (bronze, brass, iron)".

Taraporewala (1951) translates the word as 'metal' (Y30.7), and interpretively as "Fiery-Test" (Y32.7, Y51.9).

⁷ Oudbashi, Emami, and Davami, from Universities in Iran and Germany, give the following information in their article "Bronze in Archeology: A Review of Archaeometallurgy of Bronze in Ancient Iran" which may be read online at: cdn.intechopen.com/pdfs/30478/InTech-Bronze_in_archaeology. (If you have difficulty accessing this site, choose the Google suggested alternative (which is identical) and the site should come up).

They state that a significant number of prehistoric sites have been excavated and uncovered in Iran, many of them yielding valuable information concerning ancient metallurgy and metal working in the Iranian plateau during prehistoric periods. Various metal artifacts, moulds, slag, crucibles and other tools and materials have been recovered belonging to prehistoric metalworkers from a series of excavations in different geographical

regions of Iran. (p. 154). In a Table (p. 156), they show the archeological evidence of metal usage in the various archeological ages as follows (but bear in mind that 'smelting' does not make metal 'molten, liquid'):

Neolithic: 8,000 - 5,500 BCE

Early use of native copper;

Calcolithic (Early, Middle, Late), 5,500 - 3,300 BCE

Copper ore smelting, arsenical copper, the appearance of silver and gold;

Bronze Age: 3,000 - 1,500 BCE

Appearance of early low tin-bronzes, large scale metallurgical workshops, early brasses;

Iron Age: 1,500 - 550 BCE

Common use of bronze, appearance of iron, common use of gold and silver.

(With respect, the 'iron' worked during this time period may have been smelted, but would not have been liquid, molten, because there were no furnaces hot enough to make iron liquid before around 513 BCE discussed in a ft. below).

A. W. Cramb of Carnegie Mellon University has a different view from the foregoing authors. In his article *A Short History of Metals* www.cdagro.com/history/metals.html, he shows gold as the earliest worked (though not melted) metal, and states that Stone Age man learned to fashion gold into jewelry and ornaments, forming it into sheets and wires easily. But Cramb's findings are not related specifically to Iran. He shows the following timetable for the processing of metals. These dates may or may not be relevant to Iran and the 'molten' metal of the Gathas.

1. Gold from about 6,000 BCE onwards
2. Copper from about 4,200 BCE onwards
3. Silver from about 4,000 BCE onwards
4. Lead from about 3,500 BCE onwards
5. Tin from about 1,750 BCE onwards
6. Iron smelted (but not molten, discussed in a ft. below) 1,500 BCE onwards
7. Mercury about 750 B.C.E.

⁸ **XaENA**; Taraporewala 1951 in his comment on Y32.7, sees **XaENA** as deriving from **XaN-** 'to shine, to glow', citing his mentor Bartholomae (p. 273).

Humbach 1991 translates the word as 'glowing', but does not give any etymology (Vol. 2, p. 81, commenting under Y32.7); Humbach/Faiss 2010 also translate the word as 'glowing' (in Y32.7) without comment.

Skjaervo (2006) in his *Old Avestan Glossary* seems uncertain, but hazards a guess 'shining' citing an Old Indic cognate.

Insler 1975 translates both **XaENA** and **xCUSta-** as "molten" without comment.

xCUSta; Many linguists translate this word as 'molten'.

Skjaervo 2006 shows **xCUSta-** as ppt. of **xCaOd-** 'to flow, be liquid', comparing YAv. **xCaOdah-**, and giving an Old Indic cognate.

Taraporewala 1951, commenting on **xCUSta** in Y51.9, states that its meaning is 'molten'; he states that Bartholomae finds its etymology doubtful but suggests that it may be a ppt. of an Aryan ***xCaUd-** 'to flow'; Taraporewala himself cites a later Avestan passage and cognates from the Rig Veda in support of this translation 'molten'. (p. 787).

Humbach 1991 and Humbach/Faiss 2010 translate the word as 'molten' without comment.

⁹ According to the Encyclopedia Britannica, the extraction of metal from ores dates from about 2,000 BCE and seems to have started in the copper producing regions of Anatolia and Persia. But since primitive furnaces were incapable of reaching temperatures higher than 1,150 degrees C., the normal product for iron was "a solid lump of metal known as a bloom", consisting of almost pure iron, with some entrapped slag and pieces of charcoal. The bloom was then beaten into the desired shape (while still hot) ~ called wrought iron. www.britannica.com.

According to A. W. Cramb of Carnegie Mellon University, iron was available to the ancients in small amounts from meteors. However, (Cramb says) there is some indication that man-made iron was available [through working iron ore] as early as 2,500 BCE, and became an "everyday process" around 1,200 BCE, resulting in "wrought iron". This process included heating the iron until it was malleable (but not 'molten') and could be hammered into various shapes. A. W. Cramb, *A Short History of Metals*, *ibid*.

Prior to 513 BCE iron ore could not be made 'molten'; it consisted of heating and hammering, but never melting. The melting point of iron is 1528 degrees C ~ too high for ancient furnaces (before 513 BCE) which were adequate for melting copper (1083 degrees C) and its alloy bronze. This limitation was overcome when the Chinese developed a furnace hot enough to melt iron, an event traditionally dated in Chinese histories to around 513 B.C.E. resulting in the first cast iron (made by pouring the liqued iron into molds). *History of Metallurgy*, at <http://www.historyworld.net/wrldhis/PlainTextHistories.asp?historyid=ab16>.

Applying the foregoing facts to the **ayah-** of the Gathas, the "bloom" which was the malleable mass of heated iron, may well have been 'glowing' (**XaENA** as the Gathas say). But it could not have been 'molten, liquid, flowing' (**xCUS TA**), as described in the Gathas. According to the writings of ancient Greeks Zarathushtra lived around 6,000 BCE (highly improbable ~ a date before discovery of the wheel or metal processing ~ both of which are in evidence in the Gathas). The least ancient date for Zarathushtra was around 589 BCE in opinions expressed around the 9th century CE. ~ some 200 + years after the Arab conquest of Iran, (see *Part Four: Zarathushtra's Date and Place*) ~ a date that is earlier than when the Chinese first invented a furnace capable of melting iron ore. Therefore (based on present archeological information), it is doubtful that the 'molten, fiery' metal of the Gathas could have been iron.

¹⁰ According to Dartmouth College, there is archaeological evidence that copper was used (but not made molten) between 8,000 to 5,000 B.C.E. in the regions now known as Turkey, Iran, Iraq, and (towards the end of that period) India. The most ancient process was by hammering bits of copper found in nature. Later these bits of copper were heated, then hammered. And later still (dates not given), copper ore was melted in furnaces and cast into molds. Bronze was created when the Egyptians discovered that by mixing copper with arsenic or tin they could obtain a metal that was harder and better suited for tools and weapons; www.dartmouth.edu/~toxmetal/toxic-metals/more-metals/copper-history.html.

According to the Copper Development Assn., copper was being made by the Sumerians and Chaldeans in Mesopotamia, as early as 5,000 to 6,000 BCE. The earliest copper workings (that have been discovered to date) were Sumerian copper spearheads, then later, copper arrows and quivers, chisels, razors, harpoons, cloakpins, and other small articles. Copper was extracted from ore by smelting, some time before 3,000 BCE, because by around 2,800 to 2,000 B.C.E. the Sumerians were making bronze and silver pots, jugs, mixing trays, saucers and drinking vessels; (which I think would have required making copper molten or liquid ~ not just smelted). www.copper.org/education/history/60centuries/ancient/thesumerians.html.

The article *Ancient Metallurgy*, contains a summary on the metallurgical workings of copper, bronze and iron, but unfortunately, does not have many specific dates or time periods; it may be viewed at <http://pages.ucsd.edu/~dkjordan/arch/metallurgy.html>.

¹¹ Discussed in *Part Four: The Syncretization*.

¹² The interpretations by eminent linguists that 'molten, glowing metal' in Gatha verses refers to an ordeal whereby truth telling is determined are discussed, with linguistic analyses and comparative translations, in the following chapters in *Part Six: Yasna 32.7; Yasna 30.7; and Yasna 51.9*.

¹³ A Pahlavi Fragment text speaks of *melted* metal as the 'counterpart' of good rule ~ the rule to be chosen (Pahl. *Shatvairo*), and links it with a "heart so unsullied and pure that, when they shall drop melted metal upon it, it does not burn." §§ 14 - 15, SBE 5. pp. 375 - 376.

Darmesteter 1887 states that the Pahlavi *Dinkard* identifies 33 kinds of ordeals, the most common of which was to pour melted copper upon the breast of the man whose truth was to be tested ~ if he was not harmed thereby, he was considered to have spoken the truth. SBE 23, p. 170 ft. 3, to the *Rashn Yasht*.

The *Dinkard* was written more than 1,000 years after the Gathas, in a cultural environment that was quite different from that of both the Gathas and YAv. texts. And indeed, no one can be sure whether the author of the *Dinkard* was describing an ancient myth or an actual ancient practice. But unfortunately, some scholars have interpreted the use of molten/glowing metal in the Gathas (Y32.7) as referring to this ordeal by molten metal of later times, without any objective evidence. The contexts in which molten/glowing metal is used in the Gathas does not support such interpretations.

¹⁴ There are no Gatha verses which speak of a final end of life, or end of times judgment. However there are some verses which speak of the soul encountering the bridge of chinvat (**cinVaTo pereTUC**) which Insler 1975 has translated as "Bridge of the Judge" ~ a translation with which I (respectfully) disagree (detailed in *Part Three: Chinvat, The Bridge of Discerning*). But even if we assume that after death some sort of judgment takes place at this Bridge, there is no mention in the Gathas or in any Avestan or Pahlavi text of the soul having to undergo an ordeal of having molten metal poured on his chest. Here are all the Gatha verses which describe what happens to the soul at the Chinvat Bridge,

"...the conception [**daENA-** 'envionment'] of the deceitful person misses the true (conception) of the honest man. His soul shall vex him at the Bridge of the Judge [**cinVaTo** 'discerning'] surely, in that he has disappeared from the path of truth by reason of his own actions and (the words) of his tongue." Y51.13; no molten metal ~ just his own soul which is vexed with him for disappearing from the path of truth.

"During their regimes, the Karpans [a type of priest] and the Kavis [princes] yoked (us) with evil actions in order to destroy the world and mankind. But their own soul and their own conception [**daENA-** 'envionment'] did vex them when they reached the Bridge of the Judge, (there to become guests in the House of deceit forever [**yavol vispAI**]." Y46.11; the words **yavol vispAI** literally mean 'for all lifetime' and elsewhere other forms of this phrase have been translated as 'for a long time' ~ not 'forever' (as detailed in *Part Two: The Houses of Paradise & Hell*). In any event, there is no test by molten metal here.

The only other verse that mentions the bridge is a description of what happens to men and women who give "truth for the truth and the rule of good thinking" ~ they are able to cross the bridge "in the glory of your kind" (referring to Wisdom) Y46.10. Again, no test by molten metal here.

As I understand it, this Bridge is a metaphor for transition, and the 'judgment' made at this (metaphoric) Bridge is made by Wisdom and the soul itself, to discern whether the person has attained completely, the true (wholly good) order of existence, and therefor can make the transition from a mortal state of being to one that is no longer bound by mortality ~ non-deathness (**amereTAT-**), as detailed in *Part Three: Chinvat, The Bridge of Discerning*.

¹⁵ Later texts ~ both Avestan and Pahlavi ~ which mention the Chinvat Bridge, make no mention whatsoever ~ none! ~ of any ordeal of pouring molten metal on a person's chest (presumably, the person would not have a physical body after death, in any event).

¹⁶ See *Part Two: Asha & The Checkmate Solution*.

¹⁷ Detailed in *Part One: The Nature of the Divine*; and in *Part Two: The Lords & The Equations of Yasna 34.1*.

¹⁸ See in *Part Six: Yasna 30.7; Yasna 32.7; and Yasna 51.9*.

¹⁹ As detailed in *Part Two: Light, Glory, Fire*.

²⁰ See *Part Two: Asha and the Checkmate Solution*.

²¹ The addition of implied words in my translation of Y32.7, is in accordance with Avestan practices in which words that are once expressly stated are then implied, and the verb 'to be' is frequently implied. These and other rules of Avestan syntax are explained in detail in *Part Six: Yasna 32.7*, which discusses the linguistics of this verse, and gives other translations for comparative purposes.

²² See *Part Three: Seraosha*.

²³ See *Part Two: A Question of Reward & The Path*.

²⁴ See *Part Six: Yasna 30.7* for a detailed discussion of this verse, as well as other translations for comparative purposes.

²⁵ Detailed in *Part One: The Nature of the Divine*.

²⁶ I translate **maINYU-** as a 'way of being' which is the only English equivalent which fits all of the ways in which **maINYU-** is used in the Gathas. Others have translated it as 'spirit', 'mentality', and some other alternatives, (none of which fits all of the ways in which **maINYU-** has been used in the Gathas, as discussed in *Part One: The Beneficial-Sacred Way of Being, Spenta Mainyu*.

²⁷ See *Part One: The Beneficial-Sacred Way of Being, Spenta Mainyu*.

²⁸ The idea that Wisdom protects with truth and good thinking is explored in more detail in *Part One: Worship & Prayer*. But here are a few examples.

"What help by truth hast Thou for Zarathushtra who calls? What help by good thinking hast Thou for me, ... ?" Y49.12, Insler 1975. Rhetorical questions which contain their own answers.

"Yes, throughout my lifetime I have been condemned as the greatest defiler, I who try to satisfy the poorly protected (creatures) with truth [aSa-], Wise One... come to me ... give support to me. Through good thinking, find a means of destruction of this." Y49.1, Insler 1975.

"Wise One, where are those sincere ones who, through their possession of good thinking [vOHU- maNah-], make even immoral decrees and painful legacies disappear? I know of none other than you. Therefore protect us in accord with truth [aSa-]." Y34.7, Insler 1975.

²⁹ That Wisdom's actions (including His judgments) are made with solicitude, loving care, is shown in the following verses,

"... And do Thou give, Wise Ruler, that promise [m={rA} through which we may hear of your solicitude (for us)." Y28.7, Insler 1975.

"Because those who are alive, and those who have been, and those who shall be, shall seek after the salvation that comes from Him, the One who offers solicitude..." Y45.7, Insler 1975.

"... the glories of Him who offers solicitude (to us), the Wise Lord who, together with His clever advisor, truth, has judged the just and the unjust." Y46.17, Insler 1975. So even His 'judging' is linked with offering solicitude ~ which is consistent with the conclusion that the judgment of Wisdom which generates the law of consequences enables a beneficial result ~ one that reflects His solicitude.

³⁰ See *Part Two: Asha & the Checkmate Solution*.

³¹ See *Part One: A Question of Salvation*.

³² Moulton 1912, pp. 156 - 157, citing "Wisdom 2.24" ~ a text which his Table of Abbreviations does not identify. Nor does anything similar appear in the Pazand text, *Mainyo-i-Khard*, as translated by E. W. West, in Ch. 2. There is no section 24 (such as Moulton describes) in Chapter 2 ~ §§ 3 through 111 of which are little bits of good advice on how to live a good life, and have nothing to do with any end of times event. Sections 112 through the end of Ch. 2 do indeed speak of what happens after death but none of these sections mentions any end of times molten river, such as Moulton describes in citing "Wisdom 2.24".

³³ Detailed with evidence in *Part Three: Ashavan & Dregvant*.

³⁴ See *Part Two: The Houses of Paradise & Hell*, and *Part Three: Apema, One of Many Ends*.

³⁵ See David Anthony 2007. Page 12 which has an excellent diagram which shows the languages and cultures which descended from a common Proto-Indo-European origin. These include North Germanic (which includes the Scandinavians), West Germanic (which includes the Dutch, English, and Germans), Baltic, Slavic, Celtic, Italic, Albanian, Hellenic, Anatolian, Tocharian, and of course Indo-Iranian.

³⁶ Moulton 1912 p. 158 ft. 1. Moulton does not agree with Söderblom's argument. Moulton was a Protestant minister, and the notion of an eternal hell of punishment was foundational to his own religious views ~ a mind-set which colored his interpretation of Zarathushtra's ideas (especially about the afterlife) in ways that are not supported by the evidence of the Gathas. There are no Gatha verses which describe a hell of punitive torment, let alone an eternal one. Even in that horrible misanthropic Pahlavi text *Arda Viraf Namah*, (which specializes in the torments of 'hell') hell is not eternal. For the evidence in the Gathas and later texts on this issue, see in *Part Two: The Houses of Paradise and Hell*; and *Asha and the Checkmate Solution*. And in *Part Three: The Absence of Damnation & Hell in Other Avestan Texts*; and *Heaven & Hell In Pahlavi Texts*.

³⁷ The concept, (and the Gatha genesis) of fraSo;kereITI- is discussed in *Part Three: Heaven in Other Avestan Texts*.

³⁸ See *Part Three: Ashavan & Dregvant*; and in *Part Six: Yasna 30.3 and 4*.