

Metals and the Cosmos

Andrew Lacey



'As above, so below'. This is the central tenet and major theme of the 'microcosm/macrocosm'. It is also the simplest way of understanding the cosmos and those materials engendered in it and their influence upon one and other. In short, the microcosm is the world of the small or the minute, whereas the macrocosm is the greater world or the large scale. Both exist in their own right and in some respect know only that of their own world. The German word 'umwelt' (a self-centred world) is an expression of this, and by analogy we can say for example, it is where a rabbit knows the world of the rabbit but can't conceive of the moon. Likewise the moon understands it's cold existence among the stars but knows nothing of the rabbit. The mysterious beauty here is that one is a reflection of the other, and in this case both have the engendered qualities of the other. Therefore to work with one you inevitably work with the other.

To explain this further, let us look into our past, where the people of the world were well aware of the stars. It was only when they started to build the first cities, that we see the structures and texts in which they described the cosmos. The Babylonians named their star constellations forming what we now know as the signs of the Zodiac. These are the 'fixed stars', the unchanging structures of the sky. They also named the 'moveable stars', what we now know to be six planets and the one star of our solar system. Today we are aware of more, but these are the seven classic heavenly bodies as understood historically. So, from an Earth-centred cosmos the Moon came first, then Mercury, Venus, the Sun, Mars, Jupiter and finally Saturn. At this time, the city centres of Ur, Uruk, Sumer and Babylon, built on the fertile plains of the Tigris and Euphrates developed skills and technologies as their civilizations grew. There is no knowing how metallurgy first came about, possibly from accidents in the potters kiln, but when it did it changed the world. As the early metal-smiths began to manipulate the fires that transformed the living rock into metals, some part of them became, if not a god, at least the promethean archetype or 'midwife to nature'. These metals they named, and in naming them understood something of the qualities of each one. Over time, the fine structures of the metals began to be probed so that by the time of the Greek philosophers, ideas about atoms and internal forces came into play. We therefore see the relationships between planet and metal formed around the sympathetic qualities of each counterpart.

The **Moon** with its warm silver hue reflected in the metal **silver**.

Mercury the speedy sublimator of red cinnabar, mirrored the liquid metal **mercury**.

In **Venus**, the celestial beauty we see **copper**, warm, soft and yielding.

The **Sun's** warmth and enduring noble qualities are seen in **gold**, king of metals.

Mars the red planet of war, makes **iron** the metal of swords its ideal partner.

Jupiter the Roman thunder god and Zeus, his Greek version signify **tin**, but it is tin alloyed to copper to form bronze that makes the thunderous tone of bell or the sharpness of the spearhead.

Saturn in the form of Chronos, father of the gods who devoured his children,

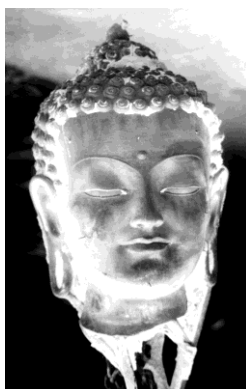
lead in turn devours and corrupts all.

The combination of alloying all of the above is called an octo-alloy and has specific names in different cultures. This octo-alloy has a potency of its own, which is greater than the sum of its parts and is the subject of much mythology around the world. However, the metallurgy of such an alloy made in equal parts would in a real sense be impractical. The crystal structure, when forming inside the casting, would counteract any of the good qualities of the individual metals. To prevent any negative reactions, the metals are usually mixed into a host alloy, like bronze (a mixture of copper and tin), in tiny amounts. In reality this should be seen as purely a symbolic process.



Bronze bell made for Emperor Rudolf II using the seven metals and decorated with alchemical symbolism.

The intentions of using metals in this way are many, depending on the belief and philosophical basis of the culture. In its simplest form one can say that this symbolism acts to bring harmony and clarity into the casting of objects, usually in the form of a sculpture or a device of spiritual or religious significance. Objects embodying this type of symbolism are common in the eastern philosophical traditions. However, in the west this philosophy is little heard of after the Renaissance and only a few rare sculptures are known today, e.g. the Gloucester Candlestick. Slowly they are being made anew.



I was recently commissioned to make a bronze cast of a Shakyamuni Buddha for a temple in Paris. The Lama who commissioned it asked specifically for these metals to be introduced when casting the head of the Buddha, reflecting microcosm/macrocosm principles. The common theme of the alchemical process being that of order, clarity and respect represented in the final form.

¹ The Tibetan name for this octo-alloy is Asta-dhatu. From Lo Bue, E. *Statuary Metals in Tibet and the Himalayas: History, Tradition and Modern Use*.

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Andrew Lacey runs a sculpture studio on the Dartington Estate, Devon and works with his partner Siân, his brother Robin and keen assistant Venetia. He gained an MSc in archaeometallurgy from UCL, is a member of the Society of Historical and Alchemical Chemistry and the Royal Institute in London. Mostly he enjoys the woods.

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