

Potential Atium Alloys

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Abstract—Atium can theoretically be Alloyed with all 16 base Allomantic metals. The Allomantic effect of these Atium Alloys is only known for 2 of these. This paper will attempt to extrapolate from these 2 to the other 14.

Index Terms—meta, Brandon Sanderson, mistborn: The Final Empire, mistborn: Well of Ascension, Mistborn: Hero of Ages, Mistborn: Bands of Mourning, Mistborn: The 11th metal, Mistborn: the secret history, Mistborn: The Alloy of Law, Mistborn: Shadows of Self, Mistborn,

INTRODUCTION

Atium can theoretically be Alloyed with all 16 base Allomantic metals. The Allomantic effect of these Atium Alloys is only known for 2 of these, Gold and Electrum. First we will attempt to extrapolate what Atium DOES when alloyed with Gold and Electrum, and then apply this to the other metals.

SAMPLE ALLOYS

For those unaware, the Atium found in the final empire is actually an alloy of Atium and Electrum. This pares nicely with Malatium, an alloy of Atium and Gold.

Electrum is an Internal Pushing Temporal metal. The effect of burning Electrum is to give the person burning a view of their own immediate future.

Gold is an Internal Pulling Temporal metal. The effect of Burning gold is to give the person burning a view of an alternative version of them self based on a major life choice that effects who they currently are.

The effect of the Atium-Electrum Alloy is to give the person burning a view of the future of others.

The effect of the Atium-Gold Alloy is to give the person burning a view of the past of an other.

For both of these, the effect is the "same" but "inverted". Pushing and pulling is not changed, and the category is not changed (ie, Temporal metals make Temporal alloys)

The first conclusion from this is that Atium inverts internal/external, however we dont think this is quite right. Consider Duralumin and Nicrosil, these are the same metal, but with internal/external inverted. If Atium only inverts internal/external, the Alloy of Duralumin would be identical to Nicrosil, and vice versa.

We suggest rather, that there is actually a 4th adjective that describes a metal. Rather than strictly internal/external, we suggest that there is both a target and effect internal/external.

For clarity, we will use the first person perspective of a Misting who can burn the example metal for all examples.

For example, Gold: If you burn gold YOU see YOUR past self. This is internal-internal. YOU see YOU. When alloyed

with Atium, the effect of Gold is that YOU see an OTHERS past self. This would be internal-external. The vision is still only visible to YOU (internal), but the target is an OTHER (external).

Similarly using Electrum as an example we see the same thing. If you burn Electrum YOU see YOUR future. Internal-Internal. But when burning Atium-Electrum Alloy, YOU see an OTHER's future. Internal-External.

We hypothesize that the effect of alloying a metal with Atium is to invert this 4th previously unused qualifier.

EXTRAPOLATING THE QUALIFIER

In order to use our hypothesis to determine the other metal's Atium alloy we must first identify this 4th qualifier for each. We will use [qualifier 1]-[qualifier 2] notation, where the first qualifier is the location of the entity feeling the effect, and the second is the location of the entity that sources the effect, as we did with Electrum and gold. As such, there are 4 possible combinations.

- Internal-Internal; where the Allomancer is effected by something based on them self.
- Internal-External; where the Allomancer is effected by something external.
- External-Internal; where something outside the Allomancer is effected based on the allomancer.
- External-External; where something other than the Allomancer is effected by something external.

As Gold-Electrum are pared, we will assume all other push/pull metals are likewise paired in this new qualifier, and they will be handled as one.

We will **bold** the classification that matches the current classification of the metal as it is not consistently the first or second. If both classifications match (ie internal-internal or external-external) we will not bold either.

Iron/Steel

The effect of an iron/steel is to move an object towards or away from an Allomancer. This is either **External**-Internal or Internal-**External**, as the effect of moving the External object also moves the Allomancer. As Iron/Steel are classified as an External power, we will pick **External**-Internal as its classification. This will not matter for later sections.

Tin/Pewter

The effect of tin/pewter is to enhance an Allomancers physical attributes. While there is an argument that tin is Internal-External as it allows an allomancer greater response

to External stimuli, we would argue that Internal-Internal is a better classification for both. The interaction is derived from the heightening of internal senses, not from any external interaction.

Zinc/Brass

Zinc and Brass allow an allomancer to manipulate the emotions of another. This is clearly **External-Internal**.

Copper/Bronze

Copper and Bronze have different enough effect to be explained separately. Copper allows an Allomancer to hear pulses of another Allomancer using their metals. This is **Internal-External**. Bronze allows an allomancer to hide other Allomancers from copper. In short, This is an External effect, yet bronze is classified as Internal, and also protects the allomancer from emotional manipulation. As such we are happy to classify this as **Internal-External** as well, completing the pairing with copper.

Aluminum/Duralumin

Without argument, Aluminum/Duralumin are **Internal-Internal**. Both only effect the allomancer burning them.

Chromium/Nicrosil

Chromium/Nicrosil only effect external allomancers, thus it is **External-External**.

Cadmium/Bendalloy

Cadmium and Bendalloy are tricky. Both create "time bubbles" around a user. This is clearly an external effect. However, the allomancer must be within this bubble. In a sense this could be said to be internal, as the allomancer must effect them self. Classifying this as **Internal-External** is possibly the weakest, however we can not see that any other classification makes sense.

Gold/Electrum

We have previously explored why Gold/Electrum are **Internal-Internal**.

POTENTIAL ALLOYS

For the remainder of this paper, we will assume the hypothesis that the Atium alloy inverts the qualifier that is not the officially recognized qualifier, and that the above extrapolations are correct. In the case of Internal-Internal we will explore both possible inversions, but will likely settle on only one.

We will handle metals with only push pull differences together. The order is mostly arbitrary, but effects of later metals build on the assumptions of earlier metals.

As a Reminder, all Alloys other than Gold and Electrum are unknown and purely hypothetical.

Gold/Electrum

As expounded earlier, the Alloy of Gold and Electrum make the future/past shadows of others visible to the Allomancer.

Iron/Steel

As an **External-Internal** metal, the Atium alloy of Iron/Steel should be **External-External**. Extrapolating from the effect of Iron/Steel this would allow an Allomancer to create a push/pull where both points are external. Likely this would mean creating it between 2 metallic objects. This seems similar to the Surge of Adhesion or to the workings of an Attractor Fabrial.

Tin/Pewter

As an **Internal-Internal** metal the Atium alloy of Tin/Pewter should be **Internal-External** or **External-Internal**. An **Internal-External**

Zinc/Brass

Copper

Copper is **Internal-External**, so the Atium alloy should be **External-External**. The effects of this are difficult to predict. Possibly this would create a cloud within which everyone can hear the Allomantic pulses. This seems the most likely theory to us, but seems weak for an Atium Alloy, however nothing says all Atium alloys must be powerful, nor even useful.

Aluminum/Duralumin

Aluminum and Duralumin are.... challenging. Not only do they only work on internal metal reserves, but there Chromium and Nicrosil are identical working on external metal reserves. After some deliberation our only theory is that these alloys allow the same effects, but on metal being touched by the Allomancer, making it **External-Internal**. So an Aluminum Gnat could erase Allomantic metal by touching it and Burning Aluminum-Atium, and a Mistborn could use a metal in a Duralumin surge by touching it instead of ingesting it.

Chromium/Nicrosil

As noted in the Aluminum/Duralumin section, one possible inversion is simply Aluminum and Duralumin. Fortunately, Chromium and Nicrosil have another possible inversion. This strays a bit from the actual use of Chromium and Nicrosil, but their Alloy could transfer power to the burner. So a Mistborn touching someone else with metal reserves could burn Chromium-Atium to steal power, or Chromium-Nicrosil to convert the other's power into a Duralumin burst of that metal within the Mistborn.

Cadmium/Bendalloy

Cadmium and Bendalloy are tricky, but we think the most likely inversion is the ability to create time bubbles that do not contain the Allomancer. **External-External**, meaning External effect that the Allomancer is external to. This may be a stretch, but the only other plausible effect would be a micro bubble that only effects the Allomancer. This would be **Internal-Internal** and would invert the classified direction unlike other proposed Atium alloys.

Bronze

Bronze is particularly tricky to invert. One possible interpretation would be External External giving a smoker the ability to create a copper cloud somewhere OTHER than around them. This fits nicely with cadmium/bendalloy, but not well with Copper. Another possible (if less justified) alloy would be an investiture suppressing field. A region where Allomantic pulses can not be created, because Allomancy is not possible. However, this may already be the effect of Duralumin Bronze already, and isnt in keeping with the inversion theory.

DRAFT