

Vallonia

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I THE START & THE UNIVERSE

At the beginning, there was Order. The Order was shattered, giving rise to the four Invariants:

The Twisted	-	Spacetime
The Inviting	-	Electroweak and Strong forces
The Fortunate	-	Probability
The Mystical	-	Magic

These Invariants are the fundamental forces of the universe. They are deities.

II STELLAR SYSTEM

A Sol - The Star

Quantity	Solar Units	SI Units
Mass	1.2M \odot	2.387×10^{30} kg
Radius	1.157R \odot	8.057×10^5 km
Luminosity	2.074L \odot	7.975×10^{36} W

B Vallonia - The World

Quantity	Earth Units	SI Units
Mass	4.557M \oplus	2.723×10^{25} kg
Radius	1.560R \oplus	9.951×10^3 km
Density	1.199D \oplus	$6.596 \frac{\text{g}}{\text{cm}^3}$
Gravity	1.872G \oplus	$18.35 \frac{\text{m}}{\text{s}^2}$

1 Diana - Vallonia's Natural Satellite

III MAGIC

All magic in the universe is due to the Mystical. The Invariants can be thought of as fields that permeate all space. In this interpretation, the Mystical becomes a field with a non-zero value everywhere. Similarly, the other Invariants can be associated with fields.

A Invariant Magic Mechanics

1 General Mechanics

There are five schools of magic:

1. Spátiamancy - Spacetime manipulation
2. Matériamancy - Matter manipulation
3. Lúci-mancy - Light manipulation
4. Fortuní-mancy - Probability manipulation

The schools are numbered from most "problematic" to least "problematic". The more "problematic" the higher the cost, so require more magic current to be channeled.

I introduce the magia vector, m ,

$$m = m^i e_i \quad (\text{III.1})$$

where e_i is the magic school (corresponding to the numbered list above), $\sqrt{(m^i)^2}$ is the amount of energy channeled in the form of the i^{th} school of magic. The individual is able to control each component to channel different amounts of energy in the forms of each school. The positive or negative values for m^i indicate opposing effects. As an example, if $m^1 > 0$, then this indicates that space is contracted. If $m^1 < 0$ it indicates space is expanded.

There is a metaphorical circuit that the magical current travels through. There is the source, a non-zero valued field that permeates all space. There is the sink, the event/item/location/etc. that the magic is deposited in for the desired effect. Lastly, there is a conduit, something which connects the source to the sink, allowing the energy to flow from the former to the latter. **TODO: Determine how intent comes into play.**

The conduit is subject to energy dissipation, similar to how wires have a resistance, so, when carrying current, energy is dissipated into them in the form of heat. Most things can be used as a conduit, however, different materials are better conductors than others, and can withstand more magic current. The human body can be used as a conductor, but it is not a very good one, and a tolerance must be built up to channel large amounts of energy through it. Think microfractures in bones: microfractures heal back stronger, complete breaks do not.

Using one's own body as a conduit can cause injury or death, from damage caused by energy dissipation. Instead, the individual can channel a small amount of energy into a focus, allowing the wielder to control the magic current and channel it through the focus instead. All materials have different "resistances", so some foci work better than others, in that they won't be damaged as much by the channeled energy.

2 Faith Manifestation

The general population knows nothing about magic. However, every individual has the ability to use magic, and will passively channel magic without knowing it. When enough individuals believe the same thing and channel magic energy into that belief, the combined result is the manifestation of the beliefs held by the group.

The energy dissipation in an individual can cause a warm feeling, which is often mistaken for the presence of their deity or something along those lines. Additionally, individuals may unconsciously channel energy through a focus. These foci tend to be the icons of the individual's religion.

3 Interference

Due to the vectorial nature of the magic, it is possible to have magical interference. When magic is being used to influence the same sink, the magia vectors add component-wise. This means that there can be interference, both constructive and destructive.

The interference doesn't necessarily have to be constructive or destructive, though. One can apply one magia vector to alter another, in order to change the effect.