

Graph Application in Learning Nen Types

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Abstract—Nen is a distinguishable feature in manga Hunter x Hunter. Of all other vital energy theories, it has the most complicated yet structured teaching. In this paper, we'll focused on one of Nen's branch, Hatsu, relation to graph.

Index Terms—Directed Graph, Graph, Hatsu, Nen

I. INTRODUCTION

Nen (念 *Mind Force*) is one of the defining features of the manga Hunter × Hunter by Yoshihiro Togashi. It may refer to both:

- The ability of using and manipulating the life energy (known as aura) present in the body of the user.
- The aura itself under this ability.

In parapsychology and many forms of spiritual practice, an aura is a field of subtle, luminous radiation surrounding a person or object (like the halo or aureola in religious art). Sometimes, however, it is said that all living things (including humans) and all objects manifest such an aura. Often it is held to be perceptible, whether spontaneously or with practice: such perception is at times linked with the third eye of Indian spirituality. Various writers associate various personality traits with the colors of different layers of the aura.

The pores or points on the body from which aura flows out from are called "**Aura Nodes**" (精孔 *shōkō*). Controlling those nodes is the first step to be a user of Nen. A student learning Nen trains to manually open and close their aura nodes so that they can control the flow of their aura.

One typically learns this process slowly and gradually through meditation. The second method is by having one receiving an influx of aura from an experienced user that forces these nodes to open; despite how quickly it works, the method is typically frowned upon due to its danger to the student if the user is inexperienced or has malicious intent. Gently jolting open one's nodes forces the new user to learn to control their aura flow, else risk suffering

severe exhaustion or death.

There are four fundamental techniques one must learn to fully grasp Nen. Everything else, including a Nen user's specialized skill, is based on the basic manipulations of one's aura flow. These are the first techniques that are taught to any student of Nen. These basic techniques, in order of study, are: **Ten**, **Zetsu**, **Ren**, and **Hatsu**.

1. Ten

Once a person has had their aura nodes opened, they must learn to keep their aura from leaking away from their body. *Ten* (纏, Envelop) is the process of keeping the nodes open, but also having aura flow through and around the body rather than away from it. Once maintained, it creates a shroud around the user that feels similar to standing in lukewarm, viscous fluid.

Ten maintains youthful vigor and reduces one's aging; since the energy powering the body no longer leaks away, one can keep the body from breaking down and deter the aging process. Through frequent meditation, one can improve the quality of their Ten.

2. Zetsu

While *Ten* allows a user to keep aura from leaking away from their body, *Zetsu* (絶, Suppress) stops the flow of aura from their body altogether. By closing all of their aura nodes, the user is able to stop almost all outflow of their aura like water from a valve. Zetsu can also be used to relieving fatigue, since it forces the body's external layer of aura to be fully contained within.

3. Ren

Ren (練, Refine) is a direct application of *Ten*. Since a user is capable of keeping aura from leaking away from the body, it's also possible for them to produce more aura around themselves without having to worry about losing it. Ren focuses on outputting a high amount of aura and keeping it on the body, expanding the size and intensity of it.

4. Hatsu

Hatsu (發, Release) is the release or transmission of

one's aura so it can be projected to carry out a certain function. In essence, Hatsu is one's personal expression of Nen that creates a special and unique ability (colloquially called a Nen Ability). A good Hatsu should reflect a person's own character; one can never truly master Nen if they only copy other people's abilities.

There are six types of aura, and the aura of every individual is aligned with a specific category. Upon learning their affinity, one can set about learning to apply Nen in a unique way that suits their personality, which can develop into a unique skill. These six types are: Kyouka (Enhancer), Henka (Transmuter), Gugenka (Conjurer), Sousa (Manipulator), Houshitsu (Emitter), Tokushitsu (Specialist).

II. HATSU TYPES

1. Kyouka

Enhancement is basically the ability to use aura to increase the natural abilities of an object or one's own body. Therefore, Enhancers are able to greatly increase their physical attack and defense, and are best suited for close-melee combat. Enhancement is the most well-balanced category, allowing users to spread themselves evenly between offense and defense.

2. Houshitsu

An affinity for Emission means that a user is capable of controlling the deployment of their aura while separating it from their body. Aura usually decreases in intensity very quickly when it is separated from the source body, but strong Emitters can separate their aura from their body for long-periods of time and still be able to maintain it.

An application of this is the ability to throw giant balls of aura. Emission abilities are commonly mistaken for Conjunction abilities. The two, however, are fundamentally different. Objects created by Emitters are made of pure aura, believed to be invisible to normal people, and requires Manipulation skills to control.

3. Sousa

Manipulation is the ability to control living or non-living material. Abilities belonging to Manipulators allow the user to control living or non-living things in a certain way, the main advantage being able to 'manipulate' enemies. The degree of control is principally determined by a condition that usually puts the manipulator at risk (attaching objects on the enemy, touching the enemy in a certain way) and of course the larger the risk, the better the degree of control.

4. Gugenka

Conjunction is the ability to create a physical, independent, material object out of one's aura. Once a person has mastered the conjunction of a certain object,

they can conjure it and dispel it in an instant, whenever they want. It is believed that conjunction is the only way in which Nen can create things which ordinary people (unaware of Nen) can see and touch. Furthermore, objects or entities created by this technique have a subtle "independence" to them. This means that they can continue existing even if they were at a considerable distance from the Conjurer, or even if the Conjurer themselves are not aware that they have yet to be dematerialized.

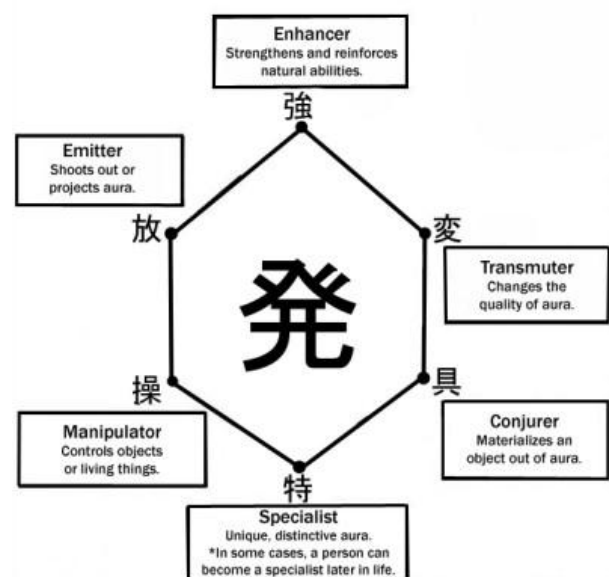
5. Henka

An affinity for Transmutation means a person can change the properties of their aura to mimic something else. Similar to Emission, things created via Transmutation are still pure aura. Transmutation is often mistaken with Conjunction due to their similarities, a simple way of thinking about it would be that Transmutation allows your aura to mimic properties of a substance, whereas conjunction allows you to change your aura into actual substances. Transmuters can copy the properties of real things.

6. Tokushitsu

Specialization is anything that doesn't belong into the other five categories. This is the most vague *Hatsu* category, because their abilities can be anything. It's possible for a Tokushitsu nen-user to learn the abilities of five other elements.

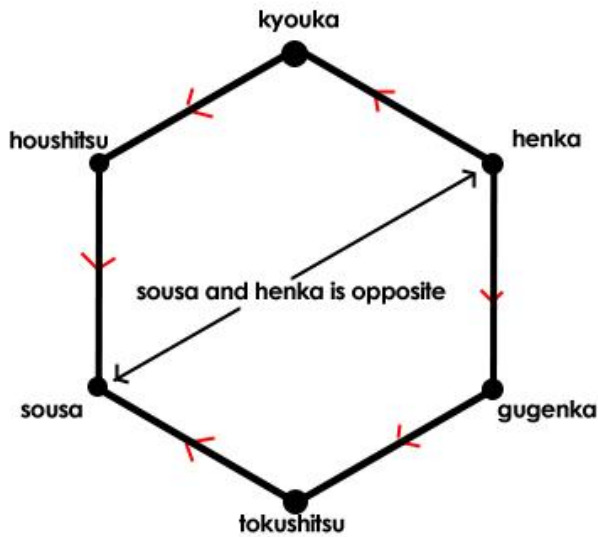
III. HATSU AND ITS RELATION TO GRAPH



As shown in the picture above, each types of nen have their own node. Every person has their own natural-born type of nen. But it is possible for them to learn other types of nen. However there's a few limitation to learn other

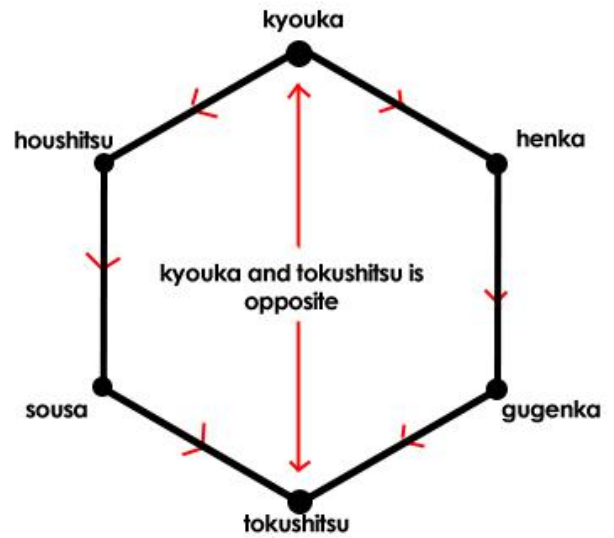
types. It is considered easy for one to learn nen type of node beside his natural-born type, but it's almost impossible to learn nen type of the opposite (farthest node).

This graph can also be made to a directed graph, since each type has its own calculation for efficiency in learning new type of nen. For example, the directed graph for Henka type below:



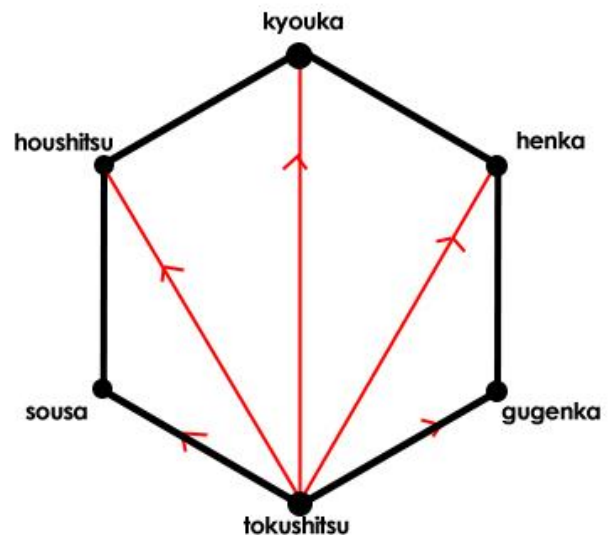
While natural-born Henka type efficiency to learn Henka nen is 100%, to learn Kyouka or Gugenka—which are nodes beside it—the efficiency rate dropped by 20%. While to learn Houshitsu—because it's farther than Kyouka by one node—the efficiency dropped by 40%. Sousa, however, is the most difficult for a Henka type to learn, because the efficiency rate dropped by 60% and it's considered too much effort. While Tokushitsu is a special type that will be explained later.

Now let's take a look at directed graph for Kyouka type. Although the calculation is basically the same, but the graph is a bit different.



Natural-born Kyouka type efficiency rate to learn Kyouka ability is 100%, to learn Henka or Houshitsu is 80%, to learn Sousa or Gugenka is 60%, while to learn Tokushitsu the efficiency rate is 0%.

Why does Tokushitsu type not follow the calculation rule?



Tokushitsu means special, so as seen from the graph above, it has different kind of directed graph. The efficiency rate of a Tokushitsu type to learn all other types is 80%. It's because Tokushitsu has its own directed edges to other types while other types have to follow the path by going from a node to another node. So we can conclude that the directed graph from all types of nen is:

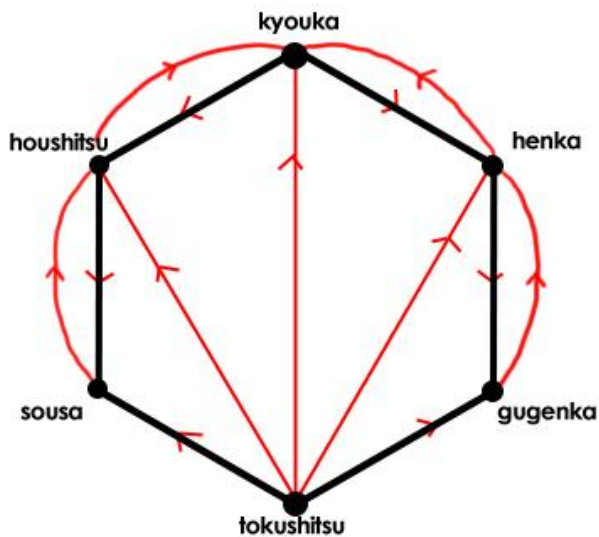
PERNYATAAN

Dengan ini saya menyatakan bahwa makalah yang saya tulis ini adalah tulisan saya sendiri, bukan saduran, atau terjemahan dari makalah orang lain, dan bukan plagiasi.

Bandung, 12 Desember 2010



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VI. APPENDIX

Aura: life energy, a field of subtle, luminous radiation surrounding a person or object

Directed Graph: a graph in which every vertices

Graph: a graph in which

Manga: Japanese comic

Nen: The ability of using and manipulating the life energy (known as aura) present in the body of the user.

Shoko: The pores or points on the body from which aura flows out from

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