CLEAR THINKING 1

workbook

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THE FOUR RELATIONSHIPS



Four Relationships Between Any Two Phenomena

	,	
Gelwa	contradictory (mutually exclusive)	
Tönchik	synonymous (mutually inclusive)	
Musum	three possibilities (three permutations-one is a subset of the other)	
Mushi	four possibilities (four permutations - they overlap)	

SET THEORY

A set is a well-defined collection of objects. The objects are elements, members, or instances of the set. The set can also be called a *generality* and the members can be called *particulars*. The term *well-defined* means that the set is described in such a way that we can determine whether or not any given object belongs to that set. For example:

The set of all men in Texas today.

The set of all red Ford trucks not in Texas last week.

Some example of poorly defined sets are:

All well-known artists.

Three wealthy men.

The members of the set can be listed or you can define the characteristics that must be met by every member of the set.

The following sets have their members listed:

The set of my nuclear family of origin only includes my mother, my father, and my three siblings.

The set of all the food I ate for breakfast this morning only includes one serving of yogurt and one bagel with butter.

The following sets are defined by characteristics:

The set of all three-legged cats living in Canada in 2006.

The set of all citrus fruits.

VENN DIAGRAMS

John Venn was a nineteenth-century British philosopher and mathematician who introduced the Venn diagram in 1881.

The Four Sets

Inside each circle are all the particular instances of that set. Outside the circle are all the instances that are not members of that set.

Mutually Exclusive Sets

Two sets can hold no members in common. That is, the first set has no members in the second set, for example: steam and ice, apples and oranges, purple and yellow, cars and flowers.





Mutually Inclusive Sets

Two sets can be mutually inclusive, for example: plants and fauna, sofa and couch, home and domicile, car and automobile.



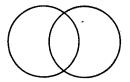
One Is a Subset of the Other

One set can completely hold the other, for example: puppies and dogs, oranges and citrus fruits, pine trees and trees, high-heeled pumps and shoes.



Overlapping Sets

Two sets can intersect and share particular instances, for example: women and Canadians, plants and food, children's books and sci-fi books, and cushions and red things.



POSITING THE FOUR RELATIONSHIPS

PROFESSOR PHIL STANLEY

As shown in the Venn diagram chart, there are four possible relationships between any two phenomena: 1) Two phenomena can be contradictory. 2) Two phenomena can be mutually inclusive, which means that everything in one set is in the other set and vice versa. 3) One set can be included in the other set, so one is a subset of the other. 4) Two sets can overlap, that is to say, they share some elements, but they also have elements that they do not share. In Tibetan, the four relationships are called *gelwa*, *tönchik*, *musum*, and *mushi* respectively.

Gelwa means "contradictory." For example, the relationship between hot and cold is contradictory. Hot is not included in cold, and cold is not included in hot. However, when you are trying to figure out a relationship between two phenomena, you first have to define them. You have to get specific. So we could say, for example, that 100 degrees or higher is the definition of hot. Therefore anything that is 100 degrees or higher is contradictory with anything that is less than 100 degrees.

Tönchik means "mutually inclusive." Tö means "meaning" and chik means "one." So tönchik means that two phenomena are of one meaning. Whatever is in one is in the other, and whatever is in the other is in the one, for instance, wolf and canis lupus. Whatever is in wolf is in canis lupus and whatever is in canis lups is in dog. They are mutually inclusive.

Musum means "three possibilities." Mu means "possibility" and sum means "three." Here something is a subset of another, for example, orange and citrus. Orange is included in citrus, but citrus is not included in orange. The category of citrus is bigger than the category of orange. All the things in the orange category are included in the citrus category, but some things in the citrus category are not included in the orange category, like a lemon. A lemon is a citrus, but it is not an orange.

The fourth relationship is *mushi*. Again *mu* means "possibility" and *shi* means "four." So *mushi* means "four possibilities." In a *mushi* relationship, two categories overlap, for example, red things and book. Is book a thing? Yes, book is in the category of thing. But what is the relationship between book and red thing? Are there red books? Are red books included in red things? Yes, a red book is a red thing. It is an object that is able to perform a function and that has the color red. So there is a common locus between the category of book and the category of red things, namely, a red book. But are there books that are not red things? Yes, a white book, for example. A white book is a book, but it is not a red thing. Now is a red sports car a red thing? Yes. Is it a book? No. So we have given three possibilities here. First is the common locus. *Locus* means "position," so common locus means "common position." A red book is both a thing and a book. Second, a white book is a book but not a red thing. Third, a red sports car is a red thing but not a book. So the categories overlap.

Key Term: Common Locus

Locus means "position," thus common locus means "common position."

CLEAR THINKING FORM

Next we will learn how to ask for a relationship, how to state the relationship, how to ask for examples of the different possible relationships, and how to give examples of the different possibilities using the Clear Thinking form.

Positing the Relationship

We begin in the same way as when we ask for definitions, classifications, and so on.

Relationship Between Phenomena and Existent

C: There is no relationship between phenomena and existent.	
D: That is not the case.	
C: Then there is a relationship between phenomena and existent.	
D: l'accept.	
C: Show.	
D: Mushi. (incorrect)	

We will give an incorrect answer and say that the relationship is *mushi*, since it is the most complicated one. It has the most possibilities.

Is there something that is an existent but not a phenomenon? The definition of existent is that which is observable by valid cognition, and the definition of phenomena is that which bears its own entity. Is there an example of something that is observable by valid cognition but does not bear its own entity? No, there isn't an example because they are equivalents. The equivalents of object are knowable object, existents, established bases objects of comprehension, and phenomena. Therefore the relationship between phenomena and existent is *tönchik*. They are mutually inclusive. That is why we could not find one that was not the other.

Two Types of Errors

When a wrong relationship is posited, there are two types of errors. You will either posit something that does not exist or you will omit something that does exist. For the first type of error, you will posit something that is an existent but not a phenomena, but it will be utterly nonexistent. Then I can ask you for an example, and when you come up with an example, it will be wrong, and I can use it to show you the error. For the second type of error, I cannot ask you for an example. Instead, I have to give you an example of the thing that you have omitted. Then I will ask you to put it somewhere in the chart, and you will have trouble placing it in your world because you have not allowed for it. In short, something is either added in or something is left out. We will discuss the two types of error further in Class 6.

Tönchik or Gelwa: Why?

If the defender says that the relationship as *tönchik* or *gelwa*, the challenger then asks, "Why?"

Relationship Between Hot and Cold

C: There is no relationship between hot and cold.	
D: That is not the case.	
C: Then there is a relationship between hot and cold.	
D: I accept.	
C: Show.	
D: Gelwa.	
C: Why?	
D: Because hot is not included in cold and cold is not included in hot.	

The challenger asks why you are making this assertion, and you explain that hot is not included in cold and cold is not included in hot.

Let's look at another example. This time we will posit the relationship between cat and dog.





Key Fact:

Just because two different phenomena may belong to the same larger category does not make them equivalents. For example, both cats and dogs are included in the larger category of animals, but the relationship between cat and dog is gelwa.



C: There is no relationship between cat and dog.	
D: That is not the case.	
C: Then there is a relationship between cat and dog.	
D: I accept.	
C: Show.	
D: Gelwa.	
C: Why?	
D: Because cat is not included in dog and dog is not included in cat.	

Student: This one confuses me because both dogs and cats are animals.

PS: The relationship between animals and dogs is another question altogether. What is the relationship between animals and dogs? It is *musum*. What is included in what? Dogs are included in the category of animals, but animals are not included in the category of dogs. It is the same for the relationship between cats and animals. Just because dogs are included in animals and cats are included in animals does not mean that dogs and cats are equivalents. They are *gelwa*. It is a common problem to think that because they are both animals that the relationship should be *tönchik*. But that is not the case.

Student: What would be the relationship between two categories like boy and man? Can it be both *musum* and *gelwa*?

PS: First you have to define the two categories. Let's say a boy is someone under the age of twenty years, and a man is someone over the age of twenty years. If someone under twenty is a boy and someone over twenty is a man, what is the relationship between the two? Well, let's look at the different possibilities. Is there someone who is both a boy and a man? Is there someone who is both under twenty and over twenty? No, so in that case, the relationship is *gelwa*. This is a common issue when learning about the four relationship—that they are both humans does not make one a subset of the other. However, if we asked about the relationship between boy and male, the answer would be *musum*.

Next we will look at an example of a tönchik relationship.

Relationship Between Wolf and Canis Lupus

C: There is no relationship between wolf and canis lupus.	
D: That is not the case.	
C: Then there is a relationship between wolf and canis lupus.	
D: l accept.	
C: Show.	
D: Tönchik,	
C: Why?	
D: Because wolf is included in canis lupus and canis lupus is included in wolf.	

For both *tönchik* and *gelwa*, when the defender posits either relationship, the challenger asks Why? For *tönchik*, the defender responds: Because A is included in B and B is included in A, and for *gelwa*, the defender responds: Because A is not included in B, and B is not included A.

Musum: What Is Included in What?

For musum, let's look at the relationship between orange and citrus.



Relationship Between Orange and Citrus

- C: There is no relationship between orange and citrus. D: That is not the case. C: Then there is a relationship between orange and citrus. D: Laccept. C: Show.
- C: What is included in what?
- D: Orange is included in citrus but citrus is not included in orange.

For musum, we ask "What is included in what?" because the inclusion could go in either direction. Is citrus included in orange or is orange included in citrus? When you just say musum it is not clear, so we ask for the inclusion to be spelled out. The defender responds that orange is included in citrus.

Mushi: Give Examples of the Four Possibilities

For mushi, there is no simple answer because all of the possibilities are present. In this case, the challenger does not ask a question; instead he or she ask for examples of the four possibilities.

Relationship Between Red Things and Book

- C: There is no relationship between red things and book.
- D: That is not the case.
- C: Then there is a relationship between red things and book.
- D: I accept.

D: Musum.

- C: Show.
- D: Mushi.
- C: Give examples of the four possibilities.
- D: Something that is both a red thing and a book is a red book. Something that is a red thing but not a book is a red sports car. Something that is a book but is not a red thing is a white book. Something that is neither is a white sports car.

How to State Examples

Giving examples is the last piece of the Clear Thinking form. For gelwa, tönchik, and musum, it is the last step. Mushi skips the step of asking a question and goes directly to asking for the examples.

The order of how the examples are given is always the same. If there is something that is both, it is given first. If there is something that is A but not B, it is given second. If there is something that is B but not A, it is given third, and something that is neither is given last. So the first one is always something that is both, and the last one is always something that is neither, and in between are something that is A but not B and something that is B but not A. The order always stays the same, but depending on the relationship, you give the examples according to its different possibilities.

Between any two phenomena, there are four possible relationships at maximum: something that is both A and B; something that is A but not B; something that is B but not A; something that is neither.

Depending on the relationship, you will either have two, three, or four possibilities. For mushi, all four examples are given. For tönchik, two examples are given: 1) something that is both and 2) something that is neither. For gelwa, three examples are given: 1) something that is A but not B, 2) something that is B but not A, and 3)





Key Fact: 📅



Examples are always stated in the same order. Depending on the relationship, either two, three, or four of the possible examples will be given:

- 1. Something that is both A and B.
- 2. Something that is A but not B.
- 3. Something that is B but not A.
- 4. Something that is neither A nor B.

something that is neither. For *musum*, three examples are given: 1) something that is both, 2) something that is A but not B, and 3) something that is neither. *Gelwa* does not have a common locus because there isn't anything that is both, but you can find something that is both for *musum*. Using the example of the relationship between orange and citrus, an example of a common locus is a tangerine. A tangerine is an orange and a citrus. Something that is a citrus but not an orange is a lemon, and a leaf is an example of something that is neither a citrus nor an orange. So *musum* and *gelwa* both have three possibilities. *Tönchik* only has two possibilities because the two phenomena are equivalents. First, there is a common locus. For dog and canine, an example of something that is both is Ty.² Ty is both dog and canine. Second, an example of something that is neither is your cat at home. *Mushi* has all four possibilities.

Possibilities	Gelwa 3 possibilities	Tönchik 2 possibilities	Musum 3 possibilities	Mushi 4 possibilities
Something that is both A and B.	×	√	√	✓
Something that is A but not B.	√	×	√	✓
Something that is B but not A.	✓	×	×	✓
Something that is neither A nor B.	✓	√	√	✓

In the Clear Thinking form, when the defender says that the relationship is *tönchik*, the challenger will ask you for two examples. If the defender says that it is *musum* or *gelwa*, the challenger will ask for three examples. If it is *mushi*, the challenger will ask for all four examples.

Giving Examples for a Gelwa Relationship

Let's take an example of pine tree and apple tree.

Relationship Between Pine Tree and Apple Tree

C: There is no relationship between pine tree and apple tree.
D: That is not the case.
C: Then there is a relationship between pine tree and apple tree.
D: l'accept.
C: Show.
D: Gelwa.
C: Why?
D: Because pine tree is not included in apple tree and apple tree is not included in pine tree.
C: Give examples of the three possibilities,
D: Something that is a pine tree but not an apple tree is ponderosa pine tree. Something that is an apple tree but not a pine tree is a crab apple tree. Something that is neither is the concept of a pineapple tree.

First ask yourself whether there something that is both? No, they are *gelwa*, so scratch the first example. Second ask yourself whether there is something that is a pine tree but not an apple tree. Yes, there is something that is a pine tree but is not an apple tree. The rule here is that you cannot give the category name; instead you have to give an example of a particular in the category, for example, a ponderosa pine tree is a pine tree that is not an apple tree. Third ask yourself whether there is something that is an apple tree but is not a pine tree. Yes, for example, a crab apple tree is an apple tree but not a pine tree. Last ask yourself whether there something that is





┮ O Key Fact:

Giving Examples:

When giving an example, you cannot give the category name. Instead, you need to use a particular of the category as an example, e.g., a crab apple tree is a particular in the category of apple tree.

Key Fact:

Something That Is Neither: When giving an example of something that is neither, try to pick a humorous example or one that is close to the other examples, e.g., a pineapple tree is neither an apple tree or a pine tree.

² Ty is a seeing eye dog who was present in the 2006 Clear Thinking class.

neither. Yes, something that is neither. One of the conventions of the Clear Thinking form is when you give an example of something that is neither, you give one that is humorous or one that is very close to the other categories. You try to shave it close. So an example of something that is neither could be a pineapple tree or the concept of a pineapple tree.

Giving Examples for a Mushi Relationship

Let's look at the *mushi* relationship between red things and book. First, is there something that is both? Yes, there is something that is both, for example, a red book is both. Second, is there something that is one but not the other? Is there something that is a red thing but not a book? Yes, a red sports car is a red thing but not a book. Third, is there something that is a book but not a red thing? Yes, a white book is a book but not a red thing. Last, is there something that is neither? Yes, a white sports car is not a red thing nor a book. Or the concept of a red sports car is not a thing nor a book. It is a nonthing, so it is completely unrelated.

Something That is Neither

Whenever you talk about two things, there can be always be something that is neither of them, and it is a part of this tradition to give an example of something that is neither. It is the convention of the form. But with the category of object, which is the broadest category, how can you posit something that is neither because all phenomena are included in object?

Let's look at the relationship between object and thing.

Relationship Between Object and Thing

- C: There is no relationship between object and thing.
- D: That is not the case.
- C: Then there is a relationship between object and thing.
- D: I accept.
- C: Show.
- D: Musum,
- C: What is included in what?
- D: Thing is included in object but object is not included in thing.
- C: Give examples of the three possibilities.
- D: Something that is both an object and a thing is a table.
 - Something that is an object but not a thing is the concept of table.
 - Something that is neither are the horns of a rabbit.

The relationship between object and thing is *musum*, so there are three possibilities. A table is an example of something that is both. An example of something that is an object but not a thing is the concept of table. It is a nonthing, so it is an object but not a thing. What is an example of something neither? Because object is the broadest category that includes all existents, traditionally, a nonexistent is given as the example, for example, the horns of a rabbit. The horns of a rabbit do not exist, so they can be used as an example of something that is neither an object nor a thing. **1**



Key Fact:

Horns of a Rabbit:

Object is the broadest category that includes all existents; therefore, when giving an example of something that is neither, traditionally, an nonexistent, like the horns of a rabbit, is given as the example.

OVERVIEW OF THE FOUR RELATIONSHIPS



Gelwa: contradictory	Market Company
A is not included in B.	Fire is not included in water.
B is not included in A.	Water is not included in fire.
Something that is neither A nor B	This table.
Challenger & Defender:	
C: There is no relationship between fire and water.	
D: That is not the case.	
C: Then there is a relationship between fire and wa	ter.
D: I accept.	
C: Show.	
D: Gelwa.	
C: Why?	
D: Because fire is not included in water and water i	s not included in fire.
C: Give examples of the three possibilities.	
D: An example of something that is fire but not wa An example of something that is water but not An example of neither is this table.	
Three possibilities:	
1. Something that is A but not B.	
2. Something that is B but not A.	
3. Something that is neither A nor B	



Tönchik: synonymous

A is included in B.	Produced is included in impermanent.	
B is included in A.	Impermanent is included in produced.	
Challenger & Defender:		
C: There is no relationship between produced and i	mpermanent.	
D: That is not the case.		
C: Then there is a relationship between produced a	nd impermanent.	
D: I accept.		
C: Show.		
D: Tönchik.		
C: Why?		
D: Because produced is included in impermanent, a	and impermanent is included in produced.	
C: Give examples of the two possibilities.		
D: An example of something that is both produced An example of something that is neither is space	·	
Two possibilities:		
1. Something that is both A and B.		
2. Something that is neither A nor B.		

(B is included in A)		
There is something that is both A and B.	A dump-truck is both a vehicle and a truck.	
There is something that is A but not B.	An airplane is a vehicle but not a truck.	
There is something that is neither A nor B.	A mountain is neither a vehicle nor a truck.	
Challenger & Defender:		
C: There is no relationship between vehicle and tr	uck.	
D: That is not the case.		
C: Then there is a relationship between vehicle an	d truck.	
D: I accept.		
C: Show.		
D: Musum.		
C: What is included in what?		
D: Truck is included in vehicle.		
C: Give examples of the three possibilities.		
D: An example of something that is both a vehicle An example of something that is a vehicle but	e and a truck is a dump-truck. not a truck is an airplane.	

Tourist





Mushi: two overlapping sets

Three Possibilities:

1. Something that is both A and B. 2. Something that is A but not B. 3. Something that is neither A nor B.

Chocolate ice cream is both chocolate and ice cream.		
A chocolate candy bar is chocolate but not ice cream.		
Mango ice cream is ice cream but not chocolate.		
Plum pudding is neither chocolate nor ice cream.		
Challenger & Defender:		
te and ice cream.		

An example of something that is neither is a mountain.

- D: That is not the case.
- C: Then there is a relationship between chocolate and ice cream.
- D: I accept.
- C: Show.
- D: Mushi.

C: Give examples of the **four** possibilities.

D: An example of something that is both is chocolate ice cream. An example something that is chocolate but not ice cream is a chocolate candy bar. An example of something that is ice cream but not chocolate is mango ice cream. An example of something that is neither is plum pudding.

Four possibilities:

- 1. Something that is both A and B.
- 2. Something that is A but not B.
- 3. Something that is B but not A.
- 4. Something that is neither A nor B.