

# Thought Process

A Language is a system of signals for expressing Complete Thoughts.

A Thought is the connection of two Ideas. Ideas are connected in order to assign some action or property to something. “A is B” and “A does B” are both Thoughts, while “A” and “B” individually are Ideas.

Ex. Teacher Doug is good.

^-- Idea (Teacher Doug) + Idea (good) = Thought (Teacher Doug is good.)

To create a Thought, we must identify both of the Ideas being connected, and then signal *which* Idea is taking the *other* as one of its properties. The Idea *taking* the property is said to be “playing the role of Subject”, while the Idea being *assigned* as a property is said to be “playing the role of Modifier”.

Ex. **Teacher Doug** is good. <-- Subject is bold, Modifier is underlined.

A Complete Thought is a Thought that is *being used* to draw some Logical Conclusion or Logical Response. These can be called Logical Effects of the Thought.

Complete Thought: It's cold outside.

Logical ↓ Effect

Conclusion: I should put on a coat.

Logical ↓ Effect

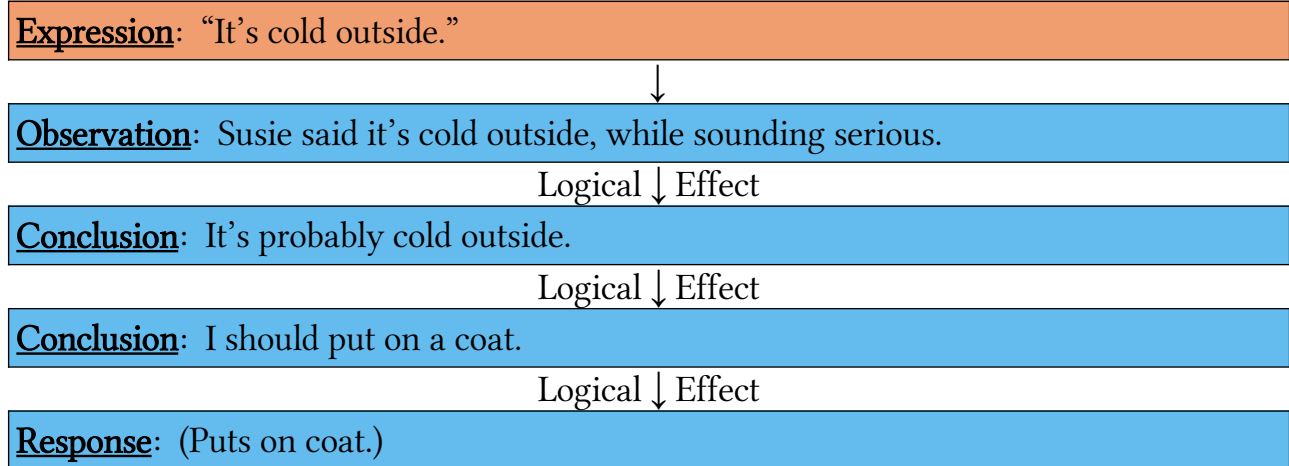
Response: (Puts on coat.)

As the example shows, the Logical Effects of any Complete Thought happen along a *chain* that we call a Thought Process. Each Conclusion is another Complete Thought, which leads to another Conclusion, and so on.

A real Thought Process doesn't usually have a clear beginning or end, but for the purpose of analysis we can break them into segments, by beginning with an Observation, and culminating in some Logical Response. In a conversation, the Observation usually includes some other person's Expression, which we must respond to.

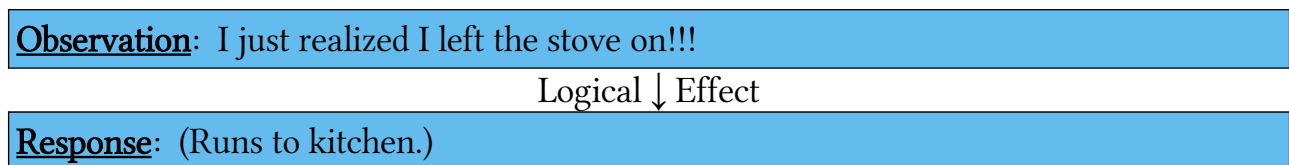
# Signals & Meanings

The system of Language can be divided into Signals and Meanings. An Expression is a group of Signals which, taken together, express a Complete Thought. Expressions are always made with some Purpose, with the speaker trying to lead the listener down a path of Logical Conclusions, until they arrive at some Desired Conclusion or Response.



In practice, the listener will make many Observations simultaneously. Observations apart from the Expression, which are deemed *relevant to the Expression*, can be called Context. The Context is then *combined* with the Expression to make a single, Contextualized Observation. For instance, Billy’s initial Observation combines “It’s cold outside” with “Susie said this” and “it was said in a serious-sounding way”.

If we think of our memories and beliefs as things we can observe, *all Complete Thoughts* can be counted as Observations. However, when diagramming a Thought Process, it is easier to think of the *first Complete Thought* in the chain as “the Observation”. This Observation could be a Contextualized Observation, like above, or it might be some other “eureka” moment.



This “sudden realization” Observation is likely the Conclusion of several *previous Observations* (like smelling smoke and hearing the oven timer going off), but since it sets in motion a torrent of *subsequent Conclusions* and Responses, we might find it more useful to mark *this Observation* as the one that begins our Thought Process.

# Thought Process in Conversation

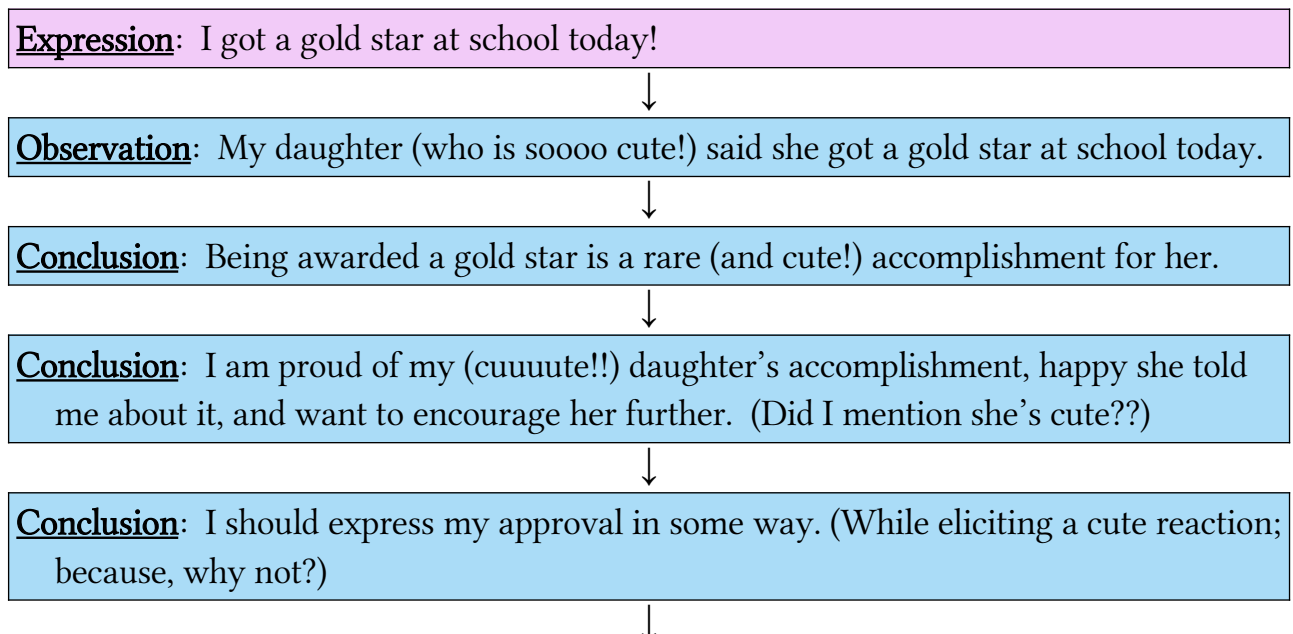
In regards to Thought Process, a basic conversation might go something like this:

1. Speaker desires a particular Response from the listener.
2. Speaker makes an Expression, with the Purpose of *causing* that desired Response.
3. Listener makes Observations of speaker's Expression, and any relevant Context.
4. These Observations combine to lead the listener to a Logical Conclusion.
5. This Logical Conclusion may lead to any number of *further* Logical Conclusions.
6. Eventually, one of these Conclusions causes a Logical Response from the listener.
7. In conversation, the Response will often cause the roles of speaker and listener to reverse, with the second person now making *their own* Expression, and trying to get *their own* desired Response. In many cases, the listener will send messages with their body language *while* they are listening; which means that on some level, *both* participants are playing "speaker" and "listener" at the same time.

A person's Thought Process can be quite complex, but in daily interactions it tends to be predictable. In fact, being able to predict another person's Thought Process is what makes communication possible.

Ex. (*Your 5 y.o. daughter says*) I got a gold star at school today! <-- Expression

If your daughter says something like this, she is not saying it for no reason. She probably expects (and hopes) that you will *respond* to her Expression by praising her, which makes her feel good. This is an example of someone *guessing* your Thought Process, and then designing an Expression to get a particular Desired Response.



**Response:** “Wow, good job!” (pats daughter’s head) “You are so amazing! Let’s go get ice cream!” :DDD

Your daughter predicted (and hoped for) a **Response** like this. Thus it can be said that this was the **Purpose** of her **Expression**.

Again, there is no end to the **Thought Process** of either person, but in conversation people will usually base *their* **Response** off of the *other* person’s **Response**, so it’s easiest to represent this visually by showing the **Thought Process** switch back and forth between the two people.

**Expression:** “Wow, good job!” (pats daughter’s head) “You are so amazing! Let’s go get ice cream!” :DDD



**Observation:** Daddy is patting my head and giving me ice cream.



**Conclusion:** This means he is proud of me. Also, I’m getting ice cream!



**Conclusion:** Both of these things make me happy.



**Conclusion:** Daddy likes it when I’m happy, so I should express my happiness in some way.



**Response:** “Yayyy! Ice cream!”

A lot of these **Conclusions** are arrived at subconsciously (your daughter doesn’t think deeply about *why* she tells you things), but the point here is that **every Expression has a Purpose**, and also that **every Observation flows naturally to a Response**.

- Ex. Please take a bath now. <-- **Purpose** is to cause the listener to take a bath.
- Ex. I’m ready to leave. <-- **Purpose** is to get the listener to leave with you.
- Ex. Is the test tomorrow? <-- **Purpose** is for the listener to give you info.
- Ex. I like pistacio gelato. <-- **Purpose** is pleasant interaction with the listener.
- Ex. Hello! <-- **Purpose** is to regard the listener, and to be regarded in return.

All **Responses** will have a **Purpose** as well, including **Responses** which are *actions*. But since we are studying **Language**, we will generally focus on **Responses** that include **Verbal Expressions**. (Actions don’t usually need to be translated anyway, even when they are *intended* as **Expressions**, since their meanings tend to be universal.)

# Reasoning

**Reasoning** is how we progress logically from one **Complete Thought** to the next. A **Thought Process** will use a combination of both **Truth-based Reasoning**, in which a **Belief** is proven *true*, and **Effect-based Reasoning**, in which a **Belief** is proven *useful*.

Both of these types of **Reasoning** are important in our daily lives. However, for the purpose of studying **Language**, we do not need to distinguish between the two. In communication, we are more interested in understanding **what the other person's Thought Process is**, and predicting what it *will be* upon observing our **Expression**. We are *not* concerned so much about how someone's **Thought Process** might be *improved*.

That said, if you *are* interested in learning more about **Truth-based Reasoning** versus **Effect-based Reasoning**, check out the first [addendum](#).

## Expressions with Multiple Complete Thoughts

Some **Expressions** may contain multiple **Complete Thoughts**.

Ex. I don't know where your dumb doll is.

This **Expression** contains two **Complete Thoughts**. (1) "I don't know where your doll is," and (2) "I think your doll is dumb." The listener can then respond to either one.

Ex. I don't know where your dumb doll is. // But you had it last!

Ex. I don't know where your dumb doll is. // My doll is not dumb! YOU'RE dumb!

## Thoughts vs. Complete Thoughts

Sometimes, information that was not *intended* as a **Complete Thought** may be *interpreted* as one by the listener.

Ex. I didn't know that the test was tomorrow. // The test is tomorrow?? :O

Here, the speaker only intends to express *one* **Complete Thought**, but the listener observes *two*. (1) "My friend just learned the test is tomorrow," and (2) "The test is tomorrow!!!" Why does this happen?

It happens because **Complete Thoughts** tend to be *new information*. Something you already know won't have a **Logical Effect** on you, because that should have already happened when you originally learned the information. In the example above, the

speaker thought there was only one piece of information in her Expression that her friend didn't already know. But it turns out there were two pieces of information contained in the speaker's Expression that were previously unknown to the listener.

This reillustrates the difference between a Thought and a Complete Thought. A Thought is merely the assignment of a property to something, while a Complete Thought includes the expectation of a Response.

Ex. The test is tomorrow. <-- By itself, this is just a Thought.

Ex. The test is tomorrow (and you should do something because of that).

^-- This Thought *could* be used as a Complete Thought.

Ex. I didn't know the test is tomorrow. <-- Or as a building block in a larger Thought.

## The Perceived Purpose & Minimum Response

In conversation, the listener can make any number of Observations during the speaker's Expression. However, it is considered polite, regardless of language, for the listener's Response to address *what the speaker actually said*. Or more specifically, what the listener *perceives* as the Purpose of the speaker's Expression. That means one of the jobs of the listener is to determine what that "Perceived Purpose" is.

Ex. The new Precure movie is this weekend! // Sorry, my family is going on a trip. :(

^ The listener responds to the Perceived Purpose, which is to invite her to the movie.

The speaker, upon making an Expression, will usually expect some kind of Response from the listener that addresses the Purpose of their Expression. Even if the listener cannot give the speaker the Response they were *hoping* for (their Purpose), a Minimum Response will at least acknowledge that the speaker's desire is understood.

Ex. You should get a haircut. // But I like the scruffy look.

## The Expected Response

Often times the Response which is *hoped* for is also the Response which is *expected*. For instance, when you say "Hello" to someone, you *expect* them to say "Hello" back. We can call this the Expected Response.

The Expected Response can be anything within a range of Responses, from the Desired Response (aka Purpose) to at least some Minimum Response. Generally the Expected Response is easily understood by the listener, and it is considered polite in all cultures to stay within its parameters.

That said, sometimes some other **Observation** will jump out as being more relevant to the listener, compelling them to respond to *that* new information instead.

Ex. I didn't know the project is due tomorrow. // Wait, the project is due tomorrow!?

The speaker's **Purpose** with this **Expression** is to explain to her friend the source of her stress, and perhaps that she won't have time to hang out today. The **Expected Response** could be anything from an offer to help, to an expression of empathy.

However, the listener signifies with "Wait" that she is not going with one of these **Expected Responses**, because *another* piece of information was so significant that it took precedence. That is, of course, the fact that the project is due *tomorrow*, which is news to the listener as well! ("Excuse me..." and "Sorry, but..." are some other common **Expressions** you might hear from someone who is about to deviate from the list of **Expected Responses**.)

## Logical Effects Depend On the Observer

It probably goes without saying, but sometimes the **Expected Response** will be different from the *actual* one, because the speaker misjudged the **Logical Effect** an **Expression** would have on that particular listener.

Ex. You look cute today. // Sexual harrassment!!

Ex. Will you marry me? // Ew. No. (Barf.)

## Incomplete Thoughts?

While it's difficult to imagine *having* a **Thought** that is "incomplete", it is quite common to *observe* an **Expression** "incompletely", which I suppose could be called an "**Incomplete Thought**". When someone observes an **Expression** incompletely, they will attempt to "fill in the blanks" in order to make it into a **Complete Thought**.

Ex. Blah blah blah CHICKEN blah blah blah. // Oh, you want some chicken?

In this example, the speaker might be a foreigner, struggling to say something in English; or perhaps there is a parade nearby that makes it hard to hear.

Ex. Meow! // Aww, are you hungry? Mommy will get you some fish. <3

Even though it isn't *human* language, you might be able to understand some of the **Expressions** of your pet cat. In this case, "meow" translates to "Feed me, slave." As long

as you can understand the **Purpose** of the **Expression**, it can be considered a **Complete Thought**. Now, if your cat meows at you, and *you can't figure out why*, it would be “stuck” as an **Incomplete Thought** to you, even though it is a **Complete Thought** from the perspective of your kitty.

Ex. Today will be cloudy. // Okay...so what?

In this example, we don't know why it's important that today will be cloudy. Is there some reason the speaker is giving us this information? Or are they just trying to make conversation and we are too autistic to understand that? Even though the **Thought** itself is easy to understand, as long as we cannot determine the **Purpose** of the **Expression**, it will remain an **Incomplete Thought**.

Ex. Flibbity-floo!

If a child or insane person says something completely non-sensical to you, they might be doing it just to see how you react. Since the actual **Expression** doesn't indicate anything that can be considered a **Thought**, and you cannot understand the **Purpose** of the **Expression**, this would be considered an **Incomplete Thought**. However, what if your child says, “Daddy, when I say ‘flibbity-floo’, you're supposed to turn into a frog!” *Now* “flibbity-floo” would be considered a **Complete Thought**, wouldn't it?

## ~~~ Review ~~~

Today we learned the following terms:

**Language** ~ A system of signals for expressing **Complete Thoughts**.

**Thought** ~ Created when two **Ideas** are connected, in order to assign some action or property to something. “A is B” and “A does B” are both **Thoughts**.

**Idea** ~ Any concept that can be commented on, or used to comment on something else. If you can say “A is B” or “A does B”, then both “A” and “B” are **Ideas**.

**Subject** ~ A role played by an **Idea** in a **Thought**, in which the **Idea** is assigned some property.

**Modifier** ~ A role played by an **Idea** in a **Thought**, in which the **Idea** is assigned as a property of some other **Idea**.

**Complete Thought** ~ A **Thought** being used for its **Logical Effect**.

**Logical Effect** ~ A **Logical Conclusion** or **Logical Response** that is brought about by observing a **Complete Thought**.



**Logical Conclusion** (aka **Conclusion**) ~ A **Complete Thought** that is observed as the logical consequence or result of the **Complete Thought** which precedes it.

**Logical Response** (aka **Response**) ~ A reaction by the observer of a **Complete Thought**, which is a direct result of observing that **Complete Thought**.

**Signal** ~ Anything that can be observed and interpreted to **Mean** something. These include both **Signals** that come from a speaker, as well as contextual **Signals**.

**Meaning** ~ A **Thought** or **Idea** that can be interpreted from **Signals**.

**Expression** ~ A group of **Signals** that, taken together, express a **Complete Thought**.

**Purpose** (of an **Expression**) ~ Whatever **Conclusion(s)** or **Response(s)** the speaker is trying to elicit from the listener with their **Expression**.

**Desired Response** ~ The **Response** or **Responses** from the targeted listener or listeners, which the speaker is trying to elicit with their **Expression**.

**Desired Conclusion** ~ Any change to the listener's beliefs that is part of the **Purpose** of an **Expression**. Sometimes this is more valuable than an immediate **Response**, because changing someone's beliefs can bring about any number of **Desired Responses** from that person in the future.

**Observation** ~ The **Complete Thought** which can be marked as the beginning of an observer's **Thought Process**.

**Context** ~ Additional **Observations** that assist the observer in interpreting some "primary" **Observation**. These combine intuitively into a single, **Contextualized Observation**. (In **Language**, the "primary" **Observation** is usually an **Expression**.)

**Contextualized Observation** ~ The result of combining multiple **Observations** into one.

**Thought Process** ~ The chain of **Complete Thoughts** leading from an **Observation** to a **Logical Response**. Also any chart used to visually represent this.

**Reasoning** ~ The method used to progress logically from one **Complete Thought** to the next. That is, from a **Complete Thought** to its **Logical Conclusion**.

**Truth-based Reasoning** ~ **Reasoning** based on whether a belief can be proven *true*.

**Effect-based Reasoning** ~ **Reasoning** based on whether a belief can be proven *useful*.

Named so because it is used to choose beliefs based on the **Logical Effect** they have on the observer. (For example, believing what makes you happy.)

**Perceived Purpose** ~ The **Desired Conclusion(s)** and/or **Response(s)** that the listener believes are the **Purpose** of the speaker's **Expression**.

**Minimum Response** ~ Any one of a number of possible **Responses** from the listener that are seen as adequately addressing the speaker's original **Expression**.

**Expected Response** ~ The **Response** that the speaker predicts the listener will make in response to their **Expression**.

**Incomplete Thought** ~ An **Observation** that cannot progress to a **Logical Conclusion**, either because the listener doesn't understand the **Expression** itself, or because the listener doesn't understand the **Purpose** of the **Expression**.

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Today we learned about Complete Thoughts. We learned that Complete Thoughts progress logically toward *other* Complete Thoughts, called Conclusions, eventually reaching some Response. Every Expression has the Purpose of eliciting one or more Conclusions or Responses from the listener.

We also learned the difference between a speaker's Expression and a listener's Observation. Both Expressions and Observations are Complete Thoughts. However, an Observation usually includes additional information not expressed by the speaker, called Context. The speaker needs to take this into account when making their Expression, or the listener's Conclusion (and Response) may turn out differently than what the speaker intends.

For a Thought to be “complete”, there must be some kind of Logical Conclusion that can be drawn from it. Even if you understand what someone says in a *literal* sense, you have not observed a Complete Thought unless you can determine its Purpose.

In the next lesson, we will learn how Thoughts and Ideas are stored in the mind.