Thought Process

A **<u>Language</u>** is a system of signals for expressing **<u>Complete Thoughts</u>**.

A **<u>Thought</u>** is the connection of two **<u>Ideas</u>**. **<u>Ideas</u>** are connected in order to assign some action or property to something. "A is B" and "A does B" are both **<u>Thoughts</u>**, while "A" and "B" individually are **<u>Ideas</u>**.

Ex. Teacher Doug is good.
    ^-- **<u>Idea</u>** (Teacher Doug) **+** **<u>Idea</u>** (good) **=** **<u>Thought</u>** (Teacher Doug is good.)

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

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

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

<u>Complete Thought</u>: It's cold outside.

<div align="center">Logical ↓ Effect</div>

<u>Conclusion</u>: I should put on a coat.

<div align="center">Logical ↓ Effect</div>

<u>Response</u>: (Puts on coat.)

The **<u>Logical Effects</u>** of any **<u>Complete Thought</u>** happen along a chain that we call a **<u>Thought Process</u>**. Each **<u>Logical Conclusion</u>** is another **<u>Complete Thought</u>**, which leads to another **<u>Conclusion</u>**, and so on.

A real **<u>Thought Process</u>** doesn't really have a beginning or end, but we can break it into segments by beginning with an **<u>Observation</u>**, and culminating with some **<u>Logical Response</u>**. In conversation, the **<u>Observation</u>** will include some speaker's **<u>Expression</u>**.

An **<u>Expression</u>** is just a **<u>Complete Thought</u>** that is being signaled for some **<u>Purpose</u>**. The **<u>Purpose</u>** of the **<u>Expression</u>** is to lead the listener or listeners down a path of **<u>Logical Conclusions</u>** until they arrive at a **<u>Desired Conclusion</u>** or **<u>Response</u>** (or both).

<u>Expression</u>: "It's cold outside."

$\downarrow$

<u>Observation</u>: Susie said it's cold outside, while sounding serious.

Logical $\downarrow$ Effect

<u>Conclusion</u>: It's probably cold outside.

Logical $\downarrow$ Effect

<u>Conclusion</u>: I should put on a coat.

Logical $\downarrow$ Effect

<u>Response</u>: (Puts on coat.)

In practice, the listener will make many **Observations**. Those **Observations** 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**. (That's how we got the initial, multi-part **Observation** in the example above.)

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 could be a **Contextualized Observation** of an **Expression**, like above, or perhaps some other "eureka" moment.

<u>Observation</u>: I just realized I left the stove on!!!

Logical $\downarrow$ Effect

<u>Response</u>: (Runs to kitchen.)

This **Observation** is also a **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 useful to mark it as the **Observation** 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 they tend 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**.

Expression: I got a gold star at school today!

↓

Observation: My daughter (who is soooo cute!) just said "I got a gold star at school today!"

↓

Conclusion: Being awarded a gold star is a rare (and cute!) accomplishment for her.

↓

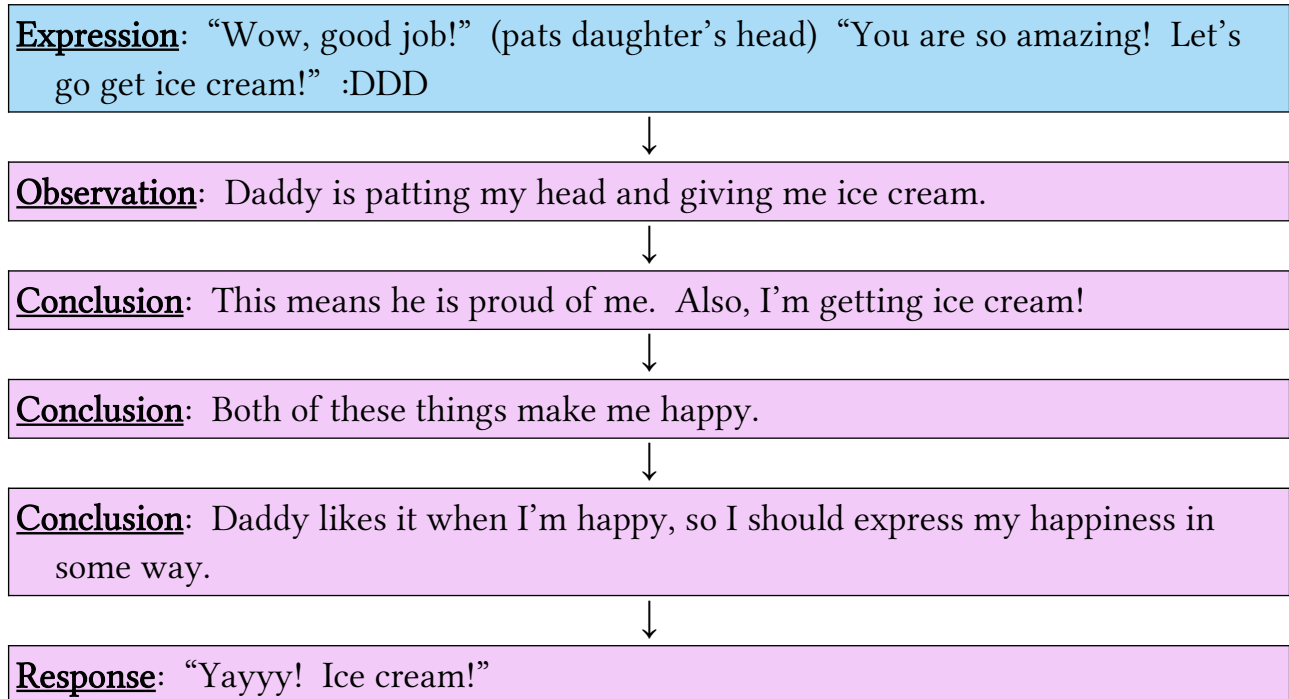| **Conclusion**: I am proud of my (cuuuute!!) daughter's accomplishment, happy she told me about it, and want to encourage her further. (Did I mention she's cute??) |
|---|

↓

Conclusion: I should express my approval in some way. (While eliciting a cute reaction; because, why not?)

↓

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 <u>Thought Process</u> of either person, but in conversation people will usually base *their* <u>Response</u> off of the *other* person's <u>Response</u>, so it's easiest to represent this visually by showing the <u>Thought Process</u> switch back and forth between the two people.

<u>Expression</u>: "Wow, good job!" (pats daughter's head) "You are so amazing! Let's go get ice cream!" :DDD

↓

<u>Observation</u>: Daddy is patting my head and giving me ice cream.

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<u>Conclusion</u>: This means he is proud of me. Also, I'm getting ice cream!

↓

<u>Conclusion</u>: Both of these things make me happy.

↓

<u>Conclusion</u>: Daddy likes it when I'm happy, so I should express my happiness in some way.

↓

<u>Response</u>: "Yayyy! Ice cream!"

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

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

All <u>Responses</u> will have a <u>Purpose</u> of course, including actions. But since we are studying <u>Language</u>, we will generally only focus on <u>Responses</u> which include <u>Spoken</u> or <u>Written Expressions</u>. (Actions don't usually need to be translated, even when they are intended as <u>Expressions</u>, because their meanings tend to be universal.)

Reasoning

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

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 the listener didn't already know. But it turns out there were _two;_ and the unexpected one just so happened to be more important to the listener.

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 acknowlege 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? 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 are 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 ~ Role played by an **Idea** in a **Thought**, in which the **Idea** is assigned some property.

Modifier ~ 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**.

Expression ~ A **Complete Thought**, which is represented with signals (**Language**), and expressed for some **Purpose**.

Purpose ~ 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 ~ A change to the listener's beliefs that is 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 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**.

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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 from 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.