

Translation:Neumann Solow “Models” Presentation

translated by Kathryn Bennett, MA, CI

Clip 1. Importance of Models

Hello. My name is Sharon Neumann Solow. I'm here today to discuss how the mind processes information for interpreting. Much of the information in my presentation comes from a book by Dennis Cokely. Dennis wrote his dissertation for his Ph.D. back in 1992. His dissertation was a huge contribution to our work. I'm going to attempt to summarize his work and you'll have a few handouts, either paper or electronic, that you can refer to while I'm talking and that will help your understanding of this material.

First, I'd like to talk about why we have a model in the first place. What's the purpose of having a model of how the brain processes material for interpreting? Now, I want you to stop and think for a minute. Perhaps you can pause this presentation to think to yourself for a minute about this question...Ok, now I'd like to share what I believe the purpose is for having the model. The first reason is that quite often we want to talk about our work amongst each other. We can use the model to help us engage in discussions and understand a dialogue with each other. It means we can think on the same wavelength and share the same vernacular; we can have the same ideas of how we work and interpret. The second reason for the model is that it helps us to focus on the work and not on ourselves personally. The model helps us to think in terms of “the work,” which is separate from ourselves as a person. In addition, the model helps us to analyze another person's work, or our own, that we may watch. I can analyze and see a breakdown, or a miscue, or a point at which the meaning strayed from the message. I can analyze where that problem came into play. Later, I can also analyze my own work, or that of others, and with a model I can give better and clearer feedback. If we share a language, as well as a vision of the model we are working within, it helps me to be able to explain to another person where I may see a problem in an interpretation, or where I see success in their work. That part is very important, because to there may be a really extensive problem that requires really going back to work on the basics. A problem may not be that extensive, but is, in fact, very serious. On the other hand, a problem can be very minor and insignificant. It helps to use a model in analyzing our work to see where there are really serious or critical problems, or those that may be just minor issues. A fourth reason for the importance of having a model to work with is to have a picture of how the mind works. Obviously, we don't have a clear, exact image of how our brain works. But, for me, a model like Dennis Cokely's is a framework for me to understand how different pieces fit together. This framework helps me to create and visualize a map and I can then see all the things my brain does while I am interpreting.

Also, having the model helps us to understand fully and clearly one specific point. We will talk about this point over and over again. It is similar to a term in computers, which is GIGO, or “Garbage In, Garbage Out.” It's the same with interpreting. When you look at the model, you'll understand. When you are taking something in, auditory or visual input, and it makes no sense “going in,” it will



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make no sense “going out” in an interpretation. The model helps us make things more clear. I have another reason, too. I have many reasons, obviously. Another reason is that when we are looking at interpreting, our work, we tend to notice all of the things that are wrong, of course. The model, though, helps us to look at it a different way so that we see what we are doing well and successfully. If there is something that has gone a little bit wrong, then it helps us to understand why. That can really help us to improve, much more so than just noticing mistakes. Not only is it successful to us in helping each other, we can also explain why something in particular has gone wrong or does not work well. So, recognizing why something I successful, or why it wasn't, is what really will assist an interpreter in maintaining their skills. In addition, the model helps us to analyze the work in sequence, or to divide work up into usable chunks in such a way that we can create manageable pieces of information to work with, instead of being overwhelmed by the whole. When we look at the job as need to “learn how to interpret,” that is such a hugely overwhelming idea because it encompasses so much. We would be overwhelmed by feeling the need to learn everything! Instead, the model can help us to focus in and pinpoint particular skills and areas of learning. This helps us to feel as if we haven't bitten off more than we can chew. Clearly, I have many reasons why the model is important and useful. My last point is why it is important to talk about models, and this relates to respect. I feel that so often interpreters and other people out in the world, both deaf and hearing, look at our work as if it is very simple and not a big deal. But, our work in fact is very difficult and extremely complicated. But how can we get this complexity across? Through the model. The model helps people to understand what our work is really all about – that it is intense, difficult and how much learning and work it requires to become an interpreter. I feel that the model gives us our profession a degree of respect. It's a way of developing respect within the profession, as well as sharing with others so that they develop more respect for our work, too. So, there are really many reasons we can think of for why models are important.

Next, I want to explain how the communication can take place, and follow that by discussing how the cognitive processing for interpreting works under Dennis Cokely's model. I have three forms, or charts, that I have provided for you to look at. The first one that I want to talk about is entitled “Communicative Interaction.” All of the papers and terminology, by the way, have come from Dennis' work. You'll notice on the chart, there are a lot of different words jumbled about all over it. But the important points that I want to tell you about involve two parts, and you'll see both of these words under “Communicative Interaction.” The first is “content”, or rather “message.” The second is “Context.” When you look at that flowchart, you'll notice that the Message/Content portion has just a few things that diverge from it. When we think of communication, it seems as if content would be the most important aspect. But, actually, in communication there are many other influences that relate to context acting upon it. In the context portion, there are issues such as where the communication is occurring, the environment, the



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setting and these are a huge influence.

Where is happening? At what point in time is it happening – a long time ago or the present? Also, who is around in the interaction is also a big influence. Sometimes “who is around” is the interpreter. Even though we are not engaged in the interaction, the fact that we are there is going to influence the interaction. You’ll notice that in your work sometimes, particularly if it involves a teacher or doctor or such. You’ll notice that when you are there it will very much influence their work. Deaf and hearing alike are effected by the presence of the interpreter. Their communication is impacted because another person is there, even though that person has a function. So, there is setting, which includes the place, the time, and the bystanders. Purpose also branches off of Context, and this category relates to why people are there in the interaction, or why they are communicating with each other. And that has a very big influence. I’m just summarizing and glossing over these, because we will be focusing on the larger scope of the model later. But I want to at least cover this briefly because I feel it’s very important background information to be able to talk about the model. Communicative Interaction itself is so complex, and interpreting is so complex. So, when you put the two of them together you are really talking about an amazing degree of complexity. Purpose has two influences. The first is what exactly is happening, and the second is the things that are being talked about. There is a third portion under Context, which is Participants, and that means who is there and involved in the communicative interaction. This category is grouped according to individual participants and the relationships of the people involved. Each of these effects Participants, which in turn influences the communicative interaction. You can look at that flow chart and gain a better understanding of everything I’ve been talking about. If there is anything that is not clear, then feel free to ask me or other teachers your questions. But, I think once you get a look at the chart, it will be quite clear. It’s actually not really a chart, but more of a flow chart or breakdown. When we talk about content, that is the portion that is labeled “Message.” In comparison to context, the message portion is very simple. There are three branches that come off of Message. The first is form and content, meaning the speaker, the dialogue, or what is being taught for example. This part relates to exactly what the communication looks like. The second branch is channel and language and this addresses whether the communication is through spoken English, through sign, the written word, Spanish, what have you. The third branch is called interaction norms, which means how people generally act in that particular environment. So, for example, if the situation is a courtroom, everyone is quite while the judge is speaking and the judge has all the power. In another environment everyone might share an equal degree of power, or there may be an interaction where between two people one has a greater degree of power than the other. In most environments, you will not find an equal degree of power between the participants. There tends to be a disparity in the distribution of power and that influences how people communicate out in the world. In addition, it effects how we behave as interpreters, because we can see and sense the differences in power



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within the interaction. So, that’s a really brief summary of the Communicative Interaction material.

Now, I want to focus on interpretation itself and talk about that. Then, we’ll talk in depth about the model. Take a look at the form, or flowchart, entitled “Interpretation and Human Linguistic Interaction.” That is taken from previous work by Dennis. It’s not actually in his book, but is taken from research he did in the past. That shows how communication is so complex, as well as how interpreting is even more so. On that page, there are two people communicating with each other, so one person is talking. In the back of that person’s mind, they have a meaning or an intent. That is called semantic intent, which is the purpose of exactly what I want to say or what my goal is for saying something. My feelings and so forth are all incorporated within that semantic intent. Essentially, there is something they want to communicate. Next to that in the picture is how exactly to communicate that by building the message through grammar, selecting which words will be used and so forth. Next to that is Encoding, which entails the message itself, or the string of parts that will comprise the message. This is the case whether the message is in spoken words or signs. The next component is how exactly to communicate the message. Everything up to this point has been occurring in the mind in forming the message. Now, there is the matter of whether it will be spoken or signed. You’ll notice in the chart that along the two columns is the aspect of noise. This, of course, includes auditory noise in the environment, but also includes “visual noise.” Noise can be something distracting within the visual field, or something auditory that is bothersome. As an interpreter, whether I am watching visually for the message or listening auditorally for the message, there is noise occurring. There is also noise that is happening between the speaker and myself. And that means something can cause me to be distracted or diverted from the task. For example, suppose there is a spider that is hanging down nearby. You’ve seen that before where a spider hangs down from the ceiling. One time I was interpreting and here comes this spider coming down. Not only is it scary, but it is visually distracting as well. Something like that can happen, or the air conditioning can suddenly come on and change the background noise. Perhaps it starts to rain and you hear the noise from that. There are many different possibilities for “noise.” So, there is noise originating from sound, visual noise, and there is mental noise, too. An example of this might be if you are nervous and are telling yourself that you can’t do the job. There is conscious level where thoughts are running through your mind that can be “noise.”

Perhaps you are thinking of the fact that your mother is sick, or there is a boy in class you think is cute and want to flirt with, or whatever. Those are different types of psychological, or mental, noise that can also intrude on an interpretation. You’ll notice, then, within the diagram there are elements of noise. Then you have an interpreter in the middle of that diagram who is taking in information amidst noise and the providing an output of the message through an interpretation. Next, you



These videos and materials were produced for the Master Mentor Program by Project TIEM. Online, Dept of Ed, Grant H160C00003, 2001-2002.

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have the person who is receiving the message, who is also confronting the issue of noise. There can be noise that is bothering them, a visual distraction, or something that could skew the message that they receive. There is a lot of wading through “noise” and then you have the message received either visually or auditorally. Obviously, that means either hearing something in a spoken language or seeing something in a signed language. Now, you have another person in the conversation who has received the message. And now that person must register the fact that it means something, which is decoding. The first person encoded the original message, and it has navigated its way through the interpreter and the person who is receiving the message must now understand it. Next in the process is decoding, which is analyzing the message and breaking it down to understand individual words. Following that is syntactic semantic processing, which involves then taking it to the next step of sorting out individual words and signs and understanding what they mean together. The selection of particular grammar in the source message, for instance, will influence the other person’s understanding. Other influences to understanding are the linguistic skills of the person receiving the message, and their understanding of how people communicate with each other. The final step in the process is semantic intent realized, which means reaching an understanding. This means truly understanding what has been said. It does not necessarily mean it is the same as the source message intent, but that the receiver has reached some understanding of the message. So...that is what that diagram means. It boils down to communication on one side, communication on the other side, and an interpreter in the middle with the influences of many different kinds of noise. So, it’s extremely complex. And I know I’ve said repeatedly that communication is so complex. Often, though, people overlook how complicated our work really is. Next, we’re finally going to talk about the model itself.

Clip 2. Cokely’s Model

The model is entitled “Psychosociolinguistic Model of the Interpretation Process.” Again, this is taken from Dennis Cokely’s work in 1992. While this is very complex, and appears so when you see all of the boxes and arrows that make up the visual model, when you think about your work it will really register and hit home with you, because it will fit with all of the experiences you’ve had interpreting. These are not things that have just happened once. They have happened over and over and over again. By this I mean, while we are engaged in one part of the process represented in the model, another part is coming whether it is visually or auditorally. It’s a little bit like an overlap. While one thing is happening, so is another, and this is going on continuously. The chart you have to look at is a visual representation of the process, but it doesn’t necessarily show interpreting clearly. This is because the chart is only two-dimensional and doesn’t reflect the influence of time on interpreting. So, keep in mind that through this two dimensional representation of the process, there is also a factor of time, which adds a third dimension. Let me explain briefly what is contained within the chart and hopefully that will help your understanding of the material. The first component is input,



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whether it be auditory or visual. Someone has said something or signed something. So, they have created a message and I receive the message either through my eyes or my ears. Now the message that I have heard or seen has entered my brain, and this is represented in the Message Reception box on the chart. Message reception is very important because it means that I recognized that it means something. Maybe this has happened to you: at an interpreting job, you stand up and are ready to go and the speaker begins talking, but they are not speaking English, or the Deaf person is not signing American Sign Language. This happened to me! I was ready to interpret, all set to go and the Deaf speaker starts signing, but it's sure not ASL or something that I recognize. It was Mexican Sign Language. That's a point where you have to stop everything and call another interpreter. So, the first step is that you must recognize the input that you are receiving, i.e. that it involves the two languages that I know. If it's not then another interpreter is needed. The second step requires that the input is clear. This can relate to situations like having too much noise, or a barrier that blocks a line of sight. This essentially means if there is some block to receiving the input, then one can't interpret. In addition, as an interpreter I must have a degree of focus on the source message. This involves two components. One is disregarding environmental distraction and actually physically focusing in on where the input is coming from. The second component is truly mentally focusing myself so that I am thinking about the work that I am doing, rather than letting my mind stray to other things. The next step is preliminary processing, which involves an interpreter beginning to break the message down to be able to understand what it means. For instance, accessing a lexical bank to understand what the words mean is included here. That lexical bank has been building up over many years in my acquisition of language. I've learned those words or signs and know what they mean, storing them in my bank of words or signs. I then access that bank in order to assign meaning to a particular word or sign. Next in that box you'll see syntactic competence and that means my knowledge and understanding of how people are using grammar within their English or ASL message. If an interpreter knows how the grammar is used, when they receive the input they are then able to create meaning for the message. Meaning, then, is not only determined on a lexical level by individual words, but also by understanding grammar. In other words, understanding how words or signs are put together. The third factor in preliminary processing is Source Language Long Term Store. That, again, refers to a sort of bank. In this case it is not a bank of individual words, but rather on a larger scale a sense of language as a whole. You know, growing up you learned English or you learned ASL. You have embedded within you at a gut level a knowledge of how to use the language that you grew up using everyday. You know how to create phrases and sentences, and how to be ironic or silly or funny or serious. You know what is mean and what is nice. How is it that you know all of those things? Very often that is because of that gut level of knowledge. We can't always explain to people what it is we know or why we know it in terms of language. But, we know it deep down inside. And that can really help us in our interpreting. So, there is a box representing Input, Reception, and Preliminary Processing.



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The next box is Short Term Message Retention. That really relates to memory. When we process and hear or see that chunk of information, it's almost like it is on audio- or videotape. We can remember and replay that chunk in our head. It's a little bit like putting the tape on rewind. We can rehear a phrase or see the signs that we've just seen. But, that's only for a very, very short span of time. Have you ever felt like that? AS if you have an audio or videotape for yourself that you can rewind? That's what I'm talking about that is happening in your brain in Short Term Message retention. You have access to that chunk again. This relates to lag time. When we are interpreting there must be a certain amount of time to hear or see something and then have processing time before something is produced in a second language. You must have time where you will have seen enough or heard enough to be able to create meaning in order to produce that in a second language. That means there must be enough to see or hear enough language to make sense of it. That time span where that occurs is called lag time. It's important for us to work on and build our memory skills in order to use that time well. There are some factors that influence that short term memory. The first factor is that one must be able to understand a word or phrase and how it is used. The second is one must be able to remember the sentence in full. The third influence on memory is the understanding of the dialogue or discourse as a whole. If you've been able to put the pieces all together in a larger understanding, that is going to help you remember pieces. Also, something that is called Semantic Core Rehearsal is an influence factor on short term memory. Rehearsal means that you may be ready to interpret a piece, or you may think you understand are but actually are not quite ready. Within your mind, you begin to formulate possibilities of how it will be interpreted. You may go through a few possibilities of how it can be put into an interpretation. You are thinking through and processing those thoughts of how you are going to say it in a second language. The last point is called decay and I don't really like that word. Sometimes it means you have that recollection from short term memory, but then it just fades away. Forgetting and decay are different. To forget means that you used to know something, but it's gone now and you can't retrieve that knowledge from your memory. You learned it before, but now you are unsure of what to do because you've forgotten it. Decay, on the other hand, means you haven't actually learned it. That piece of knowledge or information was never in your brain in the first place. You were in the process of receiving the message and then before you could actually put it out in the second language, it was gone. So, decay is a little bit different from forgetting.

After the Short Term Message Retention box, you'll see Semantic Intent Realized, which means understanding. The interpreter's "got it!" That's it, that's what it means. Next, you'll see Semantic Equivalent Determined. This means the interpreter has cross- linguistic competence, or understands both languages present, and cross-cultural competence, an understanding of both cultures. This entails understanding sociolinguistic elements for both individuals, as well as both party's long term understanding of their respective languages. That enables



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the interpreter to achieve equivalency between both languages, so that the interpretation that is produced will be equivalent to the source message. There is an ability to create an equivalent message that is true to the original message in the second language by understanding all of those factors.

And not last, but almost last, is Syntactic Message Formulation. This means actually producing the message in the second language and building that message based on the rules of the language. You access these building blocks by your knowledge of the second language’s vocabulary, grammar, structure and so forth. That component is influenced by some sociolinguistic factors. One example is my knowledge of knowing how to speak during a lecture as opposed to a job interview. Very often, linguistic factors are related to register, such as whether it is a formal or casual situation, or a private tête-à-tête, for instance. Those factors will influence how I produce something in a second language. In addition, the physical environment will have an influence on an interpretation, as will different psychological factors. If the interaction is an argument of some kind, for example, I need to know what it feels like in order to be able to make appropriate choices in the second language. Also, as a sign language interpreter, our work can be quite different from interpreters who work with two different spoken languages. It’s interesting because we are going between two different modalities, that is from an auditory language to a visual language and from a visual language back to an auditory based language. Sometimes that can really influence our work. There are things that may be very difficult to interpret not only because of cross-cultural communication, but also because of the involvement of hearing and non-hearing communities. For instance, suppose a person is using a metaphor that relates to sound. How do I communicate that to a deaf person who may never have heard sound? That’s a challenge! In my experience, it seems that deaf people catch portions of that, of course, but in terms of facilitating a really in-depth understanding, it’s a difficult job to interpret that. Humor, too, can be a real challenge, because you are dealing with two different cultures. So, there are many reasons why interpretations can become extraordinarily complex at that level of Syntactic Message Formulation. Sometimes when going from the two different modes of language, spoken language to sign and vice-versa, there can be a lot of influence from one language to another. They both can affect each other. When you are interpreting and producing something in sign, everything must be analyzed all over again. The source message in spoken English may be completely, totally understood, but I understand that from a hearing viewpoint. The message has to be analyzed all over again so that I am sure it will be equally understood from the Deaf viewpoint. It’s the same when I can understand something completely from the Deaf viewpoint with the source language being ASL, but I have to consider if that is understood in the same way from the hearing viewpoint. If it’s not, then I need to make some kind of an adjustment within the interpretation. The final component is Output, and again that can be either spoken or signed. This portion involves how we speak or sign the interpreted message.



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Now, you can understand the sequence of the process that is represented in all of those boxes in the chart. You navigate your way through all of those when you interpret. But, you're not done yet! While one is interpreting, there are chunks, or portions of information. Let's say I am interpreting from spoken English to sign and I hear the entire idea and produce that in sign. While I am producing that interpretation and processing that idea, the second idea, or the second chunk is coming. While I am actually signing the first chunk, I am analyzing the second chunk. And the third idea is now coming in. That means there are at least three chunks that I am processing at the same time. And generally it is more than that, but it's at least three. The first chunk is being produced, i.e. output. At the same time, internally, I am processing the second and receiving the third chunk. All at the same time. This relates to my point earlier that the structure and hierarchy of the chart is deceptively simple. It's actually much, much more complex than it looks.

The last thing I had better explain, though, are the words that are at the bottom of the chart. These are factors that influence the model as a whole. The first factors relate to Source Language Long Term Store. You'll recall we talked about that as the internal, gut level knowledge of a language. It's influences begin with Syntactic Knowledge, or what I know about using that language to build messages through it's grammar, structure, and so forth. Source Language Long Term Store is also influenced by Semantic Knowledge, or “how language means.” I know that is an odd way to phrase it, but what I mean by that is how a person uses the language to change their meaning. The term semantic involves more than just the meaning of something. It's not like a definition that is found in the dictionary that supplies a meaning. That's not inclusive enough for what the term semantic covers. Semantic means the effect that word or phrase has on another person. The next factor is Contextual Knowledge. This involves the interpreter understanding the environment, influences, everything really. The environment concept is a very broad idea. You'll recall we talked about context in the first chart labeled “Communicative Interaction” where it detailed where something happened and the time at which it occurred and so on. That's important, of course, and environment includes all of these and has a big influence.

The next factor under Source Language Long Term Store is Associated Relations, which entails how people talk to each other in different environments. The different reasons people talk to each other and how they relate within different environments is also part of this factor. Really, it's a huge influence. Essentially it has to do with how people act while their world is changing. For instance, I may act one way in my home and another way if I am a student in school. If I'm on Candid Camera I'll act differently as well. In contrast, if I work in front of a camera, unlike the surprise with Candid Camera, I'll act differently. Associated Relations speaks to how we relate with each other in different



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environments and the influence those environments have on how we behave. Cultural Awareness is extremely important. This is because culture influences language so significantly. It is impossible to separate language and culture. They so strongly influence each other and are so enmeshed. In order to interpret effectively, one must have a solid understanding of both of the languages and cultures. The final item in that box is Forgetting. Often, we know something and we've learned it, but then it's gone. That is forgetting. For example, I used to know what “tsunami” meant. Now I know it means something related to a storm; I know it happens in Japan; I know it is something like a terribly traumatic storm. I've forgotten exactly what it is, though. I did learn it in the past. I also used to know all the countries that were on the equator. Only, now I've forgotten. It means we've learned something or we had that knowledge previously, but it's no longer with us. The next portion of the chart next to Source Language Long Term Store is Target Language Long Term Store. Remember, we have both. If our example of Source Language Long Term Store is understanding English at that gut/instinct level, then the Target Language Long Term Store is understanding ASL at that level as well. That list of influences is exactly the same as we just covered for Source Language Long Term Store. Again, that last component, Forgetting, can influence both languages.

Lastly, I'd like to just summarize everything we've talked about up to this point. This chart and all of these boxes, arrows and visual representations, help us to be able to talk about our work. It helps us to separate the work from the person. I can look at my work objectively and not feel like it's a reflection of me as a person. That I am bad, or made all kinds of mistakes, for example. I can view my work objectively by looking at it through the model, and by doing so can identify where there might have been a problem, or where there was success. Analyzing work through that model has really helped me both as an interpreter and as a teacher. I use that model in all of my work now. The model helps me to examine and identify where problems come up in my work. Also, I can do the same thing for a person that I am working with. In addition, it helps me to work effectively in a team, because I can analyze another person's work and then be prepared as to where I can provide support.

The model helps in so many different ways, and I hope it is helpful for you as well. Thank you. layer upon layer of multiple things happening at the same time. That in a nutshell is Dennis Cokely's model.

