Hunting and Gathering for Signs: A Theoretical Development of Semiotic Processing

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This paper seeks to examine, establish, and elaborate semiotic processing-- the mechanism by which we come to make conclusions of other persons, places, or things.. Semiotic processing includes three sub-processes—semiotic acquisition, semiotic assessment, and semiotic construction. The goal of this paper is to propose a model of semiotic processing and to test the theory within an experimental setting of perceived shared realities, based on a microgenetic variation of the classic "I-Share" experiments in social psychology. I will also illustrate and discuss the broader implications of semiotic processing in applying to previously discussed literature, as well as continually re-connecting it to real-life settings.

Keywords: intersubjectivity, semiotic processing, semiotic assessment, affective evaluation, semiotic acquisition, behavioral differentiation

INTRODUCTION

Passing by a man on the side of the road, he sat cross-legged with a small cardboard sign that read: "Lost job and home; help please." Later that evening, I couldn't help but reflect on the situation. I differentiated him and I – I had a house to come home to, a table with food, a job to sustain me. And he had none of that. I provided myself with justifications for not helping and donating money-- that he was a drunk, that he would only spend my donations on booze, that it was his fault somehow that he had fallen into this dilemma, and needed to get back up and try to get out of his situation by means other than change handouts. The curious thing was that I had no facts to base these thoughts. I made conclusions about someone I didn't know, in a situation that I didn't know about. What and where was this information coming from?

This event is not unique. As human beings, we are constantly concluding. We draw conclusions about someone wearing a hooded sweatshirt at night in a city, the extra glance from a special someone across the bar, or the approving smile from a professor. Whether or not our conclusion is misguided or wrong, we constantly hunt and gather meaningful data. Anything we can observe – we can interpret and consequently make meaningful to understand within our own psychological systems. Only I may know the reasons behind my actions. But what helps us understand the behaviors of others?

And so we find ourselves immersed in continuous efforts to understand one of the hardest things to understand – each other. The problem is not difficult because of a lack of information – on the contrary we produce an excessive amount of meaningful information

at each moment for others to gather and respond to. The difficulty arises in the ability to definitely know and understand the cause and effect relationship of human actions, thoughts, motivations, emotions, etc. But if I know the reasons behind my actions, and you are similar to me, am I able to infer your reasons for action? Often, this inference is exactly what we do. We infer, assume, and prototype. When we are deprived of reasons, then we desperately search for some. That is to say that we hunt and gather food – semiotic data – to placate our starvation – the state of not knowing.

Our "semiotic hunger " is not a pallet of distinguished tastes – it will take and absorb all data we can feed it: real, perceived, or imagined. Our understanding of the human psyche becomes a hybrid of what we see and what we assume, which both bi-directionally affect each other. We take all of this semiotic data, and construct it into broader and general frameworks of meanings that fit our world. It is this semiotic construction, this constant fact creating and fact-checking process we participate in on a daily basis to feed our desire for "making sense" of things that creates the seemingly stable world around us.

It is precisely this act of collecting limited data and the assumptions created from it that this paper seeks to explore. From this question arises my theoretical model of *semiotic processing*, which is the mechanism we use to gather semiotic data to constitute constructions of new signs. Semiotic processing comprises of three sub-processes, semiotic acquisition, assessment, and construction, with semiotic acquisition comprising of two sub-processes and semiotic assessment having two sub-processes embedded within it. In order to test this theoretical model, I performed an experiment in the laboratory setting. I exposed participants to a partner who i-shared with them for a varying amount of times, and microgenetically probed their responses to their partner after every opportunity of sharing (or not sharing) of subjective experiences. My research question was twofold: How does the process of understanding a partner based on limited information (subjective experiences) develop over time and (2) how does this process vary between individuals dependent on the amount of shared experiences? Semiotic processing was observed and examined through all participants. Participants seemed to challenge current shared reality literature and still attempted to share reality even without agreement on their answers. Contrary to I-Sharing research, those who shared at every point in the experiment showed negative feelings towards their partners and high suspicion towards the experimental situation. Theoretical and practical implications will be discussed through semiotics and the implication of rumormongering.

THEORETICAL BACKGROUND

In order to better understand semiotic processing and its sub-processes, as well as to understand how it was studied in a lab setting, the following theoretical contributions are used to support its conceptual (ie., theoretical) validity (which will then be tested for empirical validity via experimentation). Previous works on intersubjectivity, shared reality theories, and the I-sharing paradigm theoretically validates semiotic processing.

Intersubjectivity literature

Intersubjectivity is when "each Self comes to know the mind/intentions of Other because Self can infer the contents of the mind of Other from self's own past experience" (Sammut, Daanen, & Sartawi, 2010, p.452). But intersubjectivity, a self-inference extrapolated to the other, at best, is an illusion (albeit a necessary and very functional one.) The best we can do is both attend to a state of something at the same time, and hope that the other is attending to it in the same way as we are attending to it (Rommetveit, 1992). Thus, the importance of intersubjectivity is not to know the *intentions* of the Other, but instead, the *attention* of the Other. If they are attending to it in the same way we are, then we assume that they have had past experiences with us as well.

Thus, illusory intersubjectivity brings forward two main points. One, that there exists a desire to "know" the other, as discussed in the introduction. Two, this desire motivates us to make assumptions that the self and the other must share similar past experiences to be able to share current experiences and attentions. For, if one is attending to an object in the same way we are, they must have had previous attentions to other objects like us in the past as well. If they are like us now, we can assume they are like us in a variety of other ways.

Shared reality theory literature

Rommetveit detailed twenty-four theses on his beliefs on human communication, many of which focused on his concept illusory intersubjectivity and shared reality.

> " 17) A dyadic state of intersubjectivity with respect to some state of affairs S is attained by verbal communication when some aspect or set of aspects Ai of S is brought into focus by one participant and, as a consequence, jointly attend to by both of them.
>
> 18) A dyadic state of shared social reality with respect to some state of affairs S is attained when both participants take it for granted that S is A_i and each of them assumes the other to hold that belief. " (Rommetveit, 1992, p.23).

As Sammut and others discussed the importance of coming to know the mind of another in their definition of intersubjectivity, shared reality is "the product of the motivated process of experiencing a commonality of inner states about the world" (Etchterhoff, Higgins, & Levine, 2009, p.498). Thus, shared reality is the product of intersubjectivity – when we assume we have both attended to the same object in the same way, then shared reality can occur.

Shared reality needs four conditions to be fulfilled for it to occur: *shared inner states, a*

target referent, epistemic motives, and the awareness of such a commonality. (Echterhoff, Higgins, & Levine, 2009). People must believe that both the action and the inner reasons are shared towards a specific target to achieve a better understanding of the target referent. Finally, they must be aware of this process occurring. If all four conditions are met, then shared reality can occur (Echterhoff, Higgins, & Levine, 2009). If we want to understand the motives of others, we must be able to in some sense share the mind of the other person by sharing their reality. What shared reality provides is a small framework from which we can begin tracing the process of understanding the other. With the four conditions needed for shared reality to occur - *shared inner states, a target referent, epistemic motives, and the awareness of such a commonality* – then the lack of one condition must infer that something gets lost on the way towards an understanding of the mind, and shared reality would not occur. If comprehension of the Other's mind depends on the sharing of realities, then both examining the moments where shared realities occur and fail would be critical to see how the process of illusory intersubjectivity occurs.

So, in order to find times where we seek the mind of an "Other", we must find the times where we share a reality with an Other. Not all the times when we seek the mind of the Other do we share realities, (for I may seek to understand why we differ in a certain way) but each time we share realities, we seek the mind of the Other (because it is assumed to be similar to my own). Therefore, it would be best suited to search for moments when this construction of illusory intersubjectivity occurs within the moments of shared reality, but not to ignore moments of non-shared reality either. Shared reality is a step towards understanding the Other, for we assume the "sharedness" of the Other's reality. Yet, assuming does not infer correctness – our assumptions – on what they are attending, on what their intending, on how they feel, are all hinging on our own beliefs towards the person.

I-Sharing literature

An important body of work in studying the sharing of subjective realities, I-sharing moments are defined as "when people perceive that someone else simultaneously reacts to some stimulus or event identically to the way themselves are reacting" (Pinel, Long, Landau, & Pyszcynski, 2004, p. 354). Through laboratory manipulation, subjects who had interacted with a partner with whom they had I-shared with (operationalized with similar responses on what selected inkblots looked like for a majority of their experiments) preferred that partner to a partner with whom they had shared less I-shared moments or even more personal characteristics with, such as personality (Pinel, Long, Landau, Alexander, & Pyszcynski, 2006). Due to the specification of 'identically', all I-shared moments are shared realities moments, but not all shared realities moments are I-shared moments (Pinel, Long & Crimin, 2010).

With no contextual cues about their partner, people had decided how much they liked their partner. "Participants reported the extent to which they felt close to each partner, could

imagine becoming friends with each partner, would feel comfortable meeting each partner, would look forward to meeting each partner, and liked each partner" (Pinel & Long, 2012, p.300). Within this work, we see the emergence of illusory intersubjectivity within these choices, and the processing of this information to come to a conclusion about their partner. It is able to provide researchers a *what,* but not a *by which processes* these conclusions about liking a partner take place. How could one assume they would like someone based off only from knowing if one had agreed on what an inkblot looked like? And why had more of these moments increased the likability of the partner? If one could track how the participant developed an understanding of their partner, they could begin to see how these conclusions came to fruition.

Again, we have reduced the phenomenon even greater, from "illusionary intersubjectivity" to "shared reality" moments to moments of "I-sharing". I-Sharing research shows the conclusions made about the partner from brief moments of illusory intersubjectivity. Participants in these studies never get to see their partner – they know nothing about them besides the answers to the prompts. Thus, they too, are starved of this semiotic data, and create their own data (We are close/not close) to their partner. I-sharing research provides us with the methodological framework in which to place examining the idea of constructing an idea of another in the operationalization of I-Sharing moments.

Together, what previous research has shown is that people seek to understand the mind of the Other. In what follows, I will attempt to examine how we come to (believe to) understand the mind of another person. Shared reality work grants conditions in which this understanding may arise. With these conditions, this data, when received, has undergone a process in which the conditions are checked to see if shared reality is achieved. We receive the data, and then we process it. We may make affective assessments, such as how close we feel towards the person and what kind of a person they may be, as I-Sharing research has shown. To conclude the intersubjectivity, we assume certain characteristic of the Other (that they may share similar experiences, that we would work well together, etc.). To put more generally, we receive information about a person. Due to wanting to know more about them, we seek to more fully understand this information and begin to process it. Once processed, we establish a way to incorporate the information into our own reality, and then make conclusions about the Other and our relationship towards the Other overall.

A THEORETICAL MODEL OF SEMIOTIC PROCESSING

These theories can be synthesized to validate the conceptual or theoretical existence of semiotic processing, which is hypothesized in the following way:

Semiotic processing is the mechanism by which individuals gather outside sign-information (meaningful actions, feelings, objects, details) that constitutes a new sign (i.e., the conclusion regarding the gathered information). Semiotic processing has three main

processes within it: *semiotic acquisition, semiotic assessment,* and *semiotic construction.* There are two types of *semiotic acquisition* (micro and macro), and *semiotic assessment* consists of two sub-processes (*affective evaluation and behavioral differentiations)*.

Semiotic Acquisition

Semiotic acquisition refers to the process of gathering meaningful sign data. When gathering data on another person (i.e., their laugh, their smile, their hair, etc.) we acquire data both separately as parts (micro semiotic acquisition) and/or together as a whole (macro semiotic acquisition). This collection of data is constantly growing; each new acquisition re-adds itself into the acquisition-base, which is the foundation for our interpretation scheme of everyday life.

Macro semiotic acquisition

Macro semiotic acquisition refers to the whole picture we receive at one time. One does not merely see the eyes of a person, they take in the eyes, nose, they see the whole face. Macro semiotic acquisition occurs when multiple sign-data emerge within a conglomerate whole.

Micro semiotic acquisition

Some sign-data can occur only in a part. If our vision is obstructed or there is uncertainty in what we are processing, we may not receive the whole. If told what someone thinks on one particular political issue, you cannot be sure of his or her overall politics views.

> *Semiotic acquisition example*: Walking into my dorm room in college for the first time, I see my roommate has already moved in and has posters of the local soccer (European football) team hanging on the wall. He is not present. If micro-acquisition takes place, I acquire the sign-data of the individual items, separately from one another, which he has brought with him (local soccer team posters), but not who he is or what other objects he has brought. I may be able to conclude I approve of his sports team posters.

Semiotic Assessment

Semiotic assessment is the second process in this semiotic processing mechanism, and is comprised of two complimentary components, *affective evaluation and behavioral differentiations*. In semiotic assessment, we attempt to assess the data we received. Is it similar or different to previous experiences with comparable past sign-data, and how do we feel about this new sign-data we have received? This is a feeling-based assessment that determines similarity or differences. But assessment does not just occur once; we can constantly evaluate what we feel. We assess our assessments, constantly refining, revising, and redefining our feelings towards information.

A second assessment, therefore, occurs when we assess how we have comprehended our data by attempting draw boundaries of what we can and cannot do. We have comprehended how the acquisition has made us feel – now do I want to distance or bring

myself closer to this individual based off those feelings? In this, we have *differentiated* our feelings towards this particular sign-data, and try and find various qualities (and realities) that one may share with the Other on an action-based level (behaviorally).

> *Affective evaluation example*: I feel good about this acquisition because I also like the local soccer team.
>
> *Behavioral differentiation example*: We can talk about soccer.

Semiotic Construction

The outcome of semiotic processing is *semiotic construction*. We compile our acquisitions, affective evaluations, and behavioral differentiations to come to a cohesive understanding of the individual at that moment in time. It is the descriptor of the individual or image on which data is being collected. It is focused on the "they" due to the development of the Other. This is where illusory intersubjectivity arises, where from past information, we attempt to make sense of the mind of the Other and draw conclusions of the object of our interest.

> *Semiotic construction example*: My roommate possesses many posters of local sports teams. We seem to have much in common, so therefore he must also like hockey and the local hockey team just as much as I do.

What is noteworthy about the example is that my construction does not need to end correctly. My roommate may not be (and was not) a hockey fan. The constructions still occurred, and only after comparing my constructions with object's true intentions was I able to re-assess and come to the new construction, "soon to be in love with hockey." Semiotic processing is not about accuracy – it is an immediate process designed for fast assimilation. Re-evaluation can come later, perhaps through the acquisition of further signs about the data, or through comparing one's constructions with the targeted referent.

EMPIRICAL EXAMINATION:

The aforementioned theory, just discussed, was then put to the test in the lab. Students at a northeastern University were invited to take part in study examining interpersonal interactions and engaged in an I-sharing methodology with qualitative questionnaires given after each subjective experience. Their responses were coded and examined to see the process of semiotic processing at work.

Research questions and elaborations.

I wanted to study the process by which people come to conclusions about Others. My research explored two main questions: (1) How does this process of understanding the other based on limited information develop over time and (2) how does this process vary

between individuals dependent on the amount of shared experiences? In order to investigate this unique intrapersonal process moment-to-moment, we used a microgenetic method (Diriwächter, Valsiner, & Sauck, 2004) to examine the theoretical model of semiotic processing as it occurred over time.

As information is always limited, either through not knowing the mind of another or through an ambiguous situation, as in our vignette of the homeless man, we wanted to see how the most limited amount of information could still create a conclusion about the Other.

Method

In order to make sure that any visual information that could potentially be collected by the participated was controlled, a large divider separated participants in the experimental room, making it impossible to see their participant. Eight inkblot images were shown. Responses were given by raising a paddle marked with numbers one through four, controlling for all audible information about the partner. By limiting visual and audible information about the partner, I hoped to create a paradigm in which acquisition, assessment, and construction of the Other occurred on singular, successive pieces of information.

Design

The study design had seventeen conditions, ranging from zero agreed responses up to a complete eight out of eight agreed responses. A control condition was present where no information was given. The experimental design also mirrored the order in which responses were in agreement or disagreement appeared. See Appendix A for a visual explanation of these conditions.

Subject pool

Data was collected from undergraduate students attending a northeastern University, recruited from an introductory psychology class. Participants received credit from their psychology class. Confidentiality and anonymity were guaranteed through the proper handling of data and agreed through the signing of the consent form. There were a total of nineteen participants for a seventeen-condition study, with four males and fifteen females ranging from eighteen to twenty-two years old with a mean age of 19.6 years with a standard deviation of 1.1 years.

Procedure

Participants were met on the second floor of the library where a consent form was signed and they agreed to remain silent for the duration of the study unless there was an emergency. They were taken to the experimental room where they found an already set-up confederate who could not be seen due to dividers almost two meters high. In front of each participant was a table with four paddles labeled one through four, a stack of questionnaires, a clipboard, and a pen. They were instructed that they would be shown a

series of inkblot images with four choices and to choose which choice came to mind when first viewing the image (e.g., a chicken, a panda, a child, two dragons). All choices can be seen in the inkblot and were verified by multiple sources of their presence within the image. This mirrors the design of the I-Sharing methodology (see Appendix B for images), They would then fill in a questionnaire, and the procedure would repeat eight times. Waiting for the participant to respond to the images placed on a screen, the experimenter would tell the participants what choice the other had made, which was controlled by the experimenter. The responses were set from the start (Confederate will pick "a panda") but also controlled for disagreement (Unless P chooses "a panda", then confederate will pick "A child"). A fill in the blank questionnaire was filled out after each image response for a timed two minutes, in hopes of focusing our participant directly on the feelings of their interaction and responses to the partner with letting them freely express their emotional states (See Appendix C for questionnaire). In this way, I hoped to gain a better introspective look into my participant's feelings as it was developing within their mind. After eight inkblots and nine questionnaires (one being given prior to images as a baseline), the participant was taken out of the room, returned to the second floor, debriefed and excused from the study.

Coding

I used grounded theory to code the different processes within the data received (Stern, 1980). Looking at questions such as "When I heard my partner's response, I (thought/felt) ___" and "I feel __ when thinking about my partner because ___", I coded for the different ways the participants reacted to the other's response to the inkblots. These questions brought out the participants' first reactions to the interaction, which is the first part of semiotic assessment, affective evaluation. This was the immediate, emotional response towards the answers given by the participant and their partner.

Table 1

Coding Guide for Affective Evaluation

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Name	Definition	Example
Positive Agreement	Positive agreement on inkblot responses paired with positive thoughts or affects.	"A little relieved because I felt a little weird saying it looked like animal skin." (P11.i1)
Positive Disagreement	Disagreement on inkblot responses paired with positive thoughts or affects.	"It was funny because I didn't think it looks anything like a chicken." (P13.i4) "Improved – they could see what I didn't at first." (P11, i3) "Finally, something different." (P43, i6)
Interest / Desire	Disagreement on inkblot responses paired with curiosity as to the logic or reasoning of the other's choice, or acceptance as something bound to happen by chance.	"Interested as to why he/she said that and wanted to look at the picture again." (P13.i5) "Like I wanted to know why he/she thought that was the answer… I really want to know the reasoning behind the answer." (P39, i2)

Concession	Disagreement on the inkblot response paired with the ability to understand why or how the others picked their response.	"They are still choosing images I almost chose." (P7, i3) "It looks more like two women but I can see the rocket." (P13, i3)
Suspicion	Suspicious of their partner's responses and the experimental setting.	"I am doubtful we've really had 5 identical responses… Not really seeing all the same things as me." (P33.i5) "They are not real! They can't keep choosing the same thing." (P27, i5)
Negative Disagreement	Disagreement on inkblot response paired with negative thoughts or affects.	"Confused on how they saw shellfish… they chose something that was wrong."(P7, i7) "I feel wrong when I answer differently. (P19, i8)

In other questions, namely "I believe my partner is __" and "When I think of my partner, I feel __ because of ___.", among others, codes of the participant's reactions tended towards conclusions becoming drawn of the other. Drawing off of the evaluations coded above, I looked for the moments where lines of can/cannot were drawn. This behavioral differentiation was coded in responses that placed the participants together, such as "My partner & I were alike", "(we could) sit in class together", or "we have turned out different." The behavioral differentiation theme shows actions that the participants could or could not do together.

Moments in which the participants spoke directly at qualities of the Other were coded as semiotic construction. Here, the participant created an image of what they believed their partner may be – "he might have some knowledge in videogames", "a man", "female, 19, Hispanic."

FINDINGS

This experiment created a directed illusory intersubjectivity (Rommetvet, 1992). Attending to an image, the partners were told if they had attended to the image in the same way as their partner. If they had, their experiences were the same. There had been a created moment of shared reality (Sammut et al., 2010) I-Sharing research had shown that the partners would like their partners with whom they had many illusory intersubjective moments, but not how the image of their partner would be constructed. This is the direction the results seem to push towards.

Semiotic Acquisition

Stripping our participants of information about their partner, they were left with only the responses of what they saw in an inkblot image. Over time, their "knowledge" about their partner grew as they received more information about their partner. At the beginning, they show not having much of a base to start with - "I have not heard a response - no feelings." "I don't know anything about my partner" "she/he is probably a student." As the experiment proceeded, the information acquisition continued – except in the setting of the control, who, even by the 7th image, stated "I don't know them" and "I have no thoughts about them" and by the final response stated, "I wish I knew their answers." Their acquisition also includes the outcome of the response – if I say "bear", and my partner says "bear", I have also acquired the fact that we have agreed in our idea that this image reminds

us of a bear. Thus, they acquire two things in each round – what the partner says, and logically following, whether or not their partner has agreed with their own response. This is the independent variable that is being controlled and manipulated – how many pieces of information they receive and what kind of information they receive (answers and agreement towards the answer). Through this set-up, I was able see any development in the acquisition base (and how it is added to the interpretation framework) since in each round the participant get more "data" about the person.

Semiotic Assessment: Affective Evaluation

Once the knowledge of what their partner had responded with had been acquired, assessments of the data they received from the semiotic acquisition occurred. In coding, six different emotional paths the participants took arose. See Table 1 above for coding scheme.

One thing that was absent from the coding was an aspect of "Negative Agreement." I could not find a time where the person found agreement but was upset by this agreement. This does not mean that it does not exist, but instead that our experimental set-up was ill equipped to foster such a reaction. The participants did not know their partner's qualities. If they had known they were part of a very salient out-group, such as a member of a Neo-Nazi party, they would not want to seek similarities with those members. They would seek to distance themselves from the partner as much as possible. In situations such as this, an affective evaluation of negative agreement may occur, in which they would state: "I am upset that we agreed."

Of course, I do not mean to infer that affective evaluation can only occur in these seven ways. We can comprehend information emotionally in an infinite amount of ways. In this experiment, however, the participants were presented with their own experience and the experience of their partner. It was most easy for them to comprehend their experience using a comparison. There are a variety of ways in which affective evaluation takes place.

Many participants' evaluations hinged on whether or not they had agreed in the image or had not. Participant 7, comprehended the first two experiences as "good" and nice" due to them having "the same response" and "similar thoughts." On image seven, she comprehends the disagreement as "disheartened, they chose something that was wrong." She expressed a positive disagreement evaluation on image three, however, when she comprehends that the disagreement was "good" because she "increased in well-being because I wanted to know how they saw that."

However, not everyone assessed based off of agreement or not. For participant 13, her semiotic assessment revolved around interest. In the first image, she acquires the knowledge that they have shared the same answer. She assesses this data as "happy" because they "saw the same thing." In the second image, she acquires the data they have not shared, but evaluates in interest of wondering how they had seen that, and differentiates her relationship with her partner as being able to "have an interesting

discussion based on the images." Participant 13 shows that this is not a stage model, but dynamic and fluid. Behavioral differentiations are not needed to bring about constructions, as found in images four, five, seven and eight. In image five, she evaluates the disagreement as "interesting that he/she looked at the negative space." Her semiotic process, while in stark contrast to the rest of the participants, speaks to the subjectivity of the process.

So, when participants receive their information, they comprehend it in a variety of ways. It is the first reaction to the semiotic data they acquire.

Semiotic Assessment: Behavioral Differentiations

With the semiotic data provided by the situation, one can begin to incorporate the information received with past experiences and our own self. Being a fluid process, behavioral differentiations do not require any prior stage to occur, nor does the presence of affective evaluation force behavioral differentiations. These are both sufficient, but not necessary to the process. Within the second part of semiotic assessments, we place ourselves within the context of the Other. This is the step taken after the illusory intersubjectivity is created – we believe to understand the mind of the Other, so we extend their qualities to match further realities of our own.

I lightly touched on behavioral differentiations with participant 13, in which you see her incorporate her partner in future plans. Another participant, number 1, presented differentiations such as "I know the person." That could easily be translated to "we know each other" as could the other differentiations he makes throughout the experiment. In image two and four, his behavioral differentiation with the partner states "I am similar to him" and later, "same age, same gender, and might be same culture."

Just as experiences change, so do our assessments. After four semiotic acquisitions of three agreements and one disagreement (coded at a positive disagreement affective evaluation), participant 7 differentiates her partner by saying "we might get along… [and] be friends." However, the next four acquisitions are disagreements, and she comprehends them as negative, with evaluations as "weird, I don't know how she saw that" and "disheartened, they chose something that was wrong." Her semiotic differentiations of her partner changes from friends to "still get a coffee and talk", "sit in class together", to finally "see each other at work."

Construction

Semiotic construction is the final process in the mechanism of semiotic processing. We extend our beliefs of the Other based off of prior acquisitions to assumptions on the other person. In this stage, we paint a full picture of the other person based on the small amount of data acquired, assessed, and previously constructed. Due to the lack of knowledge about the partner, one may state that the experimental design creates a situation where more constructions would occur than normal. However, this would ignore all of the prejudice, preconceived notions, and judgments that are made every second of our lives. This

experimental setting merely invites the judgments of the Other based on only one aspect of them – the success or failure of this illusory intersubjectivity.

Participant 13 assessed their disagreement at image five as "funny" and constructed her partner as having "a sense of humor." Her partner's third image answer, rocket, brings the construction of being "into spaceships or technology." Later, she constructs that her partner must be American due to their answer of "arrowhead." Semiotic constructions of gender, age, ethnicity, interests, and motives all appear throughout different trials. Semiotic construction can occur due to the situation ("Quiet"), the agreement ("Female" when a female participant) or on the answer itself ("into spaceships and technology" due to saying rocket).

Inter-Individual Differences

In this section, I seek to expand on certain points of various individuals' own semiotic processes and how they deviated from the norm of what I had expected to find, and reasons why this had happened.

In both full agreement (8/8 agreed responses) conditions, participants were suspicious of their partners and the amount of times they had responded the same.

> "I am doubtful we've really had 5 identical responses ; not really seeing all the same things as me. (P33, i5)"
> "They are not real! They can't keep choosing the same thing (P27, i5)."

Suspicion breaks one of the original conditions set by shared reality theorists, and limits the amount of shared realities one person can have with another (Echterhoff, Higgins, & Levine, 2009). One must believe that the both the actions and the inner states of a person is shared. A person who is copying the movement of another may not actually be experiencing the same thing, but instead may be mocking or lying instead (Echterhoff, Higgins, & Levine, 2009**)**. If the person believes there is mocking or lying occurring within the reality, the inner states fail to become shared and cannot foster the interpersonal connection provided by shared reality, which could be why these conditions find eight shares fostering less liking than the six and seven shared realities do.

By the sixth share in a row, both participants express a desire for disagreement.

> "I want us to choose at least one different answer (P27, i6)."
> "Almost hopeful we answer differently at some point, because this seems uncanny (P33, i6)!"

Trying to construct an image of our partner, we want to see some kind of difference. We want to revel in our individuality while still accepting the similarities of others and constructing them within our own previous experiences. With so many agreements, it appears as if they are merely constructing their own personal construction a second time,

and not that of another. At the same time, I cannot reject this being simply a creation of the experimental situation – people are prone to suspect deceit in research. However, as this can be seen in friendships and relationships – our desire for challenging opinions leads me to believe this would be a consistent finding.

A couple of participants expressed the fact that they could not draw accurate conclusions on their partners based off of the experimental setting.

> "Visually meeting is an important prerequisite for me to care about our alleged similarities / differences." (P21, i8)
> "I feel like I would have to talk to them and get to know them to understand their interpretations." (P41, i5)

Our internal semiotic processing mechanism is in overdrive in real life, and the experimental lab room can only attempt to slow down this process enough to be able to examine it in greater detail. These participants did not comprehend as much as other participants due to the fact they were focused on the difficulty of the situation, and their maps were therefore much harder to track. These people only show that, devoid of real life resources, construction of another person is definitely not a simple task. However, even with this, each participant did assess and construct at least once.

> "This person and I might get along!" "Definitely a confederate." (P21,i2,i4)
> "We might be a bit more alike than what I thought." "Might be a man ; might be shy." (P41, i4, i2, i6)

Another type of participant was one who focused their energy on being frustrated with the situation. While both expressing problems with the study, these participants expressed negative emotions when referring to the situation, unlike the previous participants, who attempted at best to stay as neutral as possible.

> "There is no way a person would perceive this shit! ; Like I want to knock down the barriers." (P35, i5)
> "Irritated (at) not being able to see them and read what they're thinking is frustrating." (P43, i5)

These participants comprehended the data they received but responded with the frustration of the situation. This brings to light a very real problem with the experiment – its generalizability. While shared states were used and control was taken to witness the development of the process in regards to a specific type of data, that never happens in reality. People discuss and argue opposing beliefs. While we may have been able to begin to track this process, we must recognize the situation and constantly search for ways to move the data from outside the experimental room and into the real world.

What we can draw from all of these examples is that semiotic processing exists in a variety of shapes and sizes. Not only do we process the information we receive, but we are also processing the situation (in both confusion and frustration). Constantly processing, some people limit their assessments and constructions until further information is given, but yet all eventually construct some sort of idea of the Other.

Going Further: Conditions of Understanding and Interest

While shared reality theory covers many shared experiences, it leaves sharing to be a binary act-- something is perceived as either shared or not shared. As our data showed through the coding, however, sharing is not a black or white experience, but multidimensional with many different qualities beyond that of what shared reality presents. There are multiple layers of processing within deciding what constitutes an action of illusory intersubjectivity.

As noted by my code of "Concession", there were points within our participant's affective evaluations that while not sharing realities did not cause a "not shared" negative reaction premised by I-Sharing and shared reality literature (Pinel et al., 2004, Echterhoff, Higgins, & Levine, 2009). Rommetveit speaks to this when he focuses on the point of "attention", not of the mind of the other. In concession, the participant attends to the answer of their partner, and attempts to understand their reality instead of only being focuses on their own answer. I argued that the constructions created in semiotic processing is an extension of a monologue, as we go one step beyond what we see and hear, but go no further. It brings us further towards illusion over reality, as the assumptions are based on our own experience and not of the mind of the Other. This aspect of understanding would be step in the correct direction - a step towards true intersubjectivity. It is not enough to want someone to see things your way, or to find someone who sees an object in a similar view, but to want to see someone else's opinion.

Understanding

The realities presented by both individuals must be understood at some level. This mutual understanding permits the shared of unshared moments, a concession of difference but equality.

> Example: The horses were also a valid interpretation. (P25, i6)
> It was reasonable because I could see an animal but not horses. (P41, i6)
> That was my second choice. (P19, i8)

If *understanding* can be a supplement to shared reality if the *shared inner states* condition fails, then there must be a variety of ways to promote shared reality. If the person locks onto condition three, the epistemic motives, an underlying motive of interest can develop, even when the *shared inner states* fail. "Interest" here focuses just on the interest of the reality presented, not of the interest of the partner. This was noted by my coding of "Interest / Desire." The distinction here is that the understanding condition is still not met.

Our participants could not understand the difference, but instead of rejecting the reality ("A normal person would not pick man in armor." P35, i8) they approach it in a much more epistemic sense, accepting the subjectivity of the situation.

Interest

> Interested as to why he/she said that + wanted to look at the picture again. (P13, i5)
> That their interpretation of the image was interesting. (P43, i1)

Semiotic processing can help us understand the idea of intersubjectivity and shared reality. Within semiotic assessment, we can see people reacting to shared (and not shared) realities in a variety of ways – it is not as black and white as I-Sharing promotes. Nor is shared reality as black and white as either shared or not – even not shared moments have a variety of strength within them. Within semiotic construction, we can see our attempts to reach intersubjectivity. We try to understand the minds of others but instead falter and leave ourselves instead casting judgment and assumptions. Yet in disagreement, we can sometimes strive to understand the other, not assume. Within these times, when understanding and interest are high, when we attend to the Other instead of focusing on ourselves, that we can reach intersubjective moments. Through semiotic processing, one can track attempts to both understand the Other and see how conclusions are made throughout time.

Going Further: On the Subject of Rumors

Within semiotic processing, I argued that constructions are re-added into the acquisition base and can then be used to influence further processing. The construction of the person as one of science and technology was not forgotten immediately after writing it down – their conclusion then influenced further conclusions and thoughts and feelings about their partner over time. By constantly building upon itself, the process helped build a more complete image of their partner than had the constructions not have been added into their base. These constructions came from observing the other's answers and introspectively reflecting on what that could mean about the Other. But, the growth in our acquisition base is not made only through introspective and observation. We communicate with others to extend our knowledge of the world, and this communication involves the passing of information from one person to another.

A rumor is "a specific (or topical) proposition for belief, passed along from person to person, usually by word of mouth, without secure standards of evidence being present" (Allport & Postman, 1947, p. xi). The conclusions made by the participants within the experiment were propositions for belief without secure standards of evidence as well. To conclude that someone was interested in spaceships and technology based off of seeing a rocket within an inkblot is, by many measures, not a secure standard of evidence. But the definition by Allport and Postman does leave us with a further specification - that the

proposition must be passed along. Semiotic processing can then be applied to the beginnings of a rumor in which the construction is not only added into our own acquisition base, but also attempted to be added into the acquisition base of others.

But acquisitions are not simply integrated into the base right away – the construction being passed must first go through the semiotic process of the receiver, and their own personal reactions and acquisition bases of both the rumor-mongerer and the proposition itself must be involved within the process. So, as the participant observes an *ambiguous* situation in which the answer "spaceship" is given, he or she uses the mechanism of semiotic processing to construct an image that explains this answer because the person is interested in science and technology. Then, as it is *important* to humans to feed our semiotic data, the participant attempts to spread this construction to another. This would satisfy Allport and Postman's requirement that a rumor include both a certain amount of ambiguity and importance for a rumor to exist (Allport & Postman, 1947).

The second person within the chain now has acquired this new information ("Person Y told me that Person X is interested in science and technology"). The second person now can comprehend this data (Is that a likely situation for Person X? Can I trust Person Y? Do I agree with this information?), incorporate it (I also like science) and then construct the new image of Person X as someone who is interested in science. The construction from Person Y about Person X has been leveled to just science from science and technology, similar to how Allport and Postman found in their experiments with leveling, sharpening, and assimilation.

Semiotic processing can help understand how rumors evolve, as each instance of a certain proposition must undergo each individual's semiotic process. It shows the beginning and transformation of each rumor on a personal level. While semiotic processing cannot show how the rumor transmits between person to person, it can help provide insight into how a rumor is created within a single individual.

CONCLUDING POINTS

If I am standing in a corner, you cannot be standing in the same place as I. While you may see the same object as me, you do not see it from the same eyes, from the same angle, from the same reflection of the light – our frame of reference of the object can never be the same. Even if we were to somehow distort the laws of physics, still our frame of reference would vary. Our background, our life experiences, and our personality – they all mold to create not only who we are but also how we construct the world around us. But it is not to say we are all fully different, or that we can never be similar. Surely I share similar life experiences with my family and friends. My heritage is not unique. Many others share my views on politics, religion, and the future. So while our frame of reference may never be identical, there are certainly aspects of my frame that overlap with yours. We revere the same symbols, adhere to the same laws, and behave with similar mannerisms. Our constructions of the world overlap on a regular basis.

Construction of our world involves three psychological processes: semiotic acquisition, semiotic assessment, and semiotic construction. Together, this mechanism of semiotic processing helps us understand and theorize about the world around us, even if the assumptions we create are not valid. Semiotic processing is the mechanism we use through gathering and collecting outside data to create an internal image of what we are processing. Mechanisms of meaning making can lead to both positive and negative ends. While each process is unique to the individual and each may have a different affective evaluation, behavioral differentiation, or construction, this process is universal in its use and application in all data-receiving moments.

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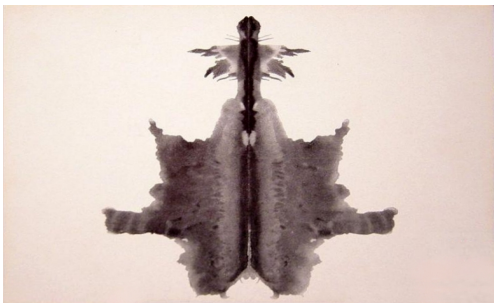
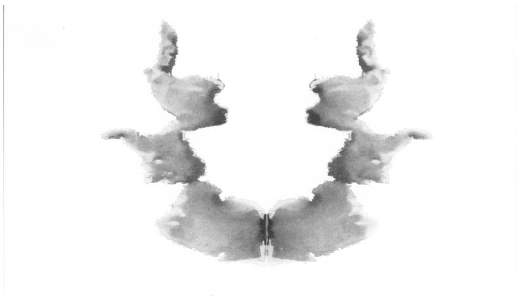
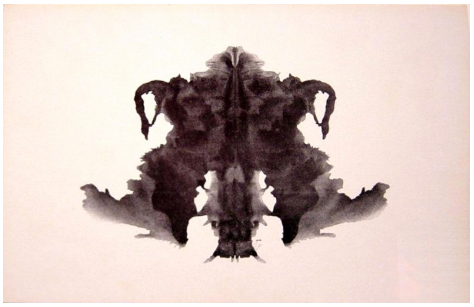
Appendix A: Conditions

# Shares	1	2	3	4	5	6	7	8
?	?	?	?	?	?	?	?	?
0	D	D	D	D	D	D	D	D
1	A	D	D	D	D	D	D	D
2	A	A	D	D	D	D	D	D
3	A	A	D	A	D	D	D	D
4	A	A	D	A	A	D	D	D
5	A	A	D	A	A	A	D	D
6	A	A	D	A	A	A	D	A
7	A	A	D	A	A	A	A	A
8	A	A	A	A	A	A	A	A
7	A	A	A	A	A	D	A	A
6	A	D	A	A	A	D	A	A
5	D	D	A	A	A	D	A	A
4	D	D	D	A	A	D	A	A
3	D	D	D	D	A	D	A	A
2	D	D	D	D	D	D	A	A
1	D	D	D	D	D	D	D	A

Appendix B: Inkblots and Possible Choices

Inkblot 1  1: Animal Skin ; 2: Rug ; 3: Axe ; 4: Dragonfly	Inkblot 5  1: Spade ; 2: Arrowhead ; 3: Thumbs ; 4: Women
Inkblot 2  1: Man ; 2: Throne ; 3: Toad ; 4: Goat	Inkblot 6  1: Fire ; 2: Pelvis ; 3: Earth ; 4: Clouds
Inkblot 3  1: Rocket ; 2: Monkey ; 3: Two women ; 4: Horses	Inkblot 7  1: The Eiffel Tower ; 2: Shellfish ; 3: Seahorse ; 4: Birds
Inkblot 4  1: A chicken ; 2: A panda ; 3: A child ; 4: Two dragons	Inkblot 8  1: Skull ; 2: Panda ; 3:Cat ; 4: Man in armor

Appendix C : *Questionnaire*

Procedure Questions

Participant # _____
Image # ____:

1) Did you and your partner have the same or different response? (Circle one).
   a) Same
   b) Different
   c) Not sure
2) When I heard my partner's response, I (thought/felt)_____
   _____.
3) I feel _____ when thinking about my partner because
   _____.
4) Compared to the last interaction, my interpretation of my partner has _____
   _____.
5) I believe my partner is _____ because
   _____.
6) When I think of my partner, I feel _____ because of_____.
7) When I think of my partner thinking of me, I believe they think that I
   _____.
8) I believe my partner and I could _____.
9) Overall thoughts, feelings, beliefs, etc. of your partner and this interaction at this point in time:

_____
_____
_____
_____