

Social Simulations as a Tool for Understanding Individual, Cultural, and Societal Change

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In addressing the role of social relations in the linked processes of individual and societal change we take it as axiomatic that these relations are constituted in the medium of culture. Our approach has been greatly influenced by the work of scholars in the cultural-historical tradition, particularly L.S. Vygotsky (1978) and A.R. Luria (1979) as well as a number of American and Western European scholars (see Cole, 1996 for a relevant summary). From this point of view, culture, the accumulated social inheritance of the social group and humanity as a whole, is central to understanding how social relations enter into the process of both individual and societal change. Social interactions and social formations, in this view, are conceived of as “joint mediated activity,” people acting together in a cultural medium.

It is also a basic assumption of this approach that processes of change, in our case, processes that are understood as processes of development, must be studied over time, a principle that is more often honored in the breach than in practice; it is not an easy matter to study the development of individuals in a cultural medium over significant periods of time. As a consequence, cultural historical scholars, and other developmental scientists who adopt some form of this methodological principle, have largely restricted themselves to individual case studies, large quantitative “life span” studies, or cross-cultural studies in which the cultural variation is also considered an historical variation (see for example, Baltes, 2006, Luria, 1979). A small, but important group of studies have managed to follow a single group of people over an extended period of time during which important cultural historical change has occurred, a process that traces change occurring over decades (i.e. Greenfield, Maynard & Childs, 2003, Rogoff, 2011). In this study we turn to a different means of

analyzing the interplay between individual and social development as it occurs in culturally mediated social interaction.

We adopt a methodology which, we believe, provides considerable insight into the ways in which culture weaves together social interaction among individuals, the role of those interactions in larger “societal level” processes, and the development of individual identity. Our observations are grounded in a cultural simulation that took place over a period of 10 weeks among a group of university students. During the course of the simulation we were able to observe the development of two contrasting “idiocultures” (Fine, 1979). These circumstances allowed us to document, from the perspectives of all of the participants, the initial invention of group artifacts, narratives, cultural practices, and shared values as the participants in the two cultural groups engaged with each other in creating and performing their cultural norms and practices. The use of such simulations can, we believe, illuminate the processes by which, in living their everyday lives, people create social worlds and actively shape their own development. It re-enacts, in some respects, the pioneering work of Sheriff and Sheriff (1953) and others on inter-group conflict and its resolution, although in our case, it appears that conflicts between the groups, however seemingly simulated and inconsequential, had surprising and enduring psychological and social consequences.

The simulation we used allowed us to retain many of the elements of “real-life” cultural work, particularly, unscripted interactions among the participants, unpredictable responses, and the emergence of artifacts and relationships as they developed over time. Simultaneously, we were free to manipulate the game’s parameters and factors in order to encourage certain kinds of cultural and psychological phenomena to become more accessible for observation.

The simulation also highlights a number of related issues that need to be considered in addressing the role of social interaction in development. Paramount in this case is the importance of

play, emotions, and inter-group interaction. Once engaged in the simulation, what begins as a game becomes real, enabling participants to draw conclusions that they generalize to their everyday life experiences outside of the simulation. We return below to discuss these general theoretical issues, but first we need to describe the simulation and enough facts about its operation to provide the reader with a foundation upon which to judge the usefulness of our approach.

The Simulation: A Brief Overview

The simulation we devised was based on the BaFa' BaFa' cultural simulation game designed by Gary Shirts (1977) which has been widely and successfully used for more than three decades as a tool for teaching cross-cultural sensitivity (Sullivan & Tu, 1996). The idea behind BaFa' BaFa' in its earlier applications was to give participants an opportunity to experience cultural border crossing in a safe space, and to reflect on and unpack their experiences without the prejudices and constraints that real-life cultural border crossing often entails.

In the original version of BaFa' BaFa', participants are divided into two groups. (In our case, the first author led one group, a graduate student confederate, Rachel Pfister the other, and the second author observed and assisted in dealing with unexpected and potentially experiment-ending difficulties as they arose). In the original BaFa' BaFa' simulation each group spends about an hour learning a different set of cultural norms. The groups then exchange members for short periods of time in an effort to learn about the other group's culture. The goal is to learn as much as possible about the other group's values and customs without directly asking questions – much like we are forced to learn when we travel to a foreign country where we do not know the language. Because the two cultures in the BaFa' BaFa' simulation are vastly different (“Alpha culture” is geared toward community spirit and sharing while “Beta culture” is focused on personal achievement), there is

ample potential for misunderstanding when a person moves from one group to the other. During the simulation each culture develops hypotheses about the other, which are tested when participants in the two groups come together at the end to talk about their experiences.

The rules of BaFa' BaFa' are few and easy to learn; just enough to deal with the situations that were likely to arise in the half-day seminars for which it was initially designed. The rules of this initial form of the simulation also suited our purposes especially well, precisely because they were inadequate to meet the demands of prolonged social interactions and would require elaboration and embellishment as the simulation progressed.

BaFa' BaFa' was designed as a short term training experience where highly educated Americans were being prepared to work in economically "underdeveloped" countries among populations with strikingly different world views as well as world circumstances. We sought to draw out the process in order to allow participants time to elaborate upon the rudimentary cultural "starter kit" that we prepared for each cultural group, and to explore at greater length the process of inter-group interaction. In place of a half-day exercise, we extended the time frame to fit within a university quarter system, where solutions to problems arising in one session could be accumulated and passed on in the next. During this time, the participants met bi-weekly. In the first three weeks they generated two distinct cultural experiences shared by ingroup members; in weeks four through six interactions between the two cultural groups took place; the final four weeks were intended to be joint, collaborative, reflection on the simulation events. We also built in self-reflexive documentation; all participants, including the organizers, were required not only to simulate being a member of a particular culture, but to document their experience as participant observers in weekly field notes.

Planting the Seeds of Culture: The Alphas and the Betas Become the Stoners and the Traders

Frederic Bartlett (1932) wrote that the acquisition of socially constructed knowledge is always grounded in an initial affective experience; this first impression results in an aligning attitude or perspective that is difficult, if not impossible, to erase. With this in mind we worked to establish two affective climates that would be salient enough, and different enough, to launch the two cultural groups off in different directions. The formation of the two groups took place in parallel; we recount their development in the intertwined fashion in which we, and the students, experienced them.

The Initial Setting and Origin Myth

On the first day of class, the students (who had expected a standard lecture class, where they would sit and take notes, read, and take exams) were given a cursory introduction to the simulation. As preparation for the next class session, the forty students were randomly assigned to the cultural group they would participate in. As apprentice ethnographers they would be asked to write fieldnotes after every class session. Their first assignment was to write a fieldnote describing their impressions of this introduction and their predictions about how the course might unfold.

The students were surprised and baffled – but willing:

I have to admit that the acting childish and playing games does concern me a little. It seems like it would be weird acting like this especially in front of other students that I don't really know. I am not sure how such rudimentary child games or systems will be able to provide any revolutionary data or results, but I am willing to follow the rules of the game and try to help out with providing the results we are seeking (Sam).

In the next class session, the students (now divided into two groups which were temporarily labeled “Alpha” and “Beta”) met in two different conference-style classrooms on adjoining floors of the same building on campus. When the Alpha group found their room they were greeted warmly by “Mother Rachel”, who served toasted raisin bread and apple juice. The conference room furniture had been rearranged to create a casual and homey atmosphere; “Good Vibrations” by the Beach Boys was playing softly in the background.

By contrast, the Beta group entered a “business meeting” conducted around a large table in the center of the room. They were greeted by Mrs. Wilson, the “banker”. Beta participants were treated with professional courtesy, issued pre-printed nametags, and seated at the conference table. Self-service water, coffee and donuts were arranged on a side counter.

In addition to being exposed to core cultural practices through these spatial/symbolic means, each group was provided with a bare-bones mythic fable from which their cultural narratives could be launched. The folk tale “Stone Soup” was chosen for the Alpha culture, the more communal of the groups. In this classic legend a traveller enters a village of hungry people. Instead of asking for food he produces a stone from his cloak, drops it into a pot of boiling water, and begins to smack his lips over the delicious soup he is preparing. As he attracts the attention of the townspeople he convinces each of them to add a little of whatever bits of food they have in the house to his cauldron. In the end there is indeed a lovely pot of soup for everyone to enjoy.

A tale based on the Old Testament “Parable of the Talents” was written for the Beta group, where individuality and personal achievement was honored. In this legend the aging leader of a financial institution entrusts each of three valued employees with a large sum of money. Their task is to use the cash as they see fit, and to report back at the end of the year on the status of their investments. The first employee builds a more impressive bank, the second

saves the cash, and the third, through hard work and shrewd trades, doubles her investments. It is this third employee that is chosen as successor to the leader of the group.

The two classic tales exemplified two different sets of values. They would provide different cultural frames of reference through which the students approached the tasks and situations they encountered in the simulation, and serve as ethical anchors for the two developing cultural groups. In order to insure that the students “got the message” from each of the parables, and to establish from the outset the practice of integrating the simulation events with the participants’ larger life narratives, the students’ homework assignment for this day was to write their own one-page story, either actual or fabricated. This story should capture some element of what they considered to be the “spirit” of their group.

Initial Results

The student responses were our first bits of evidence that this initial cultural experience had been effective in communicating the core differences between the two cultures. We were fairly certain, given reports of the initial BaFa-BaFa simulations that some such process would take place, but we had little idea of how much cultural learning would occur. Nor could we anticipate what the students would, in particular, write about. The results quickly indicated that the contrasting cultural systems were discernable across a wide variety of narrative contents.

Alpha participant, Vivian, submitted personal story about being rescued by a group of helpful citizens when her mother’s car broke down on a rainy night with six-year-old Vivian, Vivian’s younger twin brothers, and grandmother on board. A man in a pickup truck stopped to help, but Vivian’s mom was afraid and sent him away. The man returned with his wife, but her car was too small to accommodate the whole family and Vivian’s mom wouldn’t hear of splitting them

up. So the man left again and recruited his neighbor who owned a van, and his son who had some car repair expertise. Together they were able to get the car running and Vivian's family to safety. In the final paragraph of her story, quoted below, note the explicit connections that Vivian draws between the Stone Soup parable, her childhood memory, and her own personal development.

The man and his son must have figured out what was wrong with the car because they all showed up at Wendy's before we were even finished eating. I have kind of forgotten all about that night, but my mom still talks about it sometimes, so I'm not sure if I remember the night or just her stories about it. When I heard the Stone Soup story yesterday I started to think about the fact that our bad situation that night was too complicated for one person to solve but it could only be solved if everyone did something. The man with the stone was kind of like the man in the red truck. He got a bunch of people to come together to help us. I think I will always remember that now and try to pitch in when I see people in need of assistance even if someone else is already trying to help out because sometimes we all need to be in this life together (Vivian, SS, 4/3).

Beta culture's Bruno also tells a family story, about his grandfather who owned a small salt company in Korea. One day as grandfather was waiting to unload his salt from a barge in Incheon harbor it began to rain. In the rain a huge snake slithered up on the deck, causing the workman to run before unloading the salt. It rained for several days while grandfather worked frantically to keep his inventory covered and dry. When the skies cleared grandpa saw that the snake had actually been a large rope that had washed up, and that all of the other merchants' salt, which had been unloaded in the rain, had melted away. In his closing comments below, Bruno credits the happy outcome to his great-grandfather's "persistent nature", which is central value of Beta culture:

Only our great-grandfather's salt was safe on his boat. The price of salt skyrocketed that day, more than four times the usual price. That day our great-grandfather made a large fortune thanks to the "snake" and the rain, and his persistent nature most of all (Bruno, FTC, 4/3).

After reading the students' stories we were satisfied that they had adopted the moral and aesthetic frames/moods of their respective cultures and were able to generalize them across a wide range of social situations. These contrasting cultural currents would underlie the norms and practices that the students would engage in as the simulation progressed.

Enculturation: The Acquisition of Shared Cultural Practices.

Our next task was to present each group with a bare-bones "cultural tool-kit". These initial artifacts would serve two purposes in the simulation. First, the artifacts could be easily tracked as they were selectively deployed and adapted to meet the challenges the participants would encounter as the simulation evolved. Second, the two sets of materials and procedures would prescribe unique ways of interacting that could be readily learned by each group, but that could not be easily deciphered and duplicated by outsiders. One culture (Alpha) involved rigidly regulated social interactions, and work/games that required little expertise. In the Beta culture participants were free to interact socially as they wanted, but their work/card game was complex and competitive. Descriptions and instructions were minimal, providing space for differential interpretation, expansion, and evolution of the rules and behavioral norms as the two cultures emerged.

The Work of a Stoner is all Play

The Alphas learned that their society was a benevolent matriarchy where warmth, affection and tolerance were valued above all else. Alphas were instructed to stand close, touch often, and

show genuine concern for each other's welfare. They were never, under any circumstances, to be impatient, unkind, angry or aggressive. Alpha etiquette required clan members to greet each other fondly, and then move immediately into concerned inquiries and detailed discussions about the health, achievements and wisdom of each other's grandparents and other ancestors. Polite Alphas pay full attention to each other in conversation. Newcomers wishing to join a conversation in progress should listen quietly for a while to be sure that they can contribute appropriately, and then wait to be invited before speaking.

Bob Marley singing "*don't worry 'bout a thing*" in the background pretty much sums up the rhythm that emerged inside the Alpha culture. We should not have been surprised when the Alphans immediately named their group "Stone Soup" and began referring to themselves as the "Stoners". The Stoners learned that theirs was a wealthy tribe. In fact, resources and money were so abundant that neither worry nor work would play a visible role in daily life. A large pot of "gold" coins was displayed prominently in the center of the room. The Stoners were told that they should take anything they needed from it, but to be sure and put back whatever was left at the end of the day. The hoarding of money, or any display of attachment to, or particular interest in money, was considered extremely rude.

The Stoners were divided into four "families" and issued explicit rules about appropriate inter and intra-family conduct. Their days were spent enjoying each other's company. The room which the Stoners called home was stocked with "comfort food" as well as a variety of craft supplies, like rough woven cloth, needles and thread, yarn, markers, glue and such, all or none of which the players could use as they wished. Stoners could eat and drink, play their card game, listen to music, sing and dance, or engage in craft projects, but they should never forget to value friendship and camaraderie above all.

For Beta's It's all about the money.

Betans learned their worth was determined during the 15 minutes that they would spend on the trading floor each day. A successful Betan must be honest, consistent, persistent, and able to drive a hard bargain. Students would discover on their own that time management was an important element of Beta success, as the more transactions that could be accomplished during a single trading session, the more opportunities a Betan would have for increasing his or her wealth.

While the Stoners were making nice, the Beta group chose the name "Fair Trade Cartel," and began calling themselves the "Traders". The Traders were grouped into four trading teams, and while personal achievement was their ultimate goal, success was only possible through in-team cooperation and between team-competition. The majority of their time was spent trying to gain the competitive edge necessary to be successful on the trading floor.

Trading cards were distributed, along with a warning: the trading language and the rules of trade that were about to be orally shared with the group were closely held secrets that conferred huge advantages on the trading floor. This insider knowledge was never to be written down or shared with anyone who was not a Trader. Any leakage of these details would greatly jeopardize the success of the group, and limit the players' earning potential. It's important to note that no penalties or procedures for enforcing the rules were introduced, or even suggested. This left the players free to create, or not, whatever means of policing each other they felt necessary.

The Traders learned that all business transactions must be accomplished using a special set of words. This system sounded complex when heard for the first time, but it was actually quite simple when understood. There were only thirteen permitted words, six for colors and seven for numbers. The card game that the Traders were about to learn was a lot like "Go Fish" and would

require the players to describe the color and number of the cards they were looking for. When asking for a card, the first thing to do was to designate its color. Colors were communicated by using the first letter of the English word for the color (R for red, B for blue, Y for Yellow, and so on), followed by any vowel sound. So when asking for a red card, a player would begin his query with “Ra”, “Re”, “Ri”, “Ro”, or “Ru”. The listener ignores the variation in vowel sounds and listens only for the initial consonant. Numbers were communicated using the first and last letters of the player’s own name followed by any vowel sound, repeated to create the number of syllables equal to the number of the card that was being requested. A person with the initials D.W. would communicate the number four by saying “DaWa DaWa”. An informed listener ignores the sounds themselves all together, needing only to count the number of syllables that were spoken. A request for a red five would sound like this: “Ro, DaWa DaWa Da”. “Ro” (which could also have been “Ra”, “Ri”, or “Ru”) to designate the color red, followed by the five syllables, “DaWa DaWa Da”, to indicate the number five.

An uninformed listener might walk into an animated trading conversation, which sounded terribly complex due to the almost infinite possible combinations of first initials and vowel sounds. In reality, only 13 different words were being communicated. After a few awkward attempts most of the students picked up producing the language quickly. Understanding each other was a different skill all together, and took a little longer to master, but before long all of the Traders became fluent in “Tradolog”, as one Filipina student dubbed the language.

The original stacks of ten cards that each player received were purposely scrambled to contain excessive amounts of some colors and numbers, and few or none of others. Trading involved striking deals with other players that would be beneficial to both, or that would help both players assemble complete card sets. What the Traders were not told was that, in the cards that

were distributed to them, certain necessary cards (threes and fives) were extremely scarce. In the following days they would discover that the visiting foreigners were quite rich in these valuable resources.

Thus concluded our first week of the simulation. As classes were dismissed, passersby would have mistaken the departing Stoners for a group of close friends leaving a party, complete with hugs and fond farewells. The Traders strode out the door with apparent purpose and direction. Tim was singing “Ain’t nothin’ gonna breaka my stride...” to the great amusement of his teammates.

Stoners and Traders Performing the Worldviews of their Cultures

As Rachel, the Stoners’ facilitator, arrived on campus the following week, she walked past a cluster of Traders. Rachel was surprised by their mild, but clearly antagonistic taunts; “oooo..here comes the leader of the Stoners” and “Traders are best!” While this behavior was annoying and disturbing, we took it as evidence that the students were identifying with their cultural group, and found it consistent with the large body of research by Henri Tajfel and colleagues who show how little it takes to provoke in-group vs. out-group behaviors (Tajfel, 1982. Tajfel & Turner, 1978).

Already Stoned! No-shows, Tardiness, Boredom and Lack of Purpose

Despite our insistence on punctuality, and the students’ understanding that there would be a quiz on the assigned reading at 8:00 am, seven Stoners were missing at 8:15. Five students would show up before the class was over, but two just did not bother to attend. The beginning of class had been designated as the only time that the cultural rules could be explicitly discussed. This meant that absent and tardy students might miss out on some of the information necessary to participate fully in their culture; they might never become fully contributing members of their culture. This could

seriously jeopardize the students' progress and that of the entire simulation. We were left to question how, in a culture that is intended to be relaxed and anything but time-conscious, can we instill a desire in the students to be on time for a class that meets at eight o'clock in the morning?

Already into it! Present, Punctual, Engaged

On the same day the Stoners were dealing with lateness and no-shows, the facilitator for the Traders arrived at 7:45 a.m. to find an animated group waiting outside the door of the conference room, eager to begin the simulation. As soon as the door was unlocked the students rushed in and began re-arranging the furniture to create a "trading floor". Each of the small trading teams clustered in a different corner of the room. When donuts arrived the students quickly helped themselves from the table in the back of the room and returned to their corners without conversing with anyone outside of their immediate group. Sam hurried in at 8:03. He was winded and apologized profusely because his bus had been late and he had sprinted across campus to get there as soon as possible. Everyone else had arrived on time. The Traders cleared the center of the room and retrieved their sample sets of trading cards from the banker's file boxes. A small silver counter bell was introduced to mark the beginning and end of the exchange sessions. When the bell was tapped three times in quick succession and the announcement "the trading floor is now open" was made, everyone immediately sprang from their seats and the negotiations began. We were more than a little surprised at how unselfconscious the students seemed to be about using the rather silly language and body gestures that proper trading required.

In both cultures we were able to see the rapid appropriation of local cultural practices that were consistent with the "cultural starter kits" we had provided. In the weeks to follow, the interactions between the two groups produced unexpected ruptures in the easy flow of the activities.

These ruptures revealed many ways in which culture mediates both social interactions and the linkages between social interactions and the societal processes of which they are a part and which they constitute. We provide a few of many examples of this phenomenon at work

A Thief Among Us: The Emergence of Local Moral Norms and the Transformation of Money

In week four of the quarter we began the “cultural exchange” phase of the simulation. During each class period one family of Stoners and one team of Traders would leave their home culture and spend time inside the “foreigner’s territory”. The travelers were instructed to observe and attempt to interact as best they could, without asking direct questions about the cultural norms of their hosts. The hosting cultures were instructed to carry on as usual. We were surprised when the first group of Traders to visit the Stoners’ territory returned proudly displaying a gold coin that Tyler had pocketed during his stay. While his team was supportive of the theft, the members of the other groups were at first silent, and then disapproving. The general consensus was that stealing was simply not compatible with the underlying ethics of fair trading. Because the class period was coming to an end the subject did not get the airing it deserved, so the Traders decided to address the incident and how to deal with the offender at our next meeting.

The research team was thankful that Tyler had revealed the stolen coin during the last five minutes of class, because this meant we had two days to read the students’ field notes and to formulate a plan for going forward. The notes revealed that the Stoners who witnessed the crime were as unsure as the Traders had been about how to proceed. The Stoners had remained silent until Tyler and his team had left the premises, and even then had been reticent about reporting the incident to Rachel – not wanting to get anyone in trouble. Contrast this with Tyler’s jubilant account of the event:

I think that our society will definitely have the upper hand. I was a spy for the first group. It was so easy to figure out things of the other culture. I even got to steal another dollar from them (doubloon?). They were very immature compared to our culture. They spoke English, and I don't think they are very into the project. I will be able to crack them within two weeks. (Tyler, FTC, 4/10).

We had expected certain infractions to occur. Actually, we hoped they would occur so that we could witness the formation and enforcement of group rules. The research team had spoken before the simulation began about leaving the students to do their own policing and penalizing within their groups, but we had not anticipated any cross-cultural crimes. Now we agreed that the theft afforded an unexpected opportunity for us to observe any differences in the ways the two groups addressed a sticky moral issue. We decided that the facilitators would open the subject for discussion with each group at the start of the next class session.

From Profit to Prohibition: Money Becomes a Symbol of Honesty and Fairness

In Trader territory emotions (anticipation of the impending trading session) were already running high when Deborah introduced the subject of the theft. Immediately, the atmosphere shifted from a state of high energy to one of high anxiety. Luckily a number of the Traders had mentioned in their field notes that they were uncomfortable with Tyler's actions, finding them incompatible with the group's ethic of honesty and fair trade. Many had called for sanctions against stealing, and also against cheating, which they identified in their notes as secretly trading outside the designated trading period and using English on the trading floor.

Deborah read field note excerpts aloud, providing a balanced overview of the students' individual comments. There was a flurry of conversation before members of one highly competitive Trading team took charge. They suggested that there were three separate issues on the table for

consideration. 1. How should the Traders deal with a thief? 2. How should the Traders deal with a cheater? 3. What should be done with the Stoners' money that Tyler had stolen?

Tyler's team immediately came to his defense. Kelley appointed herself Tyler's counsel, and took charge of a defense team. They began by expressing disbelief that anyone could see Tyler's act as a crime. Taking the coin was not stealing, they argued, but a legitimate part of the information-seeking mission that Tyler had been a part of. Tyler brought this point home by producing the stolen coin and turning it over to the banker, suggesting that it be used for "charity". One of his teammates quickly amended Tyler's offer to, "We want it to go on display to show other people what Stoners' money looks like." Furthermore, they pointed out that *we* had given the Stoners who visited *us* some of our currency to take back with them. Tyler sums up his response to the accusations in his field notes for the day:

It seemed just like it would be an ordinary day in the Fair Trade culture. I then was shocked to find the teacher writing our discussion topics on the board. The first topic was "Cheating and Stealing". The main topic for discussion was my stealing of the coin that I got from the table when I was doing spy work in the Stone Soup territory! As far as the cheating, I had heard some normal English, but not too much. I mean, it's expected that in a new learning environment like this, people will talk the way they are used to. Personally, I was kind of surprised to hear the others say that I should be put on "trial" for helping out our culture in stealing the coin. I did not understand what the problem was for doing very good recon work, and doing everything in my power to help out our culture. I would understand if I were to be put on trail for doing something to my own benefit, but the stealing of the coin was done in selflessness, and not for monetary gain. That is why I was surprised that it was even an issue, and for me to be questioned in front of our culture (Tyler, Traders, 4/15).

Those outside Tyler's team were not immediately convinced. There was a difference between the Stoners going home with money that had been offered to them and what Tyler had done. Surreptitiously concealing currency that belonged to someone else, and then taking it without their permission...that sure sounded like stealing. Haley suggested that we turn Tyler over to the Stoners and let them deal with his infraction as they saw fit. They were, after all, the injured party and the crime had taken place on their grounds. The idea got a little traction at first, but then Harry objected, "Turning Tyler over to them will just mess it all up for the rest of us. It will turn into a big stinky international incident. They'll never trust us and we have to trade with them next week."

The motive for this argument seemed clear enough; the other teams were still waiting their turns to visit (and exploit?) the Stoners and they certainly did not want anything to interfere before this could happen. These sentiments were met with words of support and nods of agreement. That was when the group learned there had been Stoner witnesses to the theft, and that they were unsure themselves about how to handle the infraction. Silence.... followed by moans from all corners of the room.

On the issue of which culture should have jurisdiction, it was decided that the incident should be dealt with strictly in-house, so as not to further disrupt the fledgling relationship between the two cultures. In the end the act was judged to be a theft, not a legitimate reconnaissance activity, and to be contrary to the Traders' code of conduct. Tyler's case, however, was ruled to have mitigating circumstances. While the group could not condone Tyler's actions, neither could they impose a penalty when the crime had been committed prior to the rule being enacted. The stolen coin was accepted by the banker and put on display, not so much as an artifact of the Stoners' culture, but as a reminder and warning about the Traders' standards of conduct.

Folded, Spindled and Mutilated

We were expecting the Stoners to express anger, or indignation, and to demand retribution, or at very least compensation for the theft of the coin. Instead, the crime appeared to be a non-event. The Stoners listened quietly while Rachel read from the field notes that had described the theft and were immediately unified in expressing feelings of disgust and pity for the thief. *"If money was that important to him, well, let him have it. We have lots more where that came from"*. That was it. They had nothing more to say on the subject and quickly moved on to more important things, like line dancing and jewelry making, and true to the reputation all Stoners share, eating.

However, they, like the Traders, used, and transformed the meaning of, money – the money given to them by the Traders when they visited. The first family of Stoners to visit the Traders had been appalled by the Traders' obsession with monopoly currency and the lengths they would go to to acquire more of the stuff. When each of them was handed a stack of bills to take home, they were confused about what they should or could do with the money. The Stoners didn't need any more money. Other than its novelty, and of course its meaning as a gift from the foreigners, the Trader's currency had no real value in Stoner territory.

Everyone agreed that it did not seem right to set it aside. Somehow, it should be displayed, as one does with a cherished gift, to show the Traders that their offering was appreciated. Jaime suggested that it be used to make jewelry that could be worn proudly by the Stoners or gifted back to the Traders. And so it was. The dollar bills were colored with markers, folded into rings, twisted and tied into bracelets and necklaces, and shaped as feathers in headdresses. At first Rachel and I took these activities at face value – a thoughtful gesture on the part of the Stoners that was in keeping with their ethic of valuing kindness over money. Once

the field notes started coming in, however, we realized this was a not-so-subtle form of aggression. Jaimes' notes articulate the Stoners' thinking perfectly:

The souvenir of this experience was a wad of one-dollar bills, which were the least valuable in the Traders' culture. Rachel inquired as to what we should do with this currency. Knowing that it would probably and most definitely anger the Traders if we tampered with their money, I suggested we do something wild with it besides leaving them untouched. Someone mentioned using these bills as gifts to give back to the Traders, essentially giving it back destroyed to show them how little their money meant to us. This gift process then translated to a decoration party of folding and coloring the bills. In our table we did origami. Actually, after seeing what one guy did with his money, all of us at the table asked for a dollar ring. He became the maker of money rings! Afterwards we colored the rings with our family colors. Other families made earrings, making use of the string on our identifiers. The less our creations looked like Trader money, the happier we all became. My grandmother would look so pretty in Stoner Jewelry. :) (Jaime, SS, 4/15).

The Stoners jumped whole-heartedly into their craft of folding, coloring, threading and spindling the Traders' currency in the production of jewelry and various other hand-crafted items. On the surface this was done in the spirit of creativity and generosity; most of the pieces were given away to the visiting Traders. Underlying this industry, however, was the smug knowledge that the Stoners were belittling that which the Traders valued most. The Stoners had perfected the art of passive-aggression in a socially sanctioned way.

A ritual soon developed; the Stoners fashioned treasures and "innocently" bestowed them upon the greedy Traders; the Traders feigned delight and responded with profuse gratitude, before slipping away to hastily destroy the Stoners' handiwork in order to cash in the currency.

We see here, how a commonly understood action – a theft – came to have different moral significance in the two cultures. The Traders, having concluded that while valuable, the Stoner’s money could not be treated as money, converted the stolen coin into a symbol of the values of fairness and honesty and a tool of self-governance. The Stoners, by contrast, attributed no value to the money at all, so they appropriated it into the value system of Stoner culture, and made it a decorative artifact for use on festive occasions.

Cultural Misunderstanding and the Inversion of Values; Grandma!

In this section we trace the transformation of a word, “grandma,” in the course of interaction between the two cultural groups. In this case we see an inversion of meaning of an (initially) commonly understood word as it migrates from one culture to the other.

Stoner Grandmothers: The Pillars of Society

The word “grandma” was first used habitually in Stoner activities where it retained its conventional English meaning but was employed in very specific ways to help achieve group cohesion. “*How is your grandmother?*” was the traditional Stoners’ greeting, to be gotten out of the way before any other business could be attended to. Parting words always included wishes for grandma’s continued health and longevity. It was also customary for Stoners to pass the time telling stories to one another. Having just greeted each other with a reference to grandma, it was only natural that she would, more often than not, become a central character in these stories. The tales usually started out simple, but in an effort to keep things interesting, they became more and more fabulous as the simulation progressed. Thus it’s not surprising that the notion of an eccentric grandmother, one whose escapades were fun to recount and could be counted on to draw appreciative or astonished responses from the audience, readily took hold.

Many of these stories began as factual accounts of the lives of the students' ancestors which were then lavishly embellished with each retelling. One Canadian grandmother, described as a retired second grade teacher during the first week of class, evolved into a hippie living in a forest commune, singing, dancing and "*sending out vibrations of peace to the world*". There was an affluent Chinese grandmother who, in week one, spent her days playing golf, mahjong and blackjack. After a couple of retellings, she became a dragon-lady tycoon who marketed her secret family recipes for noodles and oxtail soup and used the proceeds from her new business to fight crime lords in Hong Kong. The most fantastic story was about a Korean grandmother who, when first introduced, employed herbal remedies to heal her family's ailments. She quickly transformed into "*a magical medicine woman*" who miraculously grew younger each year; but when she regressed to the age of thirteen, she reversed direction, growing older each year, and lived on until, at the age of six hundred and sixty-six, she told everyone she had had enough and just sat down and died.

The Stoners' emphasis on grandmothers served to link the classroom cultural experiences with the students' home lives and home cultures in ways that we did not expect. All of the in-class fabricating about grandmothers appeared to be stimulating a lot of real-life reminiscing about them as well, as Bernice's unsolicited add-on to her field notes suggests.

Being born in a wealthy family, raised by well educated parents, and fortunate to attend college in the US, my grandmother is a very bright, elegant, and sophisticated woman. Since she is the eldest daughter in her family, she has always been a great sister loving and caring for her younger brothers and sisters. She has the soul of unconditional giving and the heart of forgiveness. Her compassion is magnificent. Rarely will she refuse to help others, especially her love ones. She feels she has the obligation to protect her family and the responsibility to take care of all the family matters. My grandmother is very outgoing and family oriented. Every Sunday, she says, is a family day. Everyone in

my family gathers together and spends the whole day with each other. Usually, we have lunch in a dim-sum restaurant and after lunch we either go watch a movie if there is something good showing on the Movie Theater or go shopping and then afternoon tea at the mall. During her leisure time, my grandmother goes golfing with her friends or invites them over to her house to have dinner and plays Mahjong and Black Jack. Her life is full of colors and excitement. Every time I visit her, I see a happy face. The only times I see an unhappy face are when any of her family members and friends are anxious, irritated, bothered, and pessimistic over the matters of money and relationships. Every time, if anything happens that money is the only solution to resolve the problem, my grandmother, without hesitations, gives out her emergency money to help them. When she sees her love ones are hurt from a relationship, she tries to cure them by manifesting the power of forgiveness. To me, my grandmother is an angel. I love her so much (Bernice, SS, 4/10).

The Stoners' grandmothers also worked their way into almost every other aspect of their lives. When food was shared, whether it was Oreo cookies, apples, or tortilla chips, grandmother had either cooked it herself, created the recipe, or sent it along (from Tokyo, Taiwan or Toronto) with her best wishes. All of the Stoners' craft projects became reproductions of things grandmother used to make. Songs and dances (like the Stoners' rendition of Michael Jackson's "Beat It!") had all been passed down from grandmother. Card games were played by grandmother's rules, and Stoner norms for polite social interaction were maintained because grandmother said we should do it this way.

We were surprised at how deeply the Stoners took this part of the simulation to heart. As Mona's notes indicate, the lines between in-the-flesh grandmothers, and the simulated versions of them became very blurred.

The other finding I got from this class is the memory of my grandmother. My grandmother died when I was really little, I barely know anything about her. However, many members from Stone Soup culture share their stories to me about their grandmothers make me feel as if my grandmother had the same characteristics or experiences as their grandmothers. By listening to my members' stories about their grandmothers, whether they are true or not, I construct my own grandmother in my mind by embracing their information. I do not feel awkward or uncomfortable when they talk about their grandmothers because my memories toward my grandmother are inextricably entwined with how the people around me feel about theirs. The reason is that we can understand ourselves only through our relationships with others. Even though everyone's grandmother is not all the same, I believe that the characteristics of grandmother, for example, kind and loving to their own grandchildren, are the same. I really appreciate my new "family members" because they help me to create my grandmother's image by sharing their stories with me. Therefore, I will not hesitate or be confused when somebody asks my "how is your grandmother?" because she IS doing well somewhere I cannot reach but she is always in my mind (Mona,SS, 4/17).

From Pillar to (whipping) Post: The Traders Appropriate "grandma."

So varied were their stories – some fantastic, some descriptions of actual events including their grandmothers, that the Traders were convinced that the use of the word "grandma" must be part of some secret Stoners' language or code – much like the nonsense words used in the Cartel's trading language. Their puzzlement is captured nicely in the following excerpt from Aaron's visit to Stoner territory:

Semi-mockingly, I asked how their grandma was and what she was cooking. They responded deceptively and each told a story of nonsense. One said her grandma was climbing Everest and she was at base camp and how it was dangerous and a lot of people die attempting to climb it, etc. As the TA

came by, a member of the table asked her how her grandma was and she told another unbelievable story. But it didn't always seem completely nonsense as one member (Japanese) mentioned his grandma still lived in Japan on a farm with chickens, etc. His story sounded semi-plausible so I am not sure if all the stories are completely made up or not, and I have no idea what they might really mean. For all we know the Stoners might be cannibals. When they talk about soup, they might be saying "let's have Aaron for dinner" (Aaron, FTC).

The class agreed with Aaron's assessment and offered a flood of collaborating evidence. Abruptly Harry yelled over the din, "I've got it!" We've been looking for some way to accuse people of cheating - Let's use the word 'grandma' to announce that someone has broken the rules. Whatever 'grandma' means to the Stoners, I know it's not 'you're a cheater'. That will really confuse them!" And so it was decided; when Traders wanted to accuse someone of breaking the rules, they would point at the offender and yell "GRANDMA!" Soon an accompanying practice was established; if the accused did not agree that they had broken a rule, they would counter by barking, "GRANDPA!" Any witnesses could support one or the other by echoing either "grandma" or "grandpa", and if the accusation was upheld, the cheater would forfeit one card to the accuser and pay \$50 to the banker.

The habit of chastising each other with the word "grandma" turned out to be a far more aggressive act on the part of the Traders than anyone imagined at the time. Once the Traders had appropriated the word, 'grandma' took on a totally new set of meanings, and a life of its own. It wasn't long before Traders who were caught overstepping any sort of boundary were labeled "grandmas". This practice spread rapidly, and expanded to include all varieties of mistakes and infractions. When Deborah forgot to bring in a day's quiz, when a student was unable to answer a question about one of the readings, or when someone accidentally hit the light switch in the

windowless room, they "got the grandma word" (a phrase that featured often in the field notes, along with "used the grandma word" which was sometimes shortened to "used the G-word"). Spilling drinks, and dropping food or game cards, earned one grandma status, as did losing track of time in the trading game. One (male) student arriving late for class muttered, "I'm such a grandma".

Here we see with particular clarity how a valued practice or belief in one culture can be misinterpreted in another culture grounded in a different value system, inverting its meaning and converting what was a highly prosocial lexical item and associated practices into negatively valenced tool of approbation and scorn. Moreover, we see in striking form the amazing creativity of the participants in generalizing the new, negative, and culturally idiosyncratic lexical item, now devoid of its common everyday meaning in the lives of the participants, the broad category of "negatively sanctioned actions."

Only a Simulation? Lessons from the Entangled Lives of Stoners and Traders

As noted earlier, our expectation at the start of the simulation was that it would be a rough analog to the Robber's Cave experiment conducted by Sherif and Sherif (1953). However, the differences are instructive. The Sherifs set out to trace changes in within-group social structure as two more or less identical groups formed in isolation from each other and then came into a pre-planned set of interactions designed to engender conflict and then provide conditions for its resolution. We set out to trace how individuals, relationships, and societal norms, inside two distinctly different cultures, develop and change when these cultures come into dynamic relationship with each other, anticipating no severe conflicts.

Like the Sherifs, we found that our cultural simulation of the two groups revealed a process that took place over time, although in our case the changes were evident within a very brief exposure to the experience. However, the intensity of the us-them relationship between our two

groups caught us completely by surprise. At one point in the course of the simulation, in an episode that is too lengthy for this essay, a student cheated on the rules of the simulation that threatened to destroy the entire experiment. The resulting intervention that allowed the simulation to go on had consequences that fed the fuel of intergroup rivalry. Unlike the Sherif's, we did not have a ready-made solution to the conflict.. We didn't imagine that we would need one!

The simulation continued until the end of the 6th week of class. At that point, the class started meeting together as a single group under the ordinary norms of the university. By reading common articles about intergroup interaction and the ways in which groups misinterpret and devalue each other and applying these to our experiences in the simulation, we assumed that students would be led to a deeper, more or less common, understanding. We were completely wrong.

The continued mutual denigration of each other that characterized the second half of the simulation carried over into the presumably-uniting intellectual discourse that followed, up to and including the last moments of the class. This continued influence of the simulation was not only apparent in the ways the students readily identified themselves as either Stoners or Traders, but also in the in-group bias and out-group depreciation that played central roles in all of the presumably common daily activities. While there were times when the mood in class was light, even jovial, the in-group vs. out-group hostility never let up. The two groups were cordial enough to make the meetings bearable to us, but the class remained polarized. Long after the simulation portion of the class was over, seating charts, which we had maintained from the first day of class, showed that, with the exception of those who wandered into a class session late, the students always sat with their their "natal" cultural group.

Two contentious threads wove their way through all of the subsequent class discussions and surfaced as minor spats between the Stoners and the Traders several times each day. The first

reflected the Stoners' perception of the Traders as "money grubbers". In fact, even on the last day of class, we overheard one of the Stoners saying, "*We're surrounded by Traders, guard your money!*" The second sore point was the way the Traders characterized the Stoners as "spoiled and lazy". Bruno's parting comment after the party on the final day was, "You guys didn't work nearly as hard as we did. You should all get at least one grade lower than us."

In sum, not only did members of the two cultural groups draw different conclusions about the same event, but they used those (mis-understandings) to paint deeply negative pictures of the opposite culture, and highly flattering pictures of their own. The Stoners ended the course with a narrative about an exceptionally evolved, peace-loving society which struggled to maintain its gentle ways against the invasion of a coarse and greedy band of Traders. The Traders' narrative, on the other hand, was about an intelligent, civilized, industrious group of entrepreneurs who stumbled across a hapless clan of hippies, kind and gentle, but too lazy and backward even to value or protect their own resources.

An Imagined World Made Real: Simulations and The Work of Romantic Science

At the conclusion of our simulation, thirty-seven of forty students reported they felt they had been placed in the right culture for their personalities, even though these assignments had been entirely random. It seems to us pretty certain that all participants in the course, including the instructors, had collectively created two distinct cultural systems that changed dynamically over time. Moreover, as the two systems developed in mutual (antagonistic) interaction with each other, we were able to participate in the process of *within-group* cultural formation "in isolation", and we were able to observe the crucial role that *between-group* interactions play in shaping within-group dynamics and societal norms.

Our method of planting the seeds of culture and then taking part in its growth also gave us access to the intensely personal and emotional quality of participating in the simulation. Our data indicate clearly that within the first weeks of the simulation the events began to feel unbelievably real to all of us. No one in the project predicted the intensity of the emotional investments we and the students were making. Anna sums up perfectly what the rest all the participants were also saying in their field notes:

I know that this culture and these games (somehow the word "game" sounds wrong here) were not real, but they were not NOT real either. I was really there, in that real room, holding those real cards with my real fingers. I was really doing those things, really speaking that language with my real lips. I was really having those thoughts with my real brain. (hmmm? How can I get that money?) I was really feeling those feelings of greed and frustration, and then guilt. This class has made me wonder. Where does a game like this stop and "real life" begin? Is one living inside the other? (Anna, Traders, final reflection)

Anna's observations and questions would have pleased Jean Baudrillard. He asserted that we construct a simulation because we cannot obtain the information we want from the target entity directly; so we proceed indirectly by creating a model, which is sufficiently similar to the original that we are confident it will reveal the information we are looking for. Problems arise when we begin to test the reaction of society to our simulations.

"The network of artificial signs will become inextricably mixed up with real elements... You will immediately find yourself once again, without wishing it, in the real, one of whose functions is precisely to devour any attempt at simulation, to reduce everything to the real – that is, to establish order itself... order always opts for the real" (Beaudrillard, 1994: p. 20-21).

As Beaudrillard pointed out, it can be practically impossible to isolate the process of simulation from the force of the “real” that surrounds us. But in cases such as we have recounted, the simulation is distinguishable enough (the students have graduated from the university, the course stopped, the class was over, new circumstances have arisen “to push the experience into the past”) that can be extremely useful for articulating the complex relations between culture, individual development, social interaction and society.

We believe that this form of simulation also provides a good example of the process of research that Alexander Luria (1968/1972) referred to as “romantic science” (a term traceable at least back to Goethe (1798/1988)). In Luria’s view of romantic science, investigators involve themselves with the object of their research over relatively long stretches of time, ranging from weeks to several years. Deep understanding comes from the ongoing process of deep engagement in problems of mutual concern, albeit concerns that differ in their points of view and individual trajectories.

In this regard, the BaFa’ BaFa’ sociocultural simulation functioned perfectly as a romantic science method in this project. Not only did the game allow us to expose the social processes we were seeking to understand (sometimes in preplanned ways, sometimes as a response to local contingencies), it also engaged the participants and elicited feelings in ways that permit us to draw plausible connections between events in the research setting and those we encounter in naturally-occurring life experiences.

We had created and lived for a while inside an imagined world, which is exactly the way two very influential thinkers describe culture. Evolutionary psychologist, Henry Plotkin (2003), titles his book on the evolution of culture, *The Imagined World Made Real*. He suggests human culture

can be distinguished from the cultures developed by other living things in that all of our cultural artifacts existed first in our imaginations. Lev. Vygotsky had expressed the same idea almost a century earlier: *“All that is the work of the human hand, the whole world of culture, is distinguished from the natural world because it is a product of human imagination and creativity based on imagination.”* (L.S. Vygotsky, 2004)

But was it good education?

We cannot end without addressing an important issue that we have bypassed in our focus on the simulation. It was part of a university class that was supposed to induce students to be more reflective about their attribution of personal traits to members of another culture without having a deep understanding of that culture “from the inside.” In this respect, the class could be considered a total failure.

Marshall Kitchens’ ideal of inter-cultural interactions that promote mutual understanding fits our own views. He contends that in order to develop a better understanding of culture, people must be able see their own strangeness through the eyes of others.

“They have to take on this role of alien or “Other” as a way of seeing the familiar as strange. At the same time, they need their insider status in order to understand the exotic as familiar. They have to see both difference and sameness and establish a very careful combination of both insider and outsider.... Without a balanced and informed perspective, the result is either a naïve celebration of one’s own culture from the inside, or a shallow critique of the “Other” from the outside, both failing to achieve a sympathetic and rich understanding of culture” (Kitchens, 2006, p.1).

We hadn't come anywhere close to a "*balanced and informed perspective*" that would provide a "*sympathetic and rich understanding of culture*". The students' notes revealed very little evidence that they had made any effort at all to take the "Others" perspective. Instead, all of us, including the instructors (who simultaneously shared and lectured about balanced and informed perspectives) were, in Kitchen's words, naïvely celebrating of our own cultures from the inside. The two groups never came to a shared understanding of what it meant to be a member of one culture or another.

However, in many important ways, the course was a great success. For one thing, the students rated it very highly. For another, as the field-notes sprinkled in this essay attest, they engaged in sophisticated, reflective analysis of their very complex experiences. Moreover, there is ample evidence in our data corpus that the personal commitment the students made to their involvement as a Stoner or Trader had an impact on the students' engagement in the academic portion of the class as well. Surprised at how heavily invested they had become in their fabricated cultures in a few short class meetings, the students were eager to learn how such a change in their personal commitments was possible. Earlier we discussed the deliberate measures taken to establish particular affective environments or moods for the two cultures, but we were also, equally as deliberately, creating academic atmospheres.

Parker Palmer (2010) writes that there are ways of teaching that create community, but these require a virtue not always found in university classrooms -- hospitality. Lack of hospitality in the classroom has been ubiquitous in these students' previous experience. Even in seminar-style classes, they learn early on to keep an intellectual straight face. It is rare to hear an honest question, to say nothing of an admission of ignorance. Instead, students ask questions designed to let the professor know that the lesson has been heard and understood. Palmer notes that university classes

should be hospitable spaces not merely because kindness is a good idea, but because real education requires rigor. In a counterintuitive way, hospitality supports rigor by supporting community. A hospitable learning space is one where students can disagree with the professor, argue with classmates, and admit ignorance.

In the BaFa' BaFa' simulation class, ignorance was the starting point for everyone, and learning had less to do with acquiring a body of knowledge from other more learned authors than with creating a body of knowledge along with other ignorant souls. It seemed impossible to remain outside the issues we were addressing. Anything we might have taught about cultural processes from a text would certainly have been less compelling than reading those texts while engaged in practices where the sights and sounds and feelings of cultural creation were inescapable elements of the educational experience.

In their term papers the students all spoke with confidence about the theories we interrogated through our experiences in the simulation, and wrote with feeling about the changes they had experienced in their attitudes about themselves and each other, and about culture and life in general. As researchers we came to realize, rather belatedly, that, despite the bumps and diversions, or perhaps because of them, this was exactly the kind of research and educational outcome of which we had dreamed.

References:

- Baltes, Paul B. (2006).** Lifespan development and the brain. Cambridge, UK: Cambridge University Press.
- Bartlett, F. C. (1932).** *Remembering: A study in experimental and social psychology.* Cambridge University Press, London
- Baudrillard, Jean (1995)** Simulacra and Simulation University of Michigan Press; First Edition, 17th Printing.
- Cole, Michael. (1996).** *Cultural Psychology.* Harvard University Press. Cambridge. New York: Harper.
- Fine, Gary Alan (1979).** Small Groups and Culture Creation: The Idioculture of Little League Baseball Teams. *American Sociological Review.* (44) 5, (Oct., 1979), 733-745.
- Goethe, Johan Wolfgang (1988).** Empirical Observation and Science (Jan 15, 1798), in *Goethe: Scientific Studies*, ed. and trans. Douglas Miller. Boston: Suhrkamp.
- Greenfield, P., Maynard, A. & Childs, C. (2003).** Historical Change, Cultural Learning and Cognitive Representation in Zinacantec Mayan Children. *Cognitive Development* 18 455–487.
- Kitchens, Marshall. (2006).** Student Inquiry and New Media: Critical Media Literacy and Video Games. *Kairos: Rhetoric, Technology, Pedagogy.* 10.2 (Winter 2006).
- Luria, Alexander (1928).** The problem of the cultural development of the child. *Journal of Genetic Psychology*, 35, p. 493-506.
- Luria, Alexander (1968).** *Mind of a Mnemonist.* New York. Basic Books.
- Luria, Alexander (1972).** *Man with a Shattered World.* New York. Basic Books.
- Luria, Alexander (1979).** *The Making of Mind.* Cambridge MA. Harvard University Press.
- Palmer, Parker. (2010).** *The Heart of Higher Education.* Amherst: Wiley & Sons. *American Sociological Review*, (20) 4, (Aug., 1955), 383-392.
- Rogoff, Barbara. (2011).** *Developing Destinies: A Mayan Midwife and Town (Child Development in Cultural Context)* Oxford University Press, USA.
- Sherif, Muzafer & Sherif, Carolyn (1953).** *Groups in Harmony and Tension.* New York: Harper Row.
- Sherif, Muzafer (1966).** *In common predicament: Social psychology of intergroup conflict and cooperation.* Boston: Houghton Mifflin.

Shirts, Gary (1977). *BaFa BaFa: A Cross-Cultural Simulation*. Simulation Training Systems, Del Mar.

Sullivan, Sherry and Tu, Edward. (1996). Developing globally competent students: A review and recommendations. *Journal of Management Education*, 19. p.473-493.

Tajfel, Henri (1982). Social Psychology of Intergroup Relations. *Annual Review of Psychology*, 1982. 33, 1-39.

Tajfel, Henri and Turner, J.C. (1978). *Differentiation between social groups: Studies in The social psychology of intergroup relations*. European Association of Experimental Social Psychology. London. Academic Press.

Vygotsky, Lev S. (1978). *Mind in society: Development of higher psychological processes*. Edited by Cole, M., John-Steiner, V., Scribner, S., Souberman, E. Cambridge, MA: Harvard University Press.

Vygotsky, L. S. (2004). Imagination and creativity in childhood. *Journal of Russian and East European Psychology*, 42(1), 7-97.