BODY IN MOTION

A Powerful Tool for Creative Learning and Social Interaction

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Massachusetts College of Art and Design • Boston • May 2009

This thesis is submitted in partial fulfillment of the requirements for the degree of **Master of Fine Arts in Design** and approved by the MFA Design Review Board of the Massachusetts College of Art and Design in Boston.

May 2009

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I want to thank...

All the DMI students for sharing this great experience with me.
You gave me your friendship, your great criticism, your inspiration,
your support, and a drink—when I needed it. Being with you during
these two years made the adventure all the more exciting.

All the volunteers who participated in my projects and performed in *Motionary*.
You jumped, you danced, you sang, stretched and rolled, and laid on the floor,
you wore my clothes, you brought along your friends, children and families.
You did everything I asked for and more, a hundred times more!

Kasia for being a thoughtful, compassionate and extremely supportive "wife"
and for standing by me all the time.

William for inspiration, for coining the *Motionary* name and for being there
for me, through laughs and tears.

Ilona for being a wonderful friend always ready to support me.

Dorota, Mietek, Juan Carlos, Iryna and **Maria** for lending a hand to make
my dream of studying here become a reality.

Mom and **my family** for always being there for me.

Jan Kubasiewicz for his philosophical and creative input, his passion and inspiration and for urging me to follow my intuition.

Joe Quackenbush for challenging me and for helping me broaden my perspective, for being thoughtful and supportive every step of the way.

Gunta Kaza for inspiring me to experiment and for pushing me to go deeper.

Brian Lucid for his responsiveness and for his ability to grasp in an instant the most complex problems and see just as quickly their solutions.

Mike Golembewski for his remarkable performance in *Motionary* and for insisting on a methodological approach to my design and research.

Merry Conway for opening my eyes to the value and the possibilities inherent in interaction, improvisation and acting.

Maureen Moran for her patience, imagination, enthusiasm and for helping me with writing and editing.

Bradley N. Rice for his support and for helping me with editing the text.

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THESIS ABSTRACT

Body in Motion: a Powerful Tool for Creative Learning and Social Interaction.

In my thesis, I explore the power of body language and nonverbal communication with respect to social learning and interaction. I create physical and online spaces with the tools that encourage people to interact freely and spontaneously. An essential part of my thesis is to provide ways and means for people to be active, move their bodies to be more natural, and possibly, to have fun.

According to educational researchers, we now live in a "Creative Society" in which people must develop and enhance their abilities to interact meaningfully with one another. People also need to acquire skills for using the tools offered by new media. Online exchange and collaboration allow people with multicultural backgrounds to exchange ideas and negotiate meanings. The social games I designed, such as *Tell Me Your Secret* and *Jumping Squares,* foster physical playfulness and social interaction—whereas *Cinemagic* and *Motionary* encourage creative learning and online collaboration. The learning experiences I design involve activities, concepts, playfulness, improvisation and cultural exchange.

In my work, I facilitate opportunities for people to negotiate spaces and meanings while finding new forms of expression. I design experiences where people can switch roles and either they remain in the audience—as a passive observer or join the game as both active participant and teacher. Giving people the opportunity to challenge each other by negotiating the rules, meanings, and the interpretation of certain words result in dynamic communication.

GOAL:
Explore the **power of body language** and nonverbal communication in social **learning and interaction**

Encourage **people to be active** (move their body), hence to be more "natural" and possibly have fun

Create physical or online spaces/tools that **foster social interaction, communication, learning and creative collaboration**

Design spaces where one can **switch roles between** being in the audience (**student**) as well as being an active participant (**teacher**)

Open the possibility for **new meanings and forms of expression**

Give people the possibility to challenge each other and to negotiate within the group the rules/meanings/interpretations

Bring people together from various cultural backgrounds to exchange ideas

II
INTRODUCTION

"All the world's a stage,
And all the men and women merely players;
They have their exits and their entrances..."

— William Shakespeare

INTRODUCTION

Something unique happens when people interact, communicate and learn from each other. It first occurs naturally when we are very young, and when we play and interact with other children. My mother would take me to the kindergarten where she worked as a teacher. There I played with other children, and a variety of toys, especially my favorite building blocks. Researchers say that the first years in a child's development are the most influential. It must have been that I acquired my earliest interaction design skills in those first years.

An important moment in my development as an **interaction designer** happened when I was five years old. My long awaited sister was born. I adored her and created new activities and challenges for her. She responded happily to puppet shows and games I designed. Of course, I challenged her to participate actively, to move and even stretch her body. When she was only two years old, I "trained her" to do a split and other gymnastic feats. My passion for finding ways for people to move and stretch themselves while at the same time communicating began when I was young and it continues to this day.

Using body movement to communicate meaning and convey thought and feelings originated years ago with my favorite cousin Diana. We only saw each other every two years when she came for vacation from Germany. For years, we did not even speak a common language; the only language we had in common was our body language. Wherever we went we carried our multilingual dictionaries, and we used a variety of gestures to expand the meaning of our words. That experience helped me to communicate with people during my various international travels. It also helped me realize the value of combining language and playfulness as tools of communication.

Storks' Dance
Inspired by flying storks above my yard in Poland, I created this oil painting in 2006. I was amazed by the speed, flow and the storks synchronization.

I have always been interested in **movement and nonverbal communication.** My passion started when I was little, observing the movement of birds approaching and leaving a feeder. Years later, in the summer of 2006, while in Poland, I was enchanted while watching the flight of storks. Their motion, intertwining, and synchronization as they gathered for the winter migration to Africa, amazed me. I found the dynamic of their flight patterns exhilarating. Similarly, I also like watching people in motion too. I love to observe strangers walking along the streets and weaving their way at busy intersections. My favorite place to watch people is an airport, a place of arrivals and departures, of hugs, kisses, and emotions.

Before I came to study at the Dynamic Media Institute, my education and professional experience was based on graphic design. After working for a couple of years in the visual communication field, I decided to explore the grounds of interaction. I wanted not only to create things people could look at but I also wanted to design experiences for people. For the first time in my life, at DMI, I had an opportunity to **experiment, research** and **design playful social interaction**.

Projects created at the DMI include **installations, interactive games** and **spaces for improvisations.** My case studies include *Jumping Squares,* a game in which people jump on colorful squares and *Tell Me Your Secret* where users fence to find out each other's secrets. My main thesis project, *Motionary,* invites people to improvise in silence and express the meaning of words and expressions. Some common threads appear throughout all my projects and connect in obvious ways.

The most important and common characteristics of my projects are getting **users to move, jump,** and **use gesture** and **improvisation**. Motion is important for making people feel more relaxed and it helps support social interaction. Being on the move means we all have less control over our bodies and expressions. When we move we loosen up and become more happy, perceptive and creative. When I give people a challenge, they concentrate on that goal and forget about the rest of the world.

move body position gesture jump dance synchronized random **spontaneous** voice words nonverbal sound no-sound language story message play **game** unknown secret decisions **challenge** rating rules system competition anticipation audience create improvise performance **negotiation** choreography express experience answer remember **learn** understand individual duel social aware of others split-concentration **interpretation** multi-sensory **social interaction** concentration screen object installation space **physical** repetition-possible **being in a moment** uncomfortable travel touch smell secondary senses **freedom** abstract **flow** emotional

Negotiation is another very important element in the social interaction of my projects. In *Jumping Squares, Tell Me Your Secret* and *Motionary,* participants negotiate their position in physical space or negotiate the meaning of their gestures. They have to create a mutual agreement about how they would move around each other and what kind of body gestures they would avoid as not to hurt each other. I not only want the participants to be active in my projects but I also want to **entice onlookers to join in.** I want the audience to stop and think, wonder and ask questions. Then you start wondering "who knows how to do things better"? Who should be the "teacher" and who should be the "student"? In *Motionary,* the role of "teacher" and "student" is open to social negotiation.

In my projects, I create **open systems of rules**. I try to give people lots of **freedom in their interpretation** of the rules as well as the goal. I let them use a given space or tools in any way they choose. Users can then cooperate with other participants and can create their own rules or abandon all rules all together. I design spaces and tools that **support originality and encourage people to be creative.** I challenge people and I get them involved in a given experience. Exploring physical or online spaces with other people can **engage users in discussion, idea exchange and creative learning.**

I think my projects offer an **exciting and playful experience.** In my work, I want people to have fun and **uncover their inner child.** Most adults wear "masks" everyday to school, work, with friends and at home. They follow certain rules of how to behave, talk, smile and move. In *Motionary,* when people improvise they can let go and "be free" from norms and standards. When we say that we are just "improvising" for a few seconds, we can pretend to be someone else, make silly gestures, exaggerate, and make fun of ourselves.

My life experiences and my thesis research led me to **explore the links between communication, body movement and education**. I create activities where people must rely on their body movement to play, communicate and learn from each other. I believe that although body language may not be as precise as verbal language, it is universal; it crosses cultures and borders of time and space. In my thesis document, I describe my research, design process, projects and my findings about nonverbal communication and social interaction. I intertwine research with the case studies, and I present my main thesis project, *Motionary,* with testimonials of participants.

First, I present **contextual background and current scholarship** that is closely related to my research. I exhibit some examples of games, performances and interactions where is being used as a main tool of communication. I look at interactions that occur randomly or spontaneously between strangers in physical and online spaces. I also introduce key psychologist, educational researchers, and artists who work in fields closely related to my research

Second, I concentrate on **different aspects of the body in motion**. I explore how people move, gestures and the nonverbal signals they use to communicate with each other. I am interested in motion affecting the way people feel. I look at various gestures and how body language connects body and mind's behavior in individual people and in social groups.

Later, I explore various **skills people need to communicate with each other**. From communication and learning, creative collaboration to playful interaction and achieving the state of total immersion called "flow." I present educational theories that emphasize importance of social learning in today's society.

My case studies prove that people like to interact with each other in challenging, playful and creative way. Using body to deepen concept's meaning and comprehension can help people earn from each other. People use their bodies to communicate and tell powerful stories, as well as to collaborate and invent new concepts, rules, and creations. **Making people not only to move and stretch their bodies but in the same time to challenge their minds.** Improvisation is not only a way of loosening up and pretending to be someone else but it is a way to teach others. Teaching is, after all, an improvisation.

I argue that while verbal language is linear, we hear only one word at a time, and body language offers visual stimulations and it can communicate multiple things at the same time. **Body language is a great tool for building creative learning and playful social interaction.**

II

CONTEXTUAL BACKGROUND

"We all wear three masks:
The one we think we are,
The one we really are,
And the one we have in common."

— Jacques Laocq

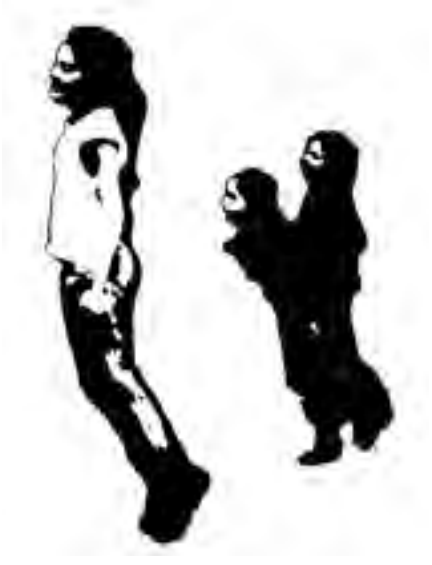
CONTEXTUAL BACKGROUND

By observing current trends, I was able to draw conclusions and apply the discovered concepts to my own projects. I studied numerous ways that the body is being used in games, performances, and as a main tool in nonverbal communication. I wanted to know what we can do with our bodies. I looked at games, where the body is used as playing piece, then I explored various forms of dance and acrobatics, performed by amateurs and professional groups. Then, I observed performances where the body is used as a musical instrument or as main tool in storytelling. I explored the nature of various interactions that occur naturally between random strangers. I am fascinated with instances where body language is essential to human communication.

I explored ways technology changes the way people live and communicate. In recent years, there has been a boom of online networking sites. Numerous programs support knowledge, information, file and personal information sharing. The internet allows users to exchange ideas and collaborate on projects online. Network connects people from around the world, in a way that has never been possible before. Surveying the extensive and fascinating research done by many anthropologists, psychologists, educators, designers, artists and others, allowed me to see a small portion of their amazing work. Various researchers analyze body movement, communication, learning, social interaction and play from their own specific perspectives. Their findings are extremely stimulating and educative. Contextual research made me realize the vast scope of issues that is connected to my thesis and that there is so much more to learn about these perspectives.

Games

People have been using the body as playing piece or instrument for ages. The technology and culture change, but the need to perform athletic activities is seeded deeply in human nature. From a young age we like to play, jump and do other locomotory games. Some of the physical games include: hopscotch, twister, improvisation, acting and dancing. These kinds of games we all learn from our older siblings or friends. We learn game rules in a kindergarten or on the playground. Those kinds of games are usually simple and they do not change much through the generations.



Currently, designers try to enhance player experience by designing better tools for human-computer communication. Companies race to invent games and tools that would allow people to play computer games more actively. Recent phenomenon in gaming is controller *Wii,* which allows players to use body movement and gesture to control the game. Technology is moving away from using buttons or keyboards as a main way of human-computer interaction. Researchers are looking for new solutions that incorporate body and gesture in the computer interface. There is also a new trend in futuristic interface solutions. Tangible interfaces and smart materials will impact the way people communicate with each other and their surroundings.

Storytelling: Ballet

During my thesis research, I observed some classical and modern performances at the Boston Ballet. For me, ballet is about movement, storytelling and making shapes with the human body. Ballet dancers remind me of living sculptures, in which both body shape and the negative space it creates is very important. Ballet fills you with wonder that the human body can move in such a way. Ballet performances relate very closely to my projects. For example, the dancer's movement, arrangement and choreography inspired me to think about the way people could move within my installations or games. Another reason is that the depth of the field is not that long, and performers almost look like graphic elements moving on a flat surface. With music, lighting and dramatic effects, the ballet visually tells a powerful story and creates an intense experience for the audience. The audience absorbs the experience but does not participate in the performance.

The most influential ballet choreographer is George Balanchine. He masterly interchanges groups of dancers and their unique body positions; puts some dancers in motion and at the same time keeps others still. Balanchine's ballet choreography looks effortless, graceful and is truly mesmerizing. In his ballet performances, the speed, movement and location of each dancer is intricately planned and rehearsed to perfection. Modern choreographers such as Jeroma Elo of the Boston Ballet try to reinvent new gestures and dance moves. Some reinvented ballet moves look mechanical, some are very controlled or extremely chaotic, and others remind me of animal moves. Dancers choreographed by Elo look as if they are swimming on the stage, running in a lethargy or whiter on the floor.

Storytelling: Mime

The Blue Man Group show is a great example of spontaneous interaction and the active dynamic between actors and the audience. Blue Man Group uses simple and clever tricks to capture people's attention and to entertain them in a fun way. Blue Man Group mimes and because their faces are covered in blue, they appear alien-like. The group is also good at creating and building up anticipation. Many times during the show, I was trying to predict what the actors were going to do. It is fascinating that the audience was captured by the actors' simplest gestures. It seems to me that people do not need much to make them laugh, simplicity is the key to success. Without spoken words, the Blue Man Group was able to communicate with the audience and even make some viewers part of the performance. The Blue Man Group makes me think of Charlie Chaplin, a master of nonverbal communication and mime. Chaplin was able to communicate, entertain and tell powerful stories using body language.

Sound–making

During my research I had the opportunity to see the Veritones, an a cappella group performing at Sanders Theater at Harvard University. The Sanders Theater looks very traditional and formal but during that performance, the singer interacted with the audience in a lovely and most informal way. Moreover, the audience itself responded with screams, shouts, clapping and stomping. Members of the Veritones group came in different shapes, sizes, heights and nationalities. They made sounds only with their bodies and without utilizing any instrumental accompaniment. The singers improvised and performed choreographed moves that enhanced their performance. The interaction and active involvement of the audience in the show made me think about the possibilities of using those ideas in my own projects.

Extreme Body Performance

Currently there are a few acrobatic dance groups that stretch the flexibility of the human body to the extreme. One of the most prominent dance groups is Pilobolus, an artistic group that combines acrobatics, dance, improvisation and creative choreography into one performance. Pilobolus uses the human body as a main tool for storytelling and that is why the dancers often perform in nudity. In their performances they relay and support each other and the figures they take emphasize human connectedness and interdependence. Pilobolus group reminds me of contact improvisation because dancers often use each other's bodies for support. When dancers connect their bodies in unconventional ways, sometimes it is hard to tell them apart, as they create new organic shapes. Dancers also work collaboratively on the choreography.

Random Meetings

In my work, I strive to bring people together, to make them interact, and have fun together. It fascinates me to watch random people meet and "connect" in a physical space. Something unexpected usually happens, and you can sense the high energy beaming from people when they get involved in the same activity. Seeing strangers embrace, dance or perform an activity in unison raises interesting issues. One is the notion of strangers being together and connecting on some level, either physically by touching or emotionally by mimicking and accepting certain behaviors. Another aspect is the tension between the performers and the audience the onlookers, the insiders who know what is going on and the people who are outside.

In cities, where thousands of people rush from one place to another, sometimes interesting things happen, something very human, something that grabs the attention of almost everyone and puts a smile on people's faces. It is coming upon a person wearing a sign: Free Hugs. Seeing strangers on the street suddenly embrace each other is quite enchanting. For one thing, there is something extraordinary about people willing to embrace another complete stranger, not even knowing who the next person could be. Another aspect is observing how the receiver reacts: is this person seeking the human touch doing it just for fun? Usually hugs and human touch are only shared with close ones.

Flash Mobs

Another unique way of bringing strangers together is the recent social phenomenon called Flash Mob. It is fascinating because random people flock to one place and they all perform pre–planned activities. For example, Flash Mob participants flocked in Grand Central Station in New York and at given moment, they all froze in one position for about three seconds. People who did not know about the event were puzzled and shocked, which only adds to this comic situation. Flash Mobs usually start when someone sends an email or post and ad with an idea for a happening. The email is forwarded in secret to selected people. In Flash Mob there is no one directly organizing it, no single responsible party. Flash Mobs straddle social games and performances.

Jumpstyle

I also looked at different styles of dancing that involve spontaneous meetings in random public places. One of the social and spontaneous dances is the *Jumpstyle*, a dance that originated in the Netherlands. *Jumpstyle* is popular with Western European teenagers, who usually organize jump–meetings on streets, empty parking lots or playgrounds. They perform choreographed dance, which involves mostly jumps and kicks to the fast beats of the music. The jumpdancers' bodies are synchronized with the music so precisely that the dancers look as if they are making sounds with their bodies. Jumpers also perform the dance uniformly and with great precision. They learn the dance from each other or from lessons posted by other teenagers on the Internet. The participants film their jump meeting in their city and then they post it as a challenge for teenagers from another place.

Online Interaction

The Internet is changing the way we communicate with others, find and share information, learn, have fun and even find a date. People are able to share their files, express their opinions, share their knowledge or ask questions. Many websites give users tools and space online so that the users can build their own collections of images, video clips and other media. Anyone can post stuff online and collaborate with others to create something new. One of the best examples of phenomenal online collaboration is *Wikipedia*, a user–generated encyclopedia, where anybody can contribute their knowledge and make changes at any given moment. *Wikipedia* may not be the most accurate source of information, but millions of people use it as a quick and accessible reference. *Wikipedia* proves that knowledge is dynamic and it can be negotiated and constantly updated. Most *Wikipedia* articles are also available in other languages than English, which proves that this form of collaboration entices peoples from many parts of the world.

Blogging, Twittering, chatting and other network tools are very popular ways of sharing information and opinions. Users of *Facebook*, *My Space* or *Twitter* very often update their personal information. *Flickr* and *YouTube* give people an opportunity to share their photographs or videos. There is something special about the notion that people feel a need to share information, photos and other personal information with others. From having a couple of friends suddenly people have a couple hundred. Some people get addicted to this new media tool. They constantly update their status and spend countless hours on their profile page. While some spend so much time updating their status online, they do not spend enough time with people around them. I think technology should help people to connect, build their social skills and not isolate them further away from each other.

Random Meetings

One of the most exciting social interaction programs available on the phone is a photo-sharing application for the *Apple IPhone*. It allows users to send any picture to a randomly selected person anywhere in the world. The photo carries information such as geographical coordinates and time it was taken. If the receiver likes the image, he can continue a photo chat and keep exchanging photos. I interviewed one *IPhone* user in Boston, who told me that the best experience he had with that application was on a day when he had received an image of a man on his motorcycle in the Red Square in Moscow. Such a place is perceived as an exotic place for that photo shoot. This exchange sparked high intensity feelings, because for a moment it connected complete strangers from different parts of the world.

Recently Google organized their first YouTube Symphony Concert. Google asked international musicians to play their instruments to a specially composed score, and to submit their recorded performance for *YouTube*. Thousands of musicians from around the world submitted their performances for the contest. About sixty musicians representing about seventeen different countries were chosen to play a concert in New York's prestigious Carnegie Hall. Google also invited prominent musicians to play with this internet–assembled orchestra. This unique concert was rehearsed only for three days and it premiered on April 15, 2009. That new way of outsourcing and auditioning for live collaboration opens doors for future projects, not only classical music performances but possibly for film and theater.

INFLUENTIAL RESEARCHERS AND ARTISTS

Desmond Morris, a specialist in human behavior and zoology, has spent years observing people, their gestures and interactions. Morris observed how people act in private and social context, and he tried to interpret the meaning of those direct or unconscious messages.

Mikhaly Csikszentmihalyi, who has been a leader in researching the psychology of flow–the satisfying state of consciousness. His work illuminates psychological, philosophical and humanistic aspects of human experience. Csikszentmihalyi clearly explains his process, research methodology and findings. One of the most appealing aspects of his writings is his ability to demonstrate his complex findings coupled with contextual anthropological and historical information.

William Whyte, an architect and designer who spent years observing how people used and interact within spaces. He studied people's behavior to design better, sensible and more usable public spaces. He used his ethnographic studies to find better solutions for his spatial, architectural and landscape designs. Whyte is inspirational because he did not believe common assumptions but worked on his own to discover new possibilities.

Mitchel Resnick is a professor at the Massachusetts Institute of Technology and leads the *Lifelong Kindergarten*. Resnick works on creating new technologies and environments that support creative learning and collaboration. I had the opportunity to participate in Resnick's class and I was able to meet other educators and designers who work on many innovative educational projects.

Philippe Halsman, a photographer who based his philosophy called *Jumpology* on the moves, gestures and expressions of jumping people. Halsman dared to ask even the most famous and powerful people in the world to jump for him. I felt inspired by his courage and despite people complaining sometimes, I kept asking my classmates and strangers to move in my projects.

Marisa Jarhn and **Steve Shada**, design interesting installations that invite collaborative authorship and the distributive intelligence of surrounding people. For example, their project Wearable Musical Instruments involved vests with an accordion-like instrument sewn in between them. Participating individuals wore the vests facing each other; as the two participants embrace and pull away, their movements generate sound.

Matt, a main character of the internet website *wherethehellismatt.com.* He posts videos of himself dancing in famous geographical locations around the world. Matt has visited over forty countries on all seven continents. In each location he recorded a special dance performance of himself with a group of native inhabitants.

Merry Conway is an acting coach, who researches fresh approaches to acting and new strategies of improvisation. She came to our DMI program in the spring of 2008 to organize a workshop on acting techniques. Participating in her acting workshop was one of the most influential moments of my thesis research. It opened my eyes to new perspectives and shed a new light on the projects I have been working on already. Merry helped me understand nonverbal communication, improvisation and collaboration more deeply.

CS
CASE STUDY

TELL ME YOUR SECRET / Version 1









TELL ME YOUR SECRET

It is a social game, which requires the active participation of at least two or more people. This game is based on fencing principles and a couple of very simple rules. The players fence with semi-swords in order to find out each other's secrets. Players have to rely on their speed, accuracy and body language. I designed this game after reading a chapter of Alexander Dumas's *The Countess de Charny,* in which two people dramatically fence over a secret document. I originally designed the game to create an experience for my classmates in the Design Experience class in the Fall 2007, however, later on I created another version of this project.

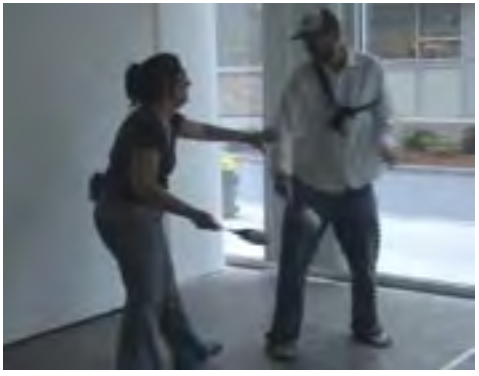
In the design of the **first version** of the game, I tried to build up some excitement and anticipation for the whole group. All players had to use bright sticky notes as a "target point" and soft (made out of foam) pointers to aim at the opponent's target. Each user had to think about a secret, place a sticker somewhere on his body and try to touch his opponent's target. The person who would succeed in touching the other person's target would be the winner in that round, and his losing partner would have to give away his secret. All winners of each round would play against each other and that way in the end, there would be only one winner. In this case, playing with multiple players was exciting because the secrets were kept between players and only the last person "standing" would get to know everyone else's secrets.

TELL ME YOUR SECRET / Version 1









Development

For the second version, I designed a small device that recorded the sound and had a speaker. When one of the players touched his rival's target, the speaker would be activated and everyone would hear the prerecorded secret. In this version, it was not that important for many people to challenge each other because everyone heard all secrets played aloud. At the same time, players became cautious about choosing their secret because when it was replayed aloud everyone could hear it. That completely changed people's interaction.

I observed one man thinking about "what to say" for about fifteen minutes. When his waiting girlfriend was rushing him, and he told her, "I want to say something clever". I considered the whole situation very funny. I watched other couples recording their secret messages and moving their body in a provocative and fun way. Watching people convinced me that this game would be popular with couples or would be a great tool for speed dating. This game could become a great tool for teasing, flirting and other forms of social interaction.

Overall, the *Tell Me Your Secret* was one of my most successful projects. I think I succeeded on many levels, the game was based on a simple idea, I was able to make it work, and I got people interacting with each other, playing and enjoying themselves.

III
COMMUNICATION

"Human communication is the process of one person stimulating meaning in the mind of another person (or persons) by means of verbal and nonverbal messages"

— Richmond and McCorskey

Verbal Communication

Language is essential and characteristic to human life. Spoken and written language is a rich and complex medium of communication. For example, the English language has the richest vocabulary in the world, having over 500,000 words. English is used in many countries and it is currently the lingua franca in most of the world. The basic roots of the English language are the same, but pronunciations of words and their meanings vary depending on whether British English, American English or Australian English is being used. Even the same language and words can have different meanings in different cultures.

Language does not exist on its own, but is seeded deeply within culture and society. Language changes with time and cultural exchanges. Some expressions of language used hundreds of years ago have changed greatly in meaning over the centuries. For example, the *Contexticon of the New Testament* explores the original meaning of words used in the New Testament and other literary works of ancient time. To understand truly the actual context of those words one must also know the history, culture and sociopolitical situation of the day.

Another fascinating fact about spoken language is the fact that linguistic researchers cannot agree on roots of language. One of the most controversial theorists, Noam Chomsky, believes that all languages come from one common ancient language, which he calls the *Universal Grammar*. Chomsky thinks that there are basic sets of principles that are common in all human languages. I find his ideas fascinating and I wish the linguists would find more evidence to prove it.

Language Acquisition

There are many theories about how people acquire their native language. Most researchers agree that language acquisition starts early, even before birth, when the child is in the womb and hears sounds. They also say that the human body gradually adapts to using language. Researchers also discovered that before speaking all infants and toddlers can understand and remember basic gestures to communicate their basic needs. Hearing–impaired children, however, have no choice and have to learn sign language from their parents and build their cognition using body language. Currently, there is also a trend that some parents of non-deaf children teach them sign language—Baby Sign.

Sign Language

A significant form of communication is sign language. Sign language had been invented in the seventeenth century as a method of communication with hearing–impaired people. Sign language is based on a coded system of gesture and finger spelling and it varies from culture to culture. People utilize other parts of the body as well; facial expressions and body movement are critical components of effective communication in sign language. Even subtle clues in body language have a huge impact on its meaning. For example, there is a difference when you say "I love you" with an emotionless face and stiff body position, instead of showing a smiling face and open arms.

Body Deepens Meaning

Maureen Moran has been teaching language acquisition for over twenty years. She began her career working with hearing–impaired children. These children are doubly deprived, because in their lacking ability to hear they are also deprived of the natural way of acquiring language. To teach hearing–impaired children language skills, Moran had to use every possible visual tool to help convey meaning and to build language structure in their minds. She had to rely heavily on nonverbal communication to help children understand the power of words, especially verbs. She had to use movement, facial expression and body language to act out and demonstrate meaning. Sign language differs from the spoken language, but it replaces it for hearing–impaired children.

Body Helps in Comprehension

Moran also used body and gesture later in her career to teach seventh-graders geography. She made them use their own body parts as measuring points for the seven latitudes. She succeeded in getting teenage students up on their feet and to move. Her *Dance of the Seven Latitudes* involved the students combining chanting the names of the latitudes while pointing to the parts of their body. For example, their waistline became Equator, their heads the North Pole and their neck the Artic Circle. The movement and chanting reinforced what would otherwise be abstractions and soon forgotten. It also made use of the body to deepen meaning and comprehension. Currently, Moran is a writing tutor at Massachusetts College of Art and Design and uses her nonverbal communication skills to help international students grasp the true meaning of English words, especially idioms. According to Moran, nonverbal communication is essential in language acquisition. It is based on real, tactile experience and it greatly facilitates comprehension.

Learning Vocabulary—Existing Tools

Many books and dictionaries present collections of specific groups of words. For example, *Hundred Words Every High School Graduate Should Know*, *Most Common SAT Words* or *Essential Words Every Educated Person Should Know* are focused on teaching groups of words to a specific audience. Those kinds of books usually give an alphabetized list of words and examples of sentences in which they are used. I think books are great, they are portable, and easy to read but they offer a very passive way of learning. *Rosetta Stone* or *Pimsleur* programs offer books, sound and image presentations that help people acquire new vocabulary and language understanding fast. Online dictionaries are more interactive and they offer related resources, for example, thesaurus and reference links. Online dictionaries send users "Word of the Day" and they offer many word riddles and games. Receiving one word a day is a good way to gradually expand vocabulary. However, with time one can get lost in long emails with many difficult words.

All these learning tools work well on some level but in my opinion they can be improved. Seeing a lot of text and reading explanations of the words is not as compelling as seeing it used in the context of a situation and acted out by various people. All actors who performed for *Motionary* are unique and original. I think that all *Motionary* performances might help people associate and remember new words with those unique people. Since "a picture is worth a thousands words," I believe these performances can communicate many things at once.

Power of Words

Numerous programs and games allow people to learn and play with words. Sometimes it is good to know unusual and very specific words and to use them skillfully in conversation. Other times people might not want to be understood. In his book, *The Superior Person's Book of Words* Peter Bowler writes, "words are not only tools; they are also weapons."(VII) His book is a collection of five hundred not commonly used words that he wants readers to play with. Instead of arguing with other people, we might use those unusual words and confuse them. In my projects, I also want people to play with vocabulary and expressions. Words often spark people's imagination or challenge them to discuss their meaning and usage.

STUDIES THAT EXPLORE MOVEMENT IN NONVERBAL COMMUNICATION

Kinesics
Aspects of gesture and body movement

Oculesic
Aspects of eye behavior

Proxemics
Aspects of space

Haptics
Aspects of touch

NONVERBAL COMMUNICATION

Nonverbal communication is intrinsic to human nature. Before people could speak or write, they relied on gestures and body language. When a child is little, nonverbal communication is the only way parents can understand what the child wants. Usually parents need some time to observe and to learn their child's facial expressions and body movements. With time, children grow up and people forget how important the nonverbal signals are.

Since early school education, I have been told that an intelligent person should communicate only with words, without using any gesture. It makes sense: that the more words you know, the more precisely you can express yourself. However, studies have shown that body language and nonverbal communication is essential in human communication. The way people walk, sit or gesture has a strong influence on how people are perceived.

Today, everyone knows that visual and nonverbal communication strongly affect people's perception and this is often used in marketing as well as in politics. That is why there are many courses and books on how to improve one's body language. It is essential for people who want to be good communicators to be convincing and persuasive. Successful politicians, salesmen, businessmen or religious leaders are masterful in nonverbal skills.

MAJOR GESTURE CATEGORIES

Incidental
Mechanical actions with secondary messages

Expressive
Biological gestures we share with other animals

Mimic
Gestures that transmit signals by imitation

Schematic
Imitations that become abbreviated and abridged

Symbolic
Gestures which represent moods and ideas

Technical
Gestures used by specialist minorities

Coded
Sign-language based on a formal system

Gesture variants
Personal or local variations on gesture themes

Multi-message
Gestures that have many meanings

Hybrid gesture
Signals made up of two original gestures

Compound gestures
Actions made up of a number of distinct elements

Multimessage Gesture
Gestures that have many meanings

Gesture alternatives
Different gestures that transmit the same signal

Relic
Gestures that have survived after the primary context has vanished

Body in Motion

One of the most interesting researchers in the field of nonverbal communication is Desmond Morris. Morris has spent decades observing animals in zoos and watching homo sapiens. He wrote many books about human behavior and nonverbal communication. In his books, he gives extensive examples of human behaviors that either are connected to our animal side or are more typical of our human side. Morris explicitly presents basic ways people move, behave and communicate. He emphasizes that people are fascinated with twenty basic ways of moving from place to place including: **slither, crawl, totter, walk, stroll, shuffle, hurry, run, jog, sprint, tiptoe, march, jump, hop, skip, climb, swing, acrobatics, swimming**. Mostly children utilize this great variety of movements natural to humans. The older people get the less mindful they become of the marvelous flexibility of the human body.

I enjoy watching people, seeing how they move, what techniques they use to communicate or how they go about achieving their goals. It is much harder for everyone to control body language than verbal language. Moreover, to communicate with each other people often use gestures or facial expressions to convey meaning. In Motionary, people negotiated what those gestures really mean. Morris writes extensively about gesture, and he believes that gesture is any action that sends a visual signal to an onlooker. Morris categorized hundreds of gestures based on their origins, meanings and complexity. Certain gestures are often used to signal a specific meaning in places where talking is not allowed or where nonverbal communication is the only possibility. Many professions make use of it, for example, people working in a recording studio, stock exchange, and law enforcement and sport players.

Cultural differences

There are basic signals and gestures that have been established for thousands of years but these vary depending on culture and continent. The same gesture will mean one thing in the United States and something different in the Middle East, China and elsewhere in the world. For example, men greet one another with a kiss on both cheeks in Europe and the Middle East. This gesture is rare and unusual among males in the United States. Researchers say that although in many countries around the world the older generation is strongly bonded to their specific cultural gestures, younger generations understand and interpret signals in an Americanized way. Pease in their *Definitive Book of Body Language*, state that nonverbal communication is impacted by inventions of communication technologies and that "American television is the prime reason cultural body language differences are disappearing."(112) Perhaps only in a few decades we will all experience the global village and share a common understanding of gesture.

Mimicking and Postural Echo

In my projects, by getting one person to move I want to motivate other people to do the same. People usually try to control themselves, and they stay in poised positions. I hope that when people see someone else move, jump or dance, they will be provoked to do the same. Mirroring is an unconscious reaction that helps people connect nonverbally. Researchers discovered a "mirror neuron" in the brain that triggers the part responsible for the recognition of faces and expressions and causes an instant mirroring reaction. Mirroring happens when people wear similar clothing, move the same way or behave certain ways. It helps people fit within large groups of people and makes them feel at ease. Pease says, "synchronicity of the crowd promotes a secure feeling in the participants."(251) That is why, for example, yawning is contagious, and why concerts, Flash Mobs and other crowded social gatherings give so much joy to the participants.

Morris writes that postural echo is part of natural body display in companionship, and it occurs when people meet and assume similar body positions. Friends often unconsciously act in unison. For example, they lean towards each other or synchronize their movement while they talk. Morris observes that groups of friends usually try to arrange themselves so that they can see each other well and they mirror each other's body postures and movement rhythms. Postural echo emphasizes equality and it is possible only when people feel that they are on the same social, intellectual or hierarchical level.

Nonverbal Leakage

Sometimes words say one thing and the speaker's body says something else. Body language often reflects a person's personality or character. Some people, for example, poker players or police, train to either hide or to recognize nonverbal leakage, which are unconscious signals that are hard to control. We all constantly send out those messages with our bodies. Poker players are famous for constraining their body movements, gestures and keeping their faces emotionless. However, on the negative side, police and psychologists use nonverbal communication for character reading and profiling.

Emotions

An interesting aspect of body language is that there are hundreds of gestures to convey meaning in different parts of the world, but there are only eight to twelve basic emotions that can be universally understood. Facial expression is the first tool used in nonverbal communication reading. The human face has the highest number of interconnected muscles in the whole body, which allows the face to be very animated. Researchers traveled around the globe to show in a variety of cultures pictures with different facial expressions. They wanted to know if a person from a tribe in Africa or a person in a European city would both recognize and name the same emotion expressed in each photograph. They still disagree about the exact number of recognizable basic emotions, but there are eight that are often common: acceptance, anger, anticipation, disgust, joy, fear, sadness and surprise. Clearly there are aspects of people's lives that are universal.

Humor

Researchers strongly encourage people to smile often and laugh as much as they can. Laughing functions as an aerobic workout and it helps the body burn more calories. Pease gathered evidence from researchers around the world, which show conclusively that smiling and laughter supports the immune system, helps sell ideas, teach better and attract more friends. Pease states that only fifteen percent of our laughter has to do with jokes. Laughter has more to do with bonding. They also cite Robert Provine, a neuroscientist at the University of Maryland, who says that laughing is thirty times more likely in a social situation than in a solitary setting. "The older we become, the more serious we become about life. An adult laughs an average of fifteen times a day; a preschooler laughs an average of four hundred times."(80) Participants in my games often laugh. Laughing is contagious.

The Philosophy of Jump

There are many theories that support the idea that when people are moving they are happier, more natural and free. One of the most fascinating ideas is invented by Philippe Halsman, an American photographer famous for taking pictures of movie stars, politicians, aristocrats and CEOs all jumping. Once he photographed famous clowns and observed them jumping and having fun. It inspired him to ask famous people who posed for him to also jump for him. In *Jump Book,* he describes his experiences with all kinds of famous people, including Albert Einstein, Winston Churchill, Richard Nixon, Alfred Hitchcock, Marilyn Monroe, the Duke and Duchess of Windsor, Pablo Picasso, and other prominent figures.

Halsman is very honest about his artistic process. He writes of rejections, people who did not want to jump, or times when he forgot to set up his camera and missed great photo opportunities. He carefully describes not only his subjects but also the historical context in which his photos were taken. I found his memoirs to be very engaging and authentic. As an artist, I felt connected with Halsman on many levels. His persistence in asking even the most prominent figures to jump inspired me to overcome my anxiety and to ask people to jump and improvise for me.

Halsman coined the term *Jumpology*, the so–called philosophy of jump. His theory was that you ask a person to jump, his attention is mostly directed toward the act of jumping and the mask falls so that the real person appears. Halsman was brave enough to ask people even 89 years old to jump, and he believed that the secret of eternal youth is in one's spirit. I found his philosophy very appealing because in my projects I also try to make people move, to get them out of their safe space and to allow their inner selves emerge. *Jumpology* confirmed my own thoughts about the originality and uniqueness of all of us.

Halsman theorizes that each jump reflects a person's character and vitality. Halsman selects each person's jumping techniques, legs, arms, hands and whole body positions and interprets what those positions mean. I have noticed that people are constantly fascinated with jumping. There are hundreds of online sites where people post their jump pictures. I found a couple hundred thousand pictures of people jumping on *Flickr* alone. It seems that people feel an unstoppable need to share their jumps with each other. For a split of a second jumping seems to defy gravity, and maybe the feeling of being free and unbounded is the reason why jumpers want to share the photo of their jump with everyone.

Contact Improvisation

One form of social dance is contact improvisation, which was invented in the 1970's by Steve Paxton, a dance teacher from Bennington College. Contact improvisation combines dance, improvisation, meditation and social interaction. It relies on physical contact between two people, but it can also be performed solo or in a group. Dancers collaborate and support each other's improvised moves. Novak emphasizes that in contact improvisation each person is perceived individually, but to make the dance one needs another person. Contact improvisation is always performed in silence, on a bare floor with minimal use of props. Currently there are hundreds of contact improvisation groups formed around the world. People meet regularly for what are called *jams,* where everyone can participate or simply observe. Contact improvisation lets people express themselves freely and create meaning. It also builds awareness of others and can be used for sensibility therapy as well.

Professional Acting

Improvisation and acting have been used to tell stories for ages. There are many acting techniques and many different schools of acting. In his book *The Moving Body,* Jacques Lecoq, of the greatest acting teachers of contemporary theater explains in detail different techniques for teaching improvisation. Lecoq believes people use different psychological masks. He teaches his acting students how to discover and use their own masks. Through recognizing the many masks, students also learn how to feel comfortable behind each one. In one of the exercises, Lecoq teaches his students to improvise the colors of the rainbow. When I worked on my project, Motionary, and was choosing words for improvisations, I assumed colors were impossible to show. Instead of teaching his student to express how colors look, Lecoq pushes them to express the spirit of the color.

Psychological Replay

In his class, Lecoq also asks students to search for *body of words*. Expressing words through improvisation is especially important when interpreting poetry, particularly if it is written by international authors. Poetry improvisation sessions help to illuminate the works of many great international poets. Poetry often is misinterpreted because when translated literally from language to language it often loses its true meaning. Lacoq say the best way to translate a poem is "through mimodynamics, truly putting a poem into motion in a way verbal translation can never attain."(49) Another improvisation technique Lacoq uses in his teaching is psychological replay. In this exercise he asks students to rely on their past experiences and *replay* lived events and feelings. This method is very personal. With time and practice, students use it as a starting point from which to build and plan. Eventually they are able to deliberately *play*.

Stanislavski's Method

In the book *Actors on Acting*, international actors share their experiences using a range of acting techniques. According to most actors using experience–memory, it is one of the most fundamental methods they use; however, Stanislavski's is another popular method. This technique puts more emphasis on using imagination as a primary source of inspiration. An actor must discover himself each time and in every situation, must ask question: "How can this be done?" Actors do not use their experience–memory, but are in the moment and must improvise. For *Motionary* improvisations, participants had little preparation. I gave them a word and its definition and gave them a couple of minutes to improvise. People were very creative and used their imagination to express even the most difficult words. Sometimes, when they say the word they would say "it is impossible", but then in a few minutes they would turn out an amazing performance.

CS
CASE STUDIES

JUMPING SQUARES / Version 1 and 2

fastest wins

messages on the floor

free style

JUMPING SQUARES

This is a game in which players jump on color squares on the floor. This project was created when I was inspired by a *jumpstyle*. I wanted to test people's physical balance and create a game where they can play on their own or in a group. The color squares create different pathways, which may be interpreted in a variety of ways. Players may follow one color path from the beginning to the end, or jump randomly and create their own rules of play. Participants may also listen to a recorded voice telling them what to do and where to go. In this game, it is important for players to be accurate in their jumping onto the squares and to keep their body balanced. I imagine that their keeping balance would be reinforced in the future by computer and multiple sensors.

First Version

My first prototype of the game was very simple but the reaction from the players was very spontaneous. Players just jumped and rushed from start to the end without following any rules. I gave each player cards with tasks, which were penalties such as "go back" or "freeze". I asked players to monitor themselves for accuracy in their jumping and to be honest. However, people were going very fast, crashing into each other and never really stopping. I think most of them were cheating because they finished very quickly and asked, "What's next"? People were so focused on getting to the last square, that they did not keep the rules. It was interesting to see how players had to pause sometimes and let another player go first to avoid collisions. Most of the players were laughing, trying to keep their balance and forgetting about everything else. I think the game took them back to their childhood of having fun and feeling free.

Ethnography
It was useful to observe the dynamic of the group. It was also fascinating to see how people, while concentrating on their paths, paid attention to the other players. For example, Brian, one of the players, made a "buzzing" noise when another player lost his balance and stepped out of his square. Watching people jump, interact and comment on each other's performance was quite a sight for me. I thought it was successful even if the fun only lasted a very short time. It all happened so quickly that people wanted more.

Oblique Strategies
The second prototype had small but highly significant changes. The messages were placed on the floor next to the squares. If a player stepped out of the boundaries, he had to read the message and do what it said. Some had to jump, go back, sing aloud or put their hands in the air. I did not want players to finish the game so quickly and so I designed messages on the floor to slow them down. I also wanted them to be curious about what the other players were doing. In this new version, some of the spontaneity of the original version was lost. People were not looking at each other. Instead, they focused more on the cards, trying to perform the given task. They also thought it was too easy and wanted more. They took control of the rules of the game and started inventing their own. First, they voted to choose which path was the most difficult. Then players invented their own "two colors rule" and a dance style jumping.

Research

In my research, I looked at various group dances and how the use of algorithms, specific rules and synchronization led people through sound tracks. Since following one color was so easy for the players I wanted to know what would happen if they had a voice over giving them specific directions. In my third creation of the game, I found that introducing sound was the easiest way to move players in random directions but at the same time to synchronize their movements. I recorded many different voices, because I envisioned that the final project would be with sensors and voices coming from different directions. In this case, I reflected on another metaphor. I considered life paths, in which we all hear much advice and many opinions on what to do and where to go. How do we know to whom we should listen? We all make choices and I wanted to explore what would happen when players heard the voice and the directions. Would they follow the rules?

Sound

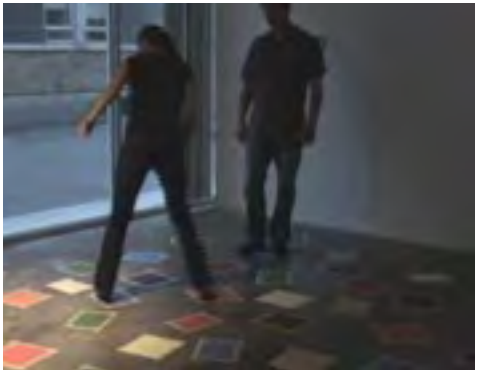
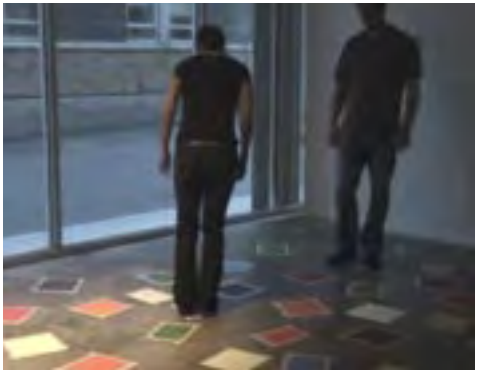
The third prototype was no longer about players being accurate in jumping, but about making quick decisions about which direction to move in. The sound track had sets of directions such as “go on, move, jump, stop, and think". Players had to calculate whether or not someone else was going to be on the next square to the left and whether they themselves would be able to go “left” when they moved. All players were very concentrated on the voice and were very careful in moving from square to square. I purposely changed the tempo of direction from very slow to very fast and gave people time to reflect and then get up to speed. I even wished I could create a human version of chess in which multiple players would jump from square to square.

JUMPING SQUARES / Version 3 and 4

sound version



free style


free stye



Outside of the Classroom

I presented it during the DMI group show *Play Time* in April 2008 at the Doran Gallery at the Massachusetts College of Art and Design. Because other projects really worked with sensors, people stepping on my squares waited for some special effects. In that environment, this project did not captivate people enough and it was hard to assemble a group of people to interact with it and each other at the same time. However, it was successful with a three-year-old girl. She jumped from square to square in random order for about fifteen minutes. She even came back for the second round. Overall, the show was a good way to see the prototype being used outside of the classroom. I realized a version of the game with sensors and sound track could be adapted for speed dating or variety of interpersonal learning experiences.

Summary

I think that making so many versions of the square jumping game helped me observe many differences in the ways people interact with it and to collect feedback. In this project, I accomplished some of my goals. I was able to make people move, behave more naturally, interact with each other and in the process have fun.
In the future, I want to create games and experiences utilizing sensors recording people approaching the game-installation, knowing how many people are moving and their position within the game. By knowing and calculating this information, I will be able to create specific sets of algorithms and establish probability cases. Jumping squares could evolve into new forms of futuristic games that teach us about ourselves, that set us free and that allow us to just have fun.


CINEMAGIC


CINEMAGIC


CINEMAGIC


CINEMAGIC

CINEMAGIC

Cinemagic is a learning and movie creating tool that allows users to draw from a database of movie clips, sounds and photography. Users can compare certain scenes and clips and use them to create their own story. It also offers a detailed description of each cinema technique, so that anyone can learn how to convey even the most difficult and abstract meanings. Users can add their own movie clips, photographs, sound and share it with the online community.

Origins

This project started out as a comparison of two movies: *La Jette* and *Twelve Monkeys*. My assignment was to create a learning tool for cinematography students by comparing similarities in those two movies. Although I liked the selected movies, I thought that comparing the two of them was not enough for an amateur to learn about cinematography. I remembered that when I was myself a new art student I had to copy master drawings and learn from various techniques they have used. I decided that the best way for students to gain knowledge is to study the broad scope of cinema masters. I decided to concentrate not on specific movie clips from the given movies but rather on the specific meanings, they convey. I researched the cinematography techniques and collected information about how each technique is used to convey the atmosphere of the place and feelings of the characters. I was very interested in how each technique influences the viewer. It was fascinating to learn how cinema can easily manipulate viewer's perception. After extensive research and data collection, I created an online database of cinema techniques and the meanings they convey.


CINEMAGIC
Cinematic Techniques Learning Tool
READ ABOUT
KNOW HOW
EXPERIMENT
SEARCH
Photography
Editing
Special Effects
Other
computer generated imagery
live special effects
practical effects
in-camera effects
miniature effects
stop motion
Schüfftan process
matte paintings
rotoscoping
dolly zoom
optical effects
traveling matte
aerial image effects
optical printing
bluescreen
prosthetic makeup effects
motion control photography
audio-animatronic models
digital compositing
wire removal
morphing
match moving
virtual cinematography

Usability

I organized the database in a such way that the users could choose different learning paths: **Learn** and **Experiment** or could select one of these Mediums: movie clips, sound clips and stills/photography. This online tool will allow people to learn about cinematography, watch examples of masters' work and create new movies. Each section would have many great *master* examples and descriptions of each specific technique. It would also suggest meaning it can convey. I hope that even an amateur will be able to quickly grasp professional terminology and various techniques of manipulating images and sound. Moreover, student can choose to watch whole movies, select clips, save them, tag them, add own clips and merge it all together to create new film and/or meaning. Student can use the knowledge gained in the Learn mode to recognize what technique is used in each scene and use that knowledge to create his own meaningful stories. **How to convey meaning** could be seen as the reverse version of the "Techniques". With this option, users would be able to search through abstract meanings and concepts, such as fear, alienation, and closeness and then would get examples of the variety of techniques used to convey those meanings.

IV
SOCIAL INTERACTION

"What attracts people most, it would appear, is other people"

— William Whyte

SOCIAL INTERACTION

Social interaction involves people talking, moving or taking any other action that carries some meaning. Social interaction can happen either in a physical space or can be accomplished through electronic devices, such as a phone (using voice) or the Internet (using voice, text, photos, videos). Physical communication allows people to be in the same moment in a space with others and it has many advantages over distance communication. It offers multiple levels of stimulation, especially tactile, and it speeds up the time of reaction. When we are in the same place with other people we unconsciously utilize all of our senses. Online communication is limited to hearing and seeing, but the main advantage of this type of communication is the possibility of connecting at the same time people from different geographical locations.

In my work, I explore both physical and online communication. My main goal is to create opportunities for human interaction in physical spaces that can be experienced in a moment or that can be shared with other people online. Technology allows users to stretch the time or repeat a situation multiple times. For example, in *Motionary,* the participants performed a word once, but when the improvisation is uploaded online, multiple users can watch it repeatedly. Users can play it in slow motion, fast or in reverse, which sometimes has many advantages. Seeing things happen multiple times allows us to notice more details and to see what we otherwise would have missed.

Communication Innovations

Technology is changing the way people learn, play and participate in society. In the last two decades we have seen technology develop very fast, which had a huge effect on people's education and the job market. Currently there are many theories about learning and education that aim to establish their position on the global scene. Educators try to find the best way to prepare new generations of students for the fast pace of technological and cultural changes. Educators argue about different theories to decide which education method is the best for getting the students ready for the future. People need other people; it is part of human nature. Research shows that being among other people generally improves a person's mood. Currently, technologies are booming, but new communication tools mainly support online networking. In my opinion, there is much more emphasis on using online communication which leads to people forgetting how to behave naturally in their real lives.

Learning Theories

There is a *Cartesian* view of knowledge and learning; "I think, therefore I am," and the social view of learning; "We participate, therefore we are". *Cartesian*, the traditional theory of education assumes that knowledge should be passed from teacher to student. The social perspective is that knowledge is gained through interaction with others. In their article *Minds on Fire*, Brown and Adler call attention to how technology and innovation influence education. The authors stress, that the impact of the Internet has not yet been fully realized. They also suggest that social learning becomes increasingly essential in everyone's education process. According to Brown and Adler, one of the most significant aspects of social learning is that the students can take on the role of the teacher to help other group members benefit from their understanding of subject.

The authors believe that the best way to learn something is by teaching it to someone else. The main difference between *Cartesian* and Social learning theories is not so much focused on **how much** we are learning but **how** we are learning. Another educational theorist John Dewey also says, "education is essentially a social process."(58) At the same time, in Dewey's opinion, education should be based on theory as well as experience, and students should be actively involved in society and culture. I think that *Cartesian* and *Social Learning* are important and interdependent. We can say, "I think, therefore I am an important part of the group." In my opinion, social learning is very important for all people and at different stages of their lives. Technology and the world are changing fast, people constantly need to build new skills, broaden perspectives and keep being motivated at all times. Social learning can provide all of these aspects without everyone having to go back to school.

Hole in the Wall

A great example of learning from peers can be seen in the experiment conducted by Sugata Mitra. Mitra, who is now a professor of educational technology at Newcastle University (UK), spent six years researching technology and social learning in his native India. His experiment was called a *Hole in the Wall,* which was a computer and monitoring system installed in walls of buildings in various demographic parts of the country. The installed computer had an English operating system and the Internet. Mitra studied children's behaviors as they began to use the computer on their own. Their learning patterns emerged easily even in poor neighborhoods. His research demonstrated that even without a teacher, children work in collaboration to explore unknown territories, exchange ideas and learn English words from one another. They extended their knowledge by applying the new English vocabulary in their everyday conversations.

My Experience

For me, one of the best elements of being in the graduate school is the opportunity to work with a diverse group of students. It is an important and integral part of my intellectual and personal growth and it affects my work enormously. In my group, we have only eight students, but it feels like eighty people are in the room. Each of us brings to the class opinions and experiences from our families and cultures. So it is not only about how many people the school teacher reaches but it's also about people who bring to school their diverse backgrounds and knowledge. Very often, we observe and learn from other peoples' moves, choices and decisions. I want to keep challenging people and make them question themselves; "what would I do?" or "how would you do it"? I think civilizations would not develop and people would not invent new things if people did not observe and learn from others.

Situated Cognition

In *Situated Cognition and the Culture of Learning*, Brown, Collins and Dugud argue that people learn the most through activity and in social and physical contexts. They claim that knowledge is situated, and is fundamentally based on activity, context and the culture in which it is developed and used. People generally learn most words in the context of ordinary communication and when they hear it being used. The authors say that research shows that an average 17–year old has learned vocabulary at a rate of 5,000 words per year (13 per day) for over 16 years. By contrast, learning words from abstract definition and sentences taken out of context of normal use is slow and generally unsuccessful. Brown and all., state that the average student who uses dictionaries and dry explanations of meanings, learns in his classroom less than 200 words per year. Their research helps support one of the key goals of *Motionary*, which is to help people learn and understand new words in the context of improvised scenes. Educational theories such as these demonstrate the potential of projects such as *Motionary,* which can be helpful both in the sense of social learning and situated cognition.

NEW MEDIA LITERACIES

Play
The ability to experiment with one's surroundings as a form of problem solving.

Performance
The ability to adopt alternative identities for the purpose of improvisation and discovery.

Simulation
The ability to interpret and construct dynamic models of real-world processes.

Appropriation
The ability to meaningfully sample and remix media content.

Multitasking
The ability to scan one's environment and shift focus as needed to salient details.

Distributed Cognition
The ability to interact meaningfully with tools that expand mental capacities.

Collective Intelligence
The ability to pool knowledge and compare notes with others toward a common goal.

Judgment
The ability to evaluate the reliability and credibility of different information sources.

Transmedia Navigation
The ability to follow the flow of stories and information across multiple modalities.

Networking
The ability to search for, synthesize, and disseminate information.

Negotiation
The ability to travel across diverse communities, grasping and respecting multiple perspectives.

Awareness
The ability to mindfully see one's self in the context of the larger world.

Visualization
The ability to create visual representations and interpret them for the purposes of identifying patterns and trends, and understanding ideas and arguments.

New Media Skills

Research indicates that in today's society, social participation and creative thinking are critical to success. Researchers, communities and companies think that we live now in a *Creative Society* where what counts the most it the ability to think and act creatively. A group of researchers from *Comparative Media Studies* at the Massachusetts Institute of Technology, under the leadership of Henry Jenkins produced a white paper *Confronting the Challenges of Participatory Culture: Media Education for the 21st Century* to help educational institutions prepare successful educational programs for future generations. Researchers think that in the 21st century literacy is based on new media social and creative skills. These skills need to be developed not only for personal use but, they are essential for successful communication within a larger community.

Since technology connects people from different geographical locations, cultures and religious backgrounds, it raises standards for communication skills, especially tolerance, respectfulness, open-mindedness and negotiation. Jenkins, et al., emphasizes that people need to be open to the ability to travel across diverse communities, respect multiple perspectives, and be able to respect different sets of cultural norms. One of the most important new media skills is the ability to judge and verify information. Since anyone can create content and share it online, how can we know what is true and what is false? In social learning and participation, user created content relies mostly on authentications from communities. People work together to generate new content and to authenticate information. The democratic vote might not always be the most accurate but people need to learn to disseminate information and sources on their own.

Collective Intelligence

In the current technological and economical state, it is very important for groups of people to work together. Most companies today look for people who are not only good at what they do, but also are team players, who will be able to work and collaborate with other group members on a variety of projects. Brown, Collins, Duguid suggest that when people work together they accumulate gathered information, learn from each other, and are able to come up with new and unexpected solutions. Working in groups can be challenging, because each member has to learn how to socialize and build understanding with others. It requires willingness to explore new venues of thinking and to be able to build on constructive criticism from others. Group members can also influence and inspire each other to create new and unique solutions. Collaboration helps people build their social skills and provides a strong basis for future.

Playful Interaction

Mitchel Resnick says that people learn the most in kindergarten where they freely create things, interact with others and build on that interaction. Resnick sketches out a spiral process or collaboration and creative learning: "children imagine what they want to do, create a project based on their ideas, play with their creations, share their ideas and creating with others, reflect on their experiences—all of which leads them to imagine new ideas and new projects"(1). Resnick suggests that this model of interaction would be used in graduate schools and work places so that people would be able to create better design solutions or business plans.

My Projects

Negotiation is a very important element of my other projects. In *Map, Jumping Squares* and *Tell Me Your Secret* participants negotiate their position in physical space. They have to create a mutual agreement about how they would move around each other and what kind of body gestures they would avoid to not hurt each other. *Motionary* offers a different kind of "negotiation". In this case, the online community has to agree whether a specific performance expresses a specific word or not, and negotiate who is the best and clearest performer. In *Motionary,* people need to agree on the meaning of a performed word before they improvise a scene. Everyone can edit the *Motionary* entry and rate performances. Everyone who thinks they can do a better improvisation can submit their own performance. In the *Motionary*, the role of *master* and *student* is open to social negotiation.

Motionary participants are responsible for what meanings to choose and how to improvise words. If there is a group of actors, they need to collaborate in groups to develop their ideas for the specific improvisation. By giving the participant freedom of expression, I think *Motionary* empowers people to be very creative in their interpretations. That brings me to related aspect of my work, which is a significant a correlation between the viewer and the participant. I not only want the participants to be active in my projects, but I also want to entice onlookers to join in. In *Jumping Squares*, onlookers could cheer the jumpers, give them directions or easily join them in jumping. I want the audience to stop and think, wonder and ask questions.

Designing Games

Most games are designed for pleasure and entertainment. For designers it is not only challenging to design something that can be used to play but it needs to be enticing for longer periods of time. Game designers play on the concept of engaging people in challenges and rules, but designers have to be careful not to make it too simple or too difficult. In his book, *Designing Interaction,* Bill Moggridge interviewed some of the most influential game designers Bing Gordon, Brendan Boyle, Brenda Laurel and Will Wright. They all agree that inventing a toy or a game is a rigorous process. Game designers go through many design stages; user testing and they also research psychology and cognitive science. Over the last twenty years, there has been a trend toward the socialization of games. Many games can be played individually but most people like games that allow them to interact with other people. Games help people relax and have fun but they also help people acquire creative and social skills.

My Games

I design games, spaces and tools that support having fun and originality. I want people to be creative and to enjoy themselves. In the *Jumping Squares* people made up their own rules, in the *Cinema Techniques* and *Motionary* users can create new stories out of existing movie clips. In addition, in *Motionary,* people have to be creative to come up with new stories and context in which they improvise a specific word. Creativity is especially obvious when words get more difficult and abstract, and actors have to be very imaginative with their improvisations. Although in my games and installations I create rules, I also try to give people lots of freedom. I let them use a given space or tools without restrictions. Users then have to cooperate with other participants and create their own “rules of engagement".

Games and Systems

In *Gaming Literacy* game designer Eric Zimmerman states, "Game design involves math and logic, aesthetics and storytelling, writing and communication, visual and audio design, human psychology and behavior, and understanding culture through art, entertainment, and popular media."(29) He stresses the importance of play and creativity in game design. He also emphasizes the role systems, which can become highly significant when people control and manipulate them. "Systems only become meaningful as they are inhabited, explored, and manipulated by people."(27) By having systems easily accessible, users can move more freely in the game structure and can crate their own rules of game and be more creative. Zimmerman works in collaboration with other game designers on *Game Star Mechanic,* a computer program that lets youth learn about game design. It allows students to create and modify simple games.

Currently there are many research groups and design initiatives that try to build open game systems. Zimmerman suggests there is a need for new approach to game design because gaming literacy is very important. He believes that cognitive, creative and social skills are acquired by playing games. Researchers argue that it is not the game results that are the most important aspect of the play but the process of thinking experienced during it. People invest time to understand the rules of the game and always try to figure out the best way to beat the system. "Game is nothing but a system of problems, the more interesting games are the ones that have larger solution space".(29)

Play

There are many theories of what play is. Play can involve many activities: moving, imagining, creating, pretending, competing, discovering, socializing, learning, and almost everything that kids usually do that is enjoyable and fun. Although play is often associated with children, adults also like to play, but they do it by performing different activities. Since there is a child in all of us, I think everyone no matter how young or old can find something he enjoys. Play and toys can help children and adults automatically learn or attain new skills or knowledge. In 1837, Fredrich Froebel first opened in the world a kindergarten and he prepared specially designed toys for his pupils. "Froebel's gifts" as they were called, are playing objects that allowed children to create new things and helped them learn numbers, sizes, shapes and colors. Resnick reflects "Froebel was designing for designers—he designed objects that enabled children in his kindergarten to do their own design."(3) How to create playful objects or situations is something that psychologists, educators and game designers try to discover.

Playful Experiences

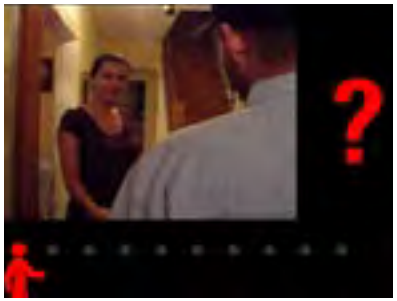
I think my projects offer an exciting and playful experience. I achieve playfulness either by creating games or by allowing participants to act out and create new stories. I try to put people in situations where they have to respond quickly and make quick associations, connections and choices. I want to challenge them to think more about a subject and to get them involved more deeply in a given experience. Moving around, jumping, dancing and improvising allow people to live in the moment, play and enjoy themselves.

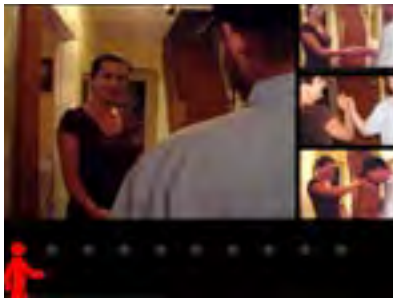
Improvisation

Psychologist Mikhaly Csikszentmihalyi has found that people become more deeply engaged in activities that are challenging but not overwhelming. That assessment helps game designers when they try to design playful games. In *Rules of Play*, Zimmerman and Sloane say that although "play is improvisational and uncertain", it emerges from a specific context created by game designers. That context is based on closed systems and sometimes–strict rules. Some people think that play is unproductive, however, research shows that play fosters creative thinking and creative expressions. Jenkins et al., in their white paper emphasize the significance of, for example "role play", and they argue that it is a fundamental skill used across multiple academic domains. "Improvisational performance represents an important life skill, one that balances problem solving and creative expression, invites us to re–imagine ourselves and the world, and allows participants to examine a problem from multiple perspectives."(30)

Our ancestors who wore masks to convey hunt stories or to perform a powerful dance for gods have used improvisation in the past. Wearing masks and acting allows people to hide, pretend to be someone else or be daring in our behavior. Improvisation, a form of play, have been studied by Csikszentmihalyi in the context of flow–the optimal experience. Csikszentmihalyi thinks that charades are popular because they allow people to act out different roles and express their fantasies. Csikszentmihalyi says "Even the most silly and clumsy impersonation can provide an enjoyable relief from the limitations of the everyday patterns of behavior, a glimpse into alternative modes of being."(100)

CS
CASE STUDIES






YOU ARE HERE
Goal: guess meaning
Keywords: game, gesture, communication, foreign language, screen

I designed this video game so that one can experience being in a different country in a specific moment. A player has to make quick choices in given situations. Each scene is based on the common cultural experiences of a chosen country and presents one with three possible solutions. Each scene has only one right answer, which is the acceptable custom in a particular country. The player relies on gesture and voice tone to recognize what is going on, because there are no translations or directions about what to do. Playing this game gives immediate insight into the subtle differences of being a stranger in a strange world.

Possible use: gaming or experiential learning

SCRATCH AND SENSORS PROJECT
Goal: triggering sound and making people move (on the screen)
Keywords: game, moving, sensors, touch, jumping, sound making, physical, screen

I designed a movement–triggered installation with Scratch, and with touch sensors. Scratch is a programming language that allows even inexperienced users to create interactive stories, animations or games. Strips of foil are attached to the sensors for better connectedness with the computer. Stepping on the tiles with aluminum "shoes" connects players through the sensors with sound and the visual display of the computer. Scratch code causes people on the screen to move, to change size and to make a variety of sounds. When a player moves, it triggers people on the screen to move, and each rectangle sets a different sound.

Possible use: interface with body movements, jumping game with sensors



MAP
Goal: finding final destination
Keywords: game, challenge, group, individual, crawling, exercise, social, no sound, connecting people, movement, gesture

I created this installation with multicolored thin threads suspended from different heights and from different points within the installation. Each participant in this experience chooses one color and slowly follows paths it creates. Players need to be careful with the delicate thread and should be aware of the other participants. This installation is designed to enable players to experience the difficulties of traveling, meeting obstacles on the way and crossing paths with other people.

Possible use: interactive installation or a game

SOUND AND GESTURE: VOX 5
Keywords: expression, motion, gesture, visualization, sound

This is a visual interpretation of *Vox 5* by Trevor Wishart. While listening to this musical piece, I created a series of gesture drawings using a variety of tools and marks. The quality of the color, shape and texture of the drawings and painting represents my impression of the sound elements from the composition. I also created an animated version of my gesture drawings and I combined it with the *Vox 5* sound track.

JUMPING SOUND
Goal: expression: creating sound
Keywords: movement, body, physical, active participation, improvisation, individual, exercise, individual, sound, performance, musical object

Jumping Sound is a concept for a sound instrument that has to be installed on the human body. It requires a player to jump, shake and twist various parts of his body to create an original sound piece. I designed the instrument and the original score. The user can use it as a performance piece or treat making sounds as a motivation for active exercise.

Possible use: performance piece

SEEING WORDS— *SCRATCH GALLERY*
Goal: express meaning
Keywords: game, story, gesture, communication, interpretation, exchange

Users of the *Scratch* website are encouraged to be creative and share their projects online. In the Fall of 2008, I had the opportunity to create a theme for a Scratch gallery. The *Scratch Gallery* changes its themes every week and inspires the community with ideas for new projects. I created the *Seeing Words* theme for the gallery where users had to visually explain the meanings of words, such as: rain, hero, time or power. It was exciting to see *Scratch* users create short animations or even games to express the meanings of these words. It was even more enthralling to see multiple interpretations of the same word with completely different context. Scratch users can share the source files and comment on each other's projects, which is a great way for a creative collaboration.

ILLUSTRATING "CONTEXTICON"
Goal: conveying meaning, illustrating words
Keywords: storytelling, gesture, communication, language, meaning

I work with researchers and writers to visually "illustrate" an online edition of the *Contexticon of the New Testament*. The *Contexticon* unearths and then explains the cultural and historical meaning of Greek words used in the New Testament and other ancient literary sources. I research art collection databases as well as history and literature to literally or conceptually illustrate expressions explained in the *Contexticon*. In the process, I strive to use images that enhance the user's comprehension of the word and give a taste of antiquity. I spend a lot of time interpreting narrative painted on ancient frescos, pottery, reliefs and mosaics. It amazes me how ancient artists simply but beautifully captured the body in motion and used gesture to powerfully express the context of certain scenes.

V

MOTIONARY

confluence \KON-floo-uhn(t)s\, noun:
1. A flowing or coming together; junction.
2. The place where two rivers, streams, etc. m
3. A flocking or assemblage of a multitude in
place; a large collection or assemblage

abulia \ah-BOO-lee-uh; uh-BYOO-\, noun:
Loss or impairment of the ability to act or
make decisions.

deus

MOTIONARY

Motionary is an online, user-generated database of improvised words and expressions given meaning through silent improvisation. *Motionary* helps people learn and understand new words and at the same time, it supports both physical and online social interaction. *Motionary* members can create an entry for each new word; record performances individually or in a group, submit and meta tag their improvisations online. *Motionary* is a confluence of concepts from other case studies I created during the first year in the DMI program. **Motionary offers three different modes: Learn, Play and Create that support different learning styles.**

Learn

It is the most important and essential part of *Motionary*. Through improvisations, it offers vocabulary and expressions, definitions and pronunciations. The Learn mode helps people understand the meaning of words, see them being used in the context of a situation and also helps them remember these words. Users will be able to create their own accounts with vocabulary preferences, galleries of favorite performances, and sign up to receive an improvised word every day. Users will be able to select the clearest or the most popular performance or add their own improvisation


Motionary
GUESS:


Motionary
I
Love
You

Play
This mode offers games that are based on nonverbal communication, for example a kind of online charades. It allows people to play with improvisations, meanings and words. Users have the option to select the level of difficulty, play with their friends and keep score online. Play mode offers a challenge for people who know vocabulary very well, but who want to experiment with their ability to comprehend body language. Playing with words and improvisations, allows playful interactions for people who enjoy games, riddles and challenges.

Create
This mode lets people remix existing performances to create new sentences, poems, and stories. In "writing" sentences using recorded improvisations, users are able to choose from a wide range of improvisations and give a very specific meaning to what they wish to convey. They can share their stories with their close friends or with the entire *Motionary* community. The white background used in the improvisations allows the clips to be linked seamlessly into one visually uniform story. In the future, I would like to see the Create mode used for creative online collaboration and filmmaking.

POEM IMPROVISATION: *The Great Figure*









Origins

The idea for Motionary was born during the Spring 2007 semester, when in my Design Symposium class I was asked to create a dynamic interpretation of a poem. I chose *The Great Figure* by William Carlos Williams, because its simple and seemingly random words created an intriguing story. Poetry is a combination of words, which, when juxtaposed with one other express unexpected and unique meaning. I contemplated the various ways each of us read, improvise or interpret a poem that results in unique and very personal interpretations. I remember poetry readings longer if the reader uses gesture. I wondered if I could push the envelope even further in my project, and ask people to act out and perform the poem.

While I was working on the interactive poem project, I was also looking at English words, which are difficult for me to understand or to remember. Because English is my second language, I decided two years ago to expand my vocabulary. I signed up to receive a new word every day from the online site, *Dictionary.com*. Since then, I have received hundreds of words but it is difficult to remember them all. This new vocabulary often seemed as abstract as the word in the William's poem and it could be used and imagined differently by various people. I want those unusual words from online the dictionary to be presented in a more appealing, unique and memorable way. I am a visual learner and so images help me build and maintain a growing fund of English words and concepts. Consequently, I imagined how helpful it would be if a person performed each new word for me each day. That is exactly how the idea for Motionary was born!

The Great Figure

by William Carlos Williams

Among the rain
and lights
I saw the figure 5
in gold
on a red
fire truck
moving
tense
unheeded
to gong clangs
siren howls
and wheels rumbling
through the dark city.

Poem Improvisation
Originally, I asked a group of strangers on the street to perform parts of William's poem together using only body language without any spoken words. I lined up five volunteers along the sidewalk and gave each one a card with their particular words from the poem. The performers had to anticipate their turns in order to act out each word or phrase sequentially and to maintain the flow of the poetry.

It was fascinating to see how the participants used their bodies, the space around them or even the other actors to express the words. Two things struck me the most. First was the moment when one of the actors clung to another—a perfect stranger to her, to express the word "gold". Another happened as an actor stepped apart from the alignment and used the entire surrounding sidewalk. Clearly this one loved to perform. It was revealing to watch the group interpret the poem, improvise and let go of norms, in this case to touch a stranger.

Though the performance was very engaging, without knowing the words of the poem it was abstract and hard for the audience to decipher. To solve the problem, I introduced a reading of the William's poem as an option. I thought about adding "buttons" to each performer so that by rolling over the viewer would be able to replay, see the text or hear the poem read aloud. To improve the project it was clear I needed to involve better or even professional actors.









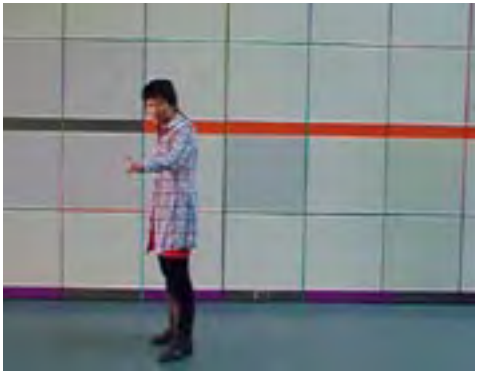
Recording Cycles

For the subsequent take of poem improvisations, I asked my classmates to perform separately in the blue room. I wanted to have a clean background and the flexibility to replace one person with another. The second group of performers was more skilled in improvisation than the first group. Their first task was to express the whole poem using only body movement. Given their talent and that I had them in the space I took advantage and required the actors to define additional groups of words. It was not about spontaneous improvisation anymore. With terms such as "instructions" or "beautiful", the actors now had to explain and define meaning as clearly as possible. Those first *Motionary* performances were excellent. They looked wonderful on a white background and demonstrated the advantage of being able to seamlessly combine all the clips.

It was observing the reaction of the audience to those clips that I realized another aspect of language and meaning acquisition. The audience was using a combination of wild guesses and reacting to one others interpretation in order to seek meaning. That inspired me to build another component of the *Motionary,* charades online. Viewing many performances gives the learner the options to choose the best performance or their favorite actor. The next step in the development of *Motionary* was to build a larger database of words and improvisations. I was determined to record more individual improvisations on a white background. However, it was challenging again to get more volunteers. I became more confident in what I was doing and started asking more people to improvise for my project.

SPONTANEOUS PERFORMANCES

lambaste



camarilla

ostentatious

Research

Over time I had to lower my expectations and for research purposes I asked many people to improvise in random locations, without the advantage of the blue room. I conducted a series of photo shoots at the MIT Media Lab, where I was able to get my classmates to perform for me. Whenever I explained that the *Motionary* is about helping people learn, understand, and remember words, most people were eager to participate. They also did not mind sharing their performances online, which I found surprising in a positive way.

Another insight occurred while I was shooting a performance, two actors obviously in a hurry and anxious about time. To accommodate them I suggested they improvise together. This accidental situation resulted in a terrific performance. Without any directions and left to negotiate on their own, the two actors collaborated and turned out an amazing performance. I realized that having a pair of actors adds another level of stimulation to the performance. With time I decided to ask three or more people to participate in the next performances. I was a bit skeptical about having a group of people agree on something and perform without a director. Here again my assumptions were wrong. The largest group I was able to get to perform for *Motionary* was five children and on another occasion four adults.

deus ex machina
epigone abulia
camarilla
miasma bellwether
pugnacious

MOTIONARY WORDS

jollification: merrymaking; revelry.

deus ex machina: an agent who appears unexpectedly to solve an apparently insoluble difficulty.

bellwether: a leader or leading indicator.

ostentation: excessive or pretentious display.

camarilla: a group of secret and often scheming advisers.

importunate: troublesomely urgent.

woebegone: woeful; also, run-down.

voluble: characterized by a ready flow of speech.

afflatus: a divine inspiration.

pugnacious: combative; quarrelsome.

caesura: a break or pause in a line of verse; also, any break or pause.

salubrious: healthful.

abulia: loss or impairment of the ability to act or to make decisions.

pin money: money for incidental expenses; also, a trivial sum.

miasma: a thick vaporous atmosphere, often noxious.

objurgate: to scold or rebuke sharply.

roister: to revel; to carouse.

inveigle: to persuade or obtain by ingenuity or flattery.

portent: a sign or omen.

lambaste: to scold sharply; also, to beat.

chimera: a mental fabrication.

lionize: to treat or regard as an object great interest or importance.

ubiquitous: being everywhere.

winsome: light-hearted.

epigone: an inferior imitator.

confluence: a flowing or coming together.

posit: to postulate; also, to suggest.

Source: *Dictionary.com*

camarilla

epigone

winsome

Gesture Patterns

All group improvisations were full of lively atmosphere and heated discussions, because people had to negotiate and agree on elements of each scene first. What also amazed me was the ease participants displayed while performing even with some unfamiliar people. Strangers touched, unconsciously mimicked each other and assumed postural echo body positions. I watched enthralled as people who never talked to each other before, embrace, touch and have fun together. I also tried to see if *Motionary* could help people learn a new language. I recorded native speakers improvising and pronouncing the word aloud, so that the learner could both see and hear the new word. I decided to zoom in to frame only the person's upper body. That way I thought, the viewer could see the facial expressions in detail. I assumed that we mostly use our upper bodies to gesture while talking. Thus by watching the speaker's lips, we can see the positions needed to make certain sounds.

Another fascinating aspect of *Motionary* performances is the fact that although I recorded all performances in separate shoots, some performers used exactly the same gestures and moves to express certain words. It is more understandable to see performers using the same gesture for very specific words, such as in performances of the word "camarilla", however seeing actors using the same sets of moves for the word "epigone" fascinated me. Three different groups of people, from different cultural backgrounds and different schools used the same context of a person marching and an "imitator" following him. I was surprised because I would think of a dozen of other ways to represent the "imitator" before I would think about walking, but maybe it is just me. I think it could be revealing to research this matter further and see why people use identical gestures to interpret the same word.

GROUP PERFORMANCES





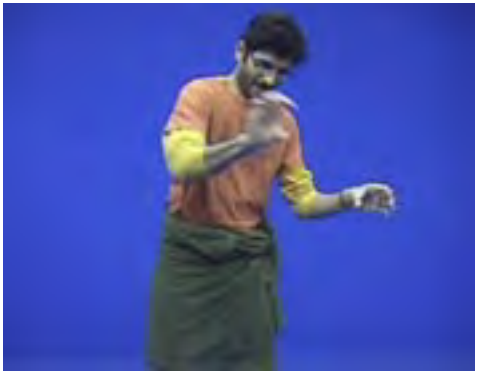




No Director

One of the most remarkable aspects of *Motionary* performances is the fact that performers took only a few minutes to think about their words and how to act it out. The Actors had to be creative and improvise in an instant. It was amusing to see that at first participants would say, "it is impossible to show this word" and then a couple minutes later they would turn out an amazing performance that clearly expressed that particular word. Over time, I realized that the participants also needed some time to "warm up" and with each new word they would become more free and relaxed. They needed time to get used to the space, to the camera and the challenge. I recorded and interviewed professional actor and director Joshua Dolby. Because he has extensive experience in front of and behind the camera, his feedback was invaluable. Dolby acknowledged that he also needed time to warm up, get used to the space and surroundings, the camera range and to my expectations.

Usually, directors have a specific vision of the performance and they want actors to play according to that plan. In *Motionary,* I simply gave people words and encouraged them to express it using only body language and no words. I had no rules, no directions, and no time limits. Some participants told me that in the beginning, they were confused, because they did not know what exactly was expected of them. *Motionary* participants were surprised that I was happy with the first take. I did not judge or criticize the performances. I only re-shoot a performance if the actors were stuck in their scene and needed more time to work it out. I wanted all *Motionary* performances to be "raw", spontaneous and very real. I think that this is one of the reasons why those improvisations were so successful. Often I was able to observe the joy the actors felt during and after improvisation session. I often heard "I did not think this would so much fun" which gave me enormous satisfaction.

	GERMAN PERFORMER	KOREAN PERFORMER	HINDI PERFORMER
cook			
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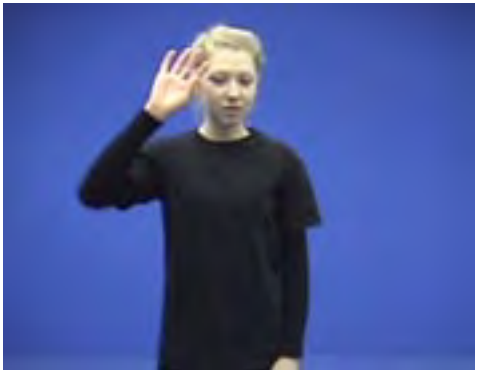
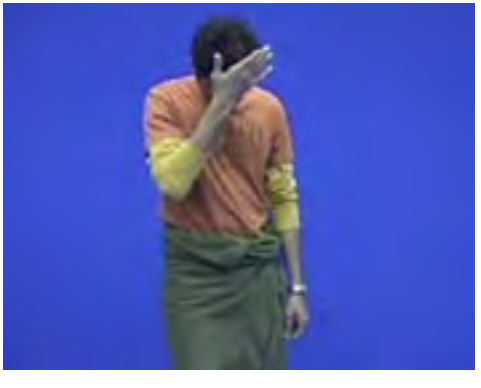
forget			

Expressed Words

For *Motionary,* I asked people to perform uncommon and very specific English words taken from the online site *Dictionary.com—Word of the Day*. I also imagined that people would be able to create sentences about their feelings and emotions. That is why I asked people to show me "I love you" or "I hate you". Most American participants expressed hate with very animated body language and facial expressions. Then, when I asked people from Asian cultures to do the same, they told me they do not know how to communicate "hate" because in their culture they do not express this emotion. International students from Korea, China and India had to think very long to improvise a "feeling that is close to hate". Even when they expressed it, it was not as powerful as those done by American students. Asian cultures are known for not demonstrating emotions ostentatiously, or in public, which is likely the reason for their reticence.

The participants were also given some basic verbs that are usually learned when a person is first acquiring a new language. I asked students from Germany, Korea and India to show and say the verbs: cook, sleep, forget, measure and other basic expressions. That experiment made me realize that motion could really work as a tool for learning a language. However, for a better learning purpose it would be useful to zoom in even closer to capture facial expressions and upper body gestures. Some languages and sounds are very hard to hear and even harder to repeat. Improvisation enhances seeing, seeing enhances learning. That batch of recordings turned out to be fascinating on another level. I discovered that students from different countries used the same gesture to express certain verbs. For example, each student leaned her head on her folded hands to express the word: sleep. It would be revealing to research even more gestures in order to discover universal patterns of body language.

cook

German: kochen

sleep

German: schlafen

forget

German: vergessen

Korean: 요리하다

Hindi: pakhana

Korean: 잠자다

Hindi: sona

Korean: 잊다

Hindi: bhoolna

CHILDREN









Children

Filming children who participated for *Motionary* demonstrated another fascinating aspect of my motion and interaction studies. I filmed five children: three, six, nine, ten, and twelve years old. I noticed right away that children utilized a great variety of movements. Kids crawled, pretended to fly, jumped, made stars. I gave them simple or simply defined words from *Motionary* to perform. It was amusing to see that their performance of "zoo" was almost the same as "ubiquitous". When standing alone in front of a camera a child looked nervous and self-conscious. The same child in a group with other children would forget about everything and concentrate on interacting with others. When moving and interacting with each other, children looked more carefree, cheerful and more relaxed than the adults.

The nine-year-old actor used the same gesture and facial expressions to express anger or concern as the adult actors did. Was this part of inborn gesture or can children mimic adults and even by age of nine recognize and replay certain meanings with their own body language? Mimicking was obvious in interaction between kids, especially when younger children tried to copy the older ones.

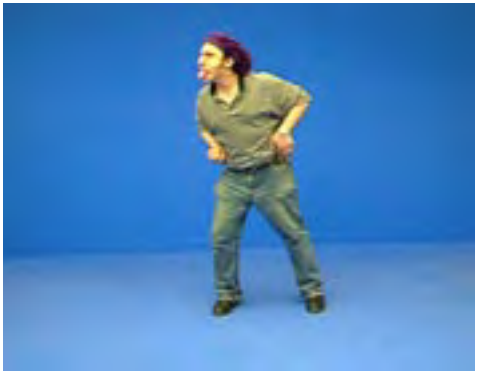
PROFESSIONAL MIME

sensors

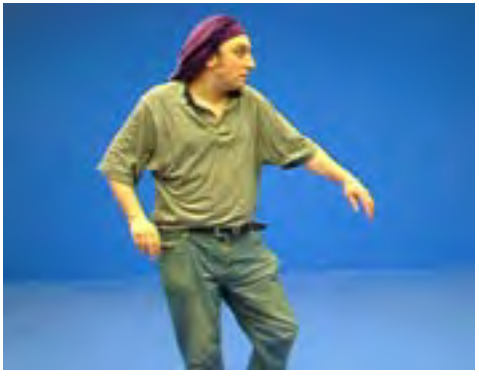
visualization

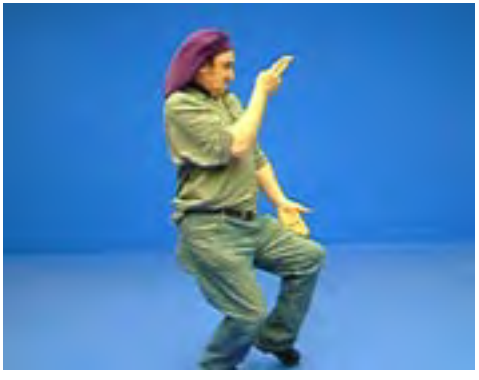
alphabet of gesture









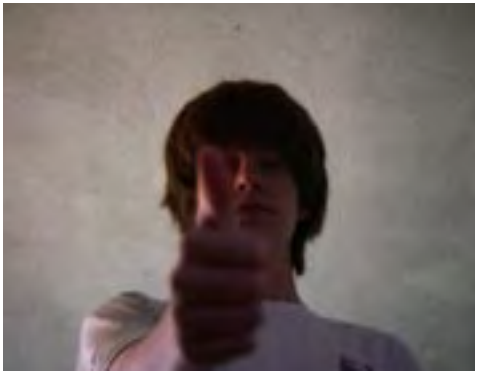
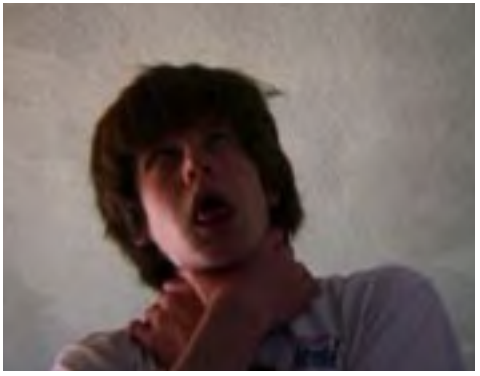
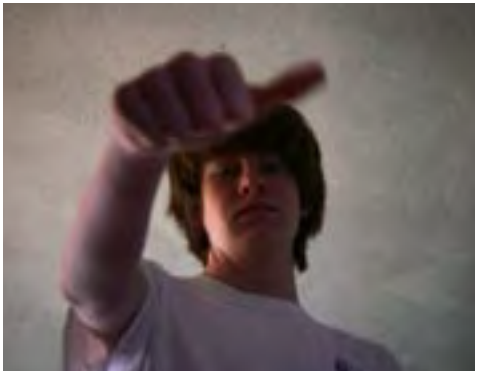


Professional Mime

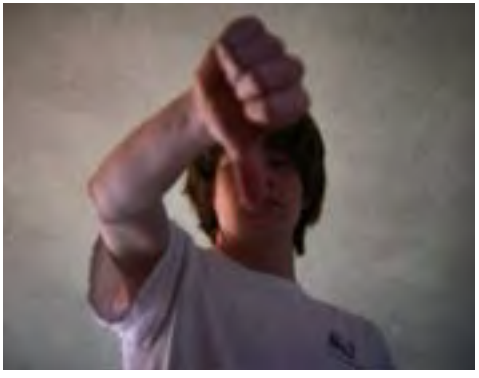
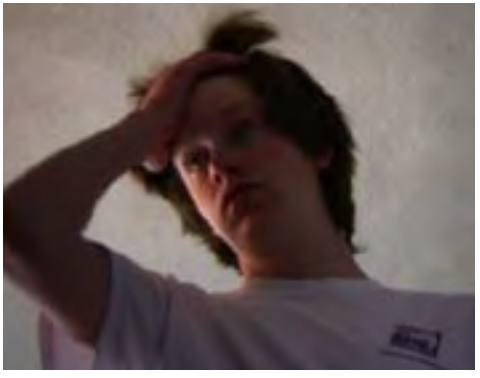
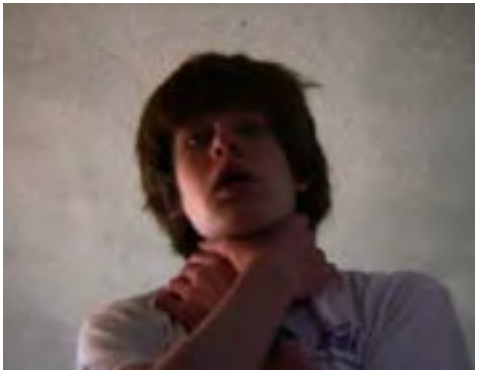
My last photo shoot happened at the end of April 2009, when I recorded and interviewed a professional mime, Ian Thal. He performed words for the *Motionary* contest and other unusual words from the Motionary collection. Thal's improvisations were captivating and dynamic. He presented and explained to me his "gesture alphabet" that he uses as foundation for his improvisations. Thal trained in classical mime but he tries to discover new venues of improvisation through his own acting, writings and direction. Thal looks at the body through a philosophical, spiritual and mystical prism. He does not agree with famous philosophers, for example, Descartes, that "the Body is just a machine". Thal believes that acting, improvising and using body motion integrates people's body and mind into "real" unison. Thal thinks that being in tune with their bodies helps people feel better and be happier. In his opinion, verbal and nonverbal communication operate in different realms. These areas overlap, but while verbal communication is very precise, corporal language leaves more room for interpretation. Thal believes that *Motionary* is a confluence of explicit vocabulary, the highest form of verbal communication, and mime, the highest form of nonverbal communication.

2008 MOTIONARY CONTEST **WINNER**

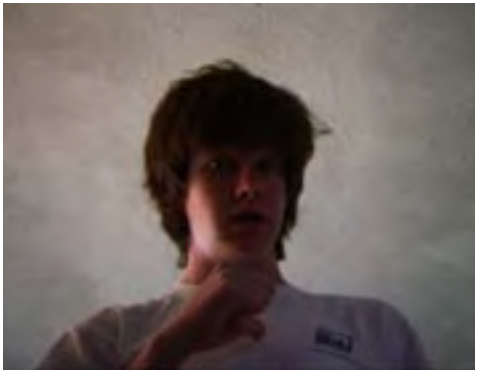
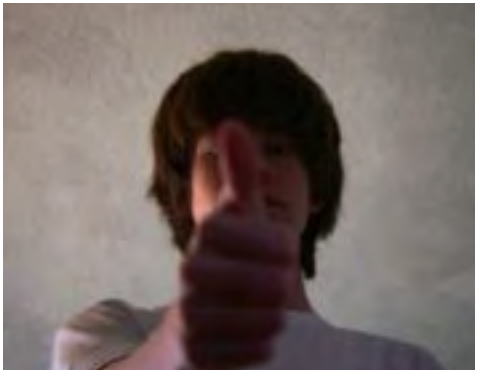
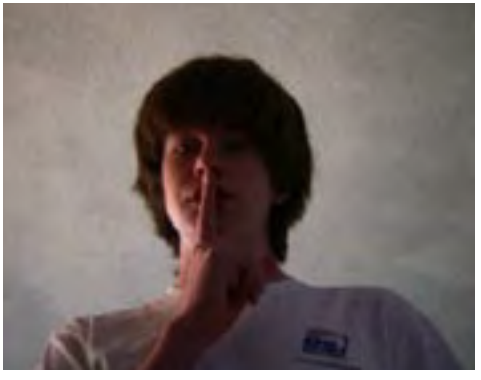
gesture

gesture

gesture

Motionary Contest

In April 2009, Brian Moore helped me organize the First Annual Motionary Improvisation Contest. He helped me create a system of rules for contest submissions and judging. The contestants had to perform one of four words: gesture, narrative, sensors and visualization, and upload their performance on *YouTube.* I received five submissions this year but I am hoping next year it will get bigger. The winner, Tristan Pine, was chosen based on ratings from *YouTube* users and the opinion of four judges chosen from the DMI community. The Motionary Judges surprised me with their extreme ratings, and it was tough to choose the winner. Negotiating across different opinions and preferences is essential in the concept of Motionary.

http://motionary.org

http://motionary.org/blog

Interaction Online

The main concept for online interaction is based on new media tools that already exist and are widely used by millions of people. For example, on *Wikipedia* or *YouTube* users often generate their own content. I intend that the *Motionary* database be authentic and original. Before any performance will be introduced to a new learner, it has to be revised and approved by a group of community members. So far, I recorded over five hundred performances, edited and posted some of them online. I also designed the *Motionary* website, Blog and a working prototype to provide an example of how each performance represents a specific word. *Motionary* constantly expands.

Interaction in Physical Space

By creating the *Motionary* community I want to foster social learning and interaction, enhance people's communication skills and encourage the exchange of creative ideas. I want to motivate people to have fun learning and playing with words and improvisations. For the physical *Motionary* interaction, I want to design spaces that could be located in large public places, for example in shopping malls, schools or on playgrounds. I want people to have the opportunity to stop by and perform with their friends or invite passers-by to improvise with them. Those *Motionary* spaces will be set up with filming equipment, a white background, good lighting and Internet connection. Having such a setup ready against a consistent background, without any effort users will be able to share their performances online.

META TAGGING VIDEO CLIP

Search
- keyword
- thesaurus
- tags
- ratings
- performer's name
- upload date

VOCABULARY

Words
- dictionary/random
- unique verbal expression
- foreign language
- slang

Nonverbal Communication
- personal improvement
- international gestures
- storytelling techniques

Sound/Pronunciation
- various voices
- international accents

PERFORMER

Ethnography
- geolocation
- nationality
- language
- number of people
- age group
- name
- sex

Acting
- amateur
- professional/actor

Accessories
- clothing
- objects

RATINGS

Performance
- most watched
- difficulty
- favorite performer
- most clear
- funniest
- worst

Movie clip
- length
- background
- lightning
- dominant colors
- inside
- outside

Statistics and Meta Tagging

During my process of recording for *Motionary,* I filmed over 50 different performers and over 500 word interpretations. Performers' ages varied from a three–year old boy through teenagers, students in their twenties to adult actors in their fifties. I recorded many individual and group performances. The performers came from different countries; some of them spoke their native language to teach pronunciation. Most people improvised for the first time in their lives, others were professional actors. I recorded performances in different locations and with a different background. Most *Motionary* performances lasted at least 4 seconds but others were longer than 30 seconds. Actors utilized a variety of moves, gestures and facial expressions. My *Motionary* database grew enormously and I hope it will get even bigger. That is why I decided to prepare a system that users could use for meta tagging their video clips, gestures and interactions.

TAGGING GESTURE

BODY

- whole
- head
- hair
- face
- eyes
- nose
- cheeks
- ears
- mouth
- teeth
- tongue
- chin
- neck
- shoulders
- torso
- back
- breast
- arms
- elbows
- hands
- wrists
- fingers
- belly
- buttocks
- crotch
- legs
- knees
- feet

MOVEMENT

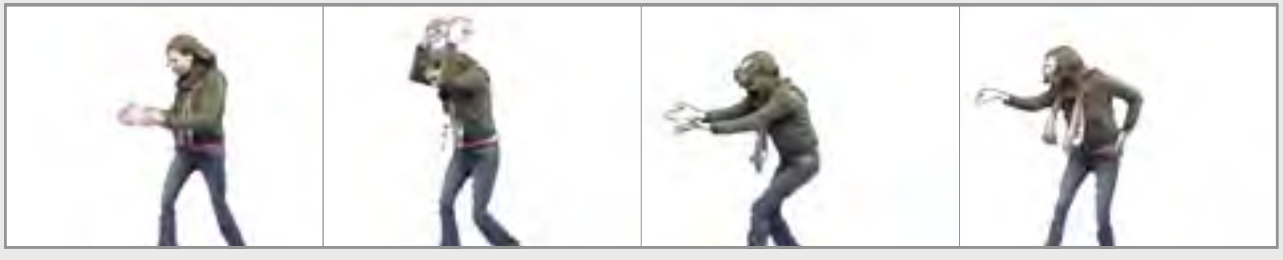
- walking
- sitting
- floating
- showing
- spinning
- kneeling
- crawling
- spreading
- laying
- falling
- floating
- flying
- yelling
- shaking
- jumping
- bending
- wobbling
- twisting
- undressing
- exercising
- waving
- stretching
- throwing
- picking-up
- more actions
- whispering
- stomping
- more actions

TAGGING INTERACTION

ACTION BETWEEN ACTORS

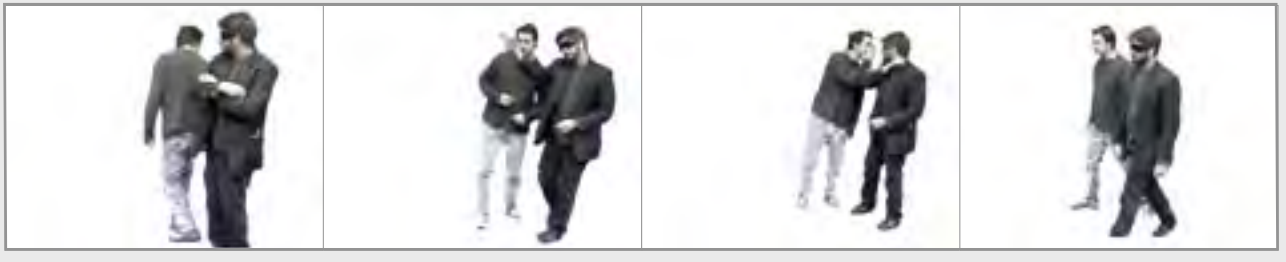
- mimicking
- yelling
- standing
- touching
- sniffing
- following
- leaning
- kissing
- hugging
- embracing
- helping
- attacking
- scolding
- kicking
- pushing
- laughing
- whispering
- riding
- picking
- circling
- hiding
- stomping
- pulling
- showing
- bitting
- choking
- killing
- more actions

META TAGGING ADVANCED MODE



BODY	legs	hands	arms	hand
MOVEMENT	tapping	shaking	stretching	waving
Speed	1 — 10	1 — 10	1 — 10	1 — 10
Smoothness	1 — 10	1 — 10	1 — 10	1 — 10
ACTION	yelling	warning	argumenting	explaining

META TAGGING ADVANCED MODE



BODY	arms	hands	neck	body
MOVEMENT	folding	pointing	cutting	walking
Speed	1 — 10	1 — 10	1 — 10	1 — 10
Smoothness	1 — 10	1 — 10	1 — 10	1 — 10
ACTION	looking	showing	planning	explaining

POSSIBLE RESEARCH IN:

Education

- Vocabulary acquisition
- Foreign language and culture learning
- Body language; self–improvement, communication skills

Games and Play

- Word games, for example: charades
- Games that support learning
- Improvisation competitions

Acting Techniques

- Database of body language, gestures, emotions
- Acting inspirations

Creative Collaboration

- Storytelling
- Filmmaking and online creative collaboration
- Social interaction and spontaneous meetings

Building Social Interaction

- Creative collaboration and understanding
- Therapy: to build understanding, sensibility, awareness of others

Specialized Research

- Psychology, Linguistics, Sociology, Education, Cognitive and other

FUTURE DIRECTIONS

Motionary is based on a simple but at the same time quite complex idea. I think the *Motionary* concept can be researched further in countless different directions. One of the most important researches that can be done in the future is: language acquisition, social interaction and body language. During my thesis research, I concentrated mostly on experimenting, observing and interviewing participants. I realize that my research would benefit from a more controlled and methodical approach. I think it would in the future be helpful to conduct more specific studies.

I think that games, motion and creativity can put people in a "flow" state. I strive to engage people deeply in my projects and I create situations where they can immerse themselves in what they are doing. Most of the people who performed for *Motionary* told me: "I did not know this would be so much fun"! I also noticed that although I asked them to do three words, once people started performing and "warmed up" they always wanted to do more. I believe that some participants experienced a "flow" while interacting with my projects. In the process of creating improvisations, recording for the *Motionary,* my perceptions came full circle; from the initial group of people performing at the same time, to experimenting with a single performer, and finally understanding the value of the groups of people collaborating to express meaning.

ubiquitous

camarilla

confluence

An Idea for the Create mode interface

VI
TESTIMONIALS

"Participating in Motionary was fun. For me, the initial obstacle to participation was to understand what I would need to do and how the footage was going to be used. Once I had convinced myself to participate, it was nothing but creative fun."—**Scott**

"Motionary gave me permission to be silly. I think people want to be silly but are afraid of what others might think, Motionary is a bit like a physical Karaoke, or charades in that it makes it OK to act out and let loose. Because I was one of the first people to perform, I enjoyed seeing how other people responded when put in the same situation. The process of translating a concept to a physical action in a short amount of time was a fun creative challenge and not something I typically do very often if ever. I think the words evolved to become more complex after my performance but I think that if I had words I was less familiar with that acting them out would help me remember the meaning, like a mnemonic device."—**Jason**

"Motionary is a collaborative experience that requires participants to communicate as they discover the meaning of the word, brainstorm potential solutions, and then create a solution to the problem that is readily understood by others. In this way, Motionary is a kind of microcosm of the design process. But at it's very core, Motionary's a lot of fun!"—**Kent**

"It was a lot of fun performing for Motionary. At first, I felt a little weird because it was difficult to create gestures that translated abstract words into motion. Eventually meaning became secondary to performing and improvising and that is when the fun began. I especially liked the group dynamics. By not using verbal language we were forced to create a dialog centered on motion—action and reaction."—**Dennis**

"It would be very enlightening for the audience to partake of all the negotiating that happens when these concepts are being created. So much effort, collaboration, not to mention your set up time, direction (or not), negotiation, etc., and it all gets stripped away as you edit out the "undesirable". It is precisely in these "undesirable" moments that we understand the "truth" of the complexity of gesture. That a simple gesture is not so simple. That these are ancestral gestures, passed onto us, entrusted to us to pass on to the next generation. We so eloquently and simply understand a gesture, but it is a very complicated process to really get at the heart of. In your case, not only do you involve these gestures, but you rely on them to communicate and translate complicated verbal definitions. The interaction, the tension between the verbal and the gestural is enhanced when you film cooperative teams of people collaborating to translate these concepts."—**Gunta**

"When I did your Motionary first time, it is hard for me to get involve in your project because I had to do something by myself. After I was familiar with that, I really enjoyed explaining something in front of the camera. Especially with my classmates. When I did something with other people physically, I felt more close with them. Also, when I did record Korean alone with body motion, I felt weird because it was only me in the room. However, after I saw the other movie made in other language, it became interesting to me as a participant. like... "wow Germany has the same body language with Korea..." or "ah~ her way of explain that words is different from me." I felt more strongly involved after I participated in your work. It was interesting to work with others, and see what other people have done after I explained the same word."—**Kyoung**

"I participated in Agata Stadnik's Motionary project by acting out certain words or concepts in front of a video camera. Each time I came to the filming session completely unprepared, having no idea what I would need to express. Agata was behind the camera for each session ... The more unusual words seemed to provoke a more natural, instant reaction... Although I recall needing to stop and gather a bit of a game plan prior to my performance. Improvising by myself in front of the blue screen and video camera was much easier than the collaborative group session I participated in.

The group dynamics needed a bit more up front planning before creating the Motionary interpretation of the word. I remember working with Audrey and Eun Kyoung. The word requests from Agata were a bit more universal and basic, but it was still difficult to figure out and coordinate what each of us would do. And I definitely felt a bit more pressure working within a group setting. But it was definitely fun to express some cruder themes. I think anger or maybe pain... We performed this a few times and the level of cartoonish violence increased with each attempt, which made it pretty funny.

I enjoyed the playful notion. The charades–like, game aspect of the project made it really fun to participate in and watch later on (although some of the video clips can be a bit embarrassing to see, especially during critique, embarrassing but still funny). And I think it is educational and fun to see the similarities and differences between various interpretations of the same word or theme.

Agata's projects all inspire energy, action and movement. And behind the energy, action and movement the story behind the word comes out. I felt just the word choices alone brought out an interesting meta–vocabulary that might not be as important as the movements and play. And eventually, after seeing three or four clips, you instinctually want to watch more and more... Feeling that the overall theme of her project work is about 'play'. Bringing a forgotten child–like sense of playing back into your adult life ... But also, at the very core of theatricality, allowing the participants, performers, a micro–storytelling platform, a time and space to create a 'play' from just one word or concept".—**Lou**

"We love Motionary! We appreciate its playful design and clever conceptual framing. Reading your design brief paper provoked several questions for us: Although playing with words in Motionary is fun, how does interacting with words in a de–contextualized way support your over arching goal of language learning? In what ways does Motionary connect to themes such as situated learning and body synchronicity? As you move forward, how might you think about providing more analysis around user experiences?"—**Mitch and Karen**

"I think Motionary sounds like a really compelling idea. The disconnect between teaching vocab lists and actually getting people to learn words that they can recall later and use effectively is quite large. I have been thinking a lot about this recently since my girlfriend is in France right now teaching 2nd–4th grade students English. For elementary students, it seems like such a difficult balancing act to keep the learning fun and motivated without the class losing focus. The vocab list is too often the solution; I like your approach much better.

One suggestion that I think you may want to consider is to encourage word groups that have things in common. I think this is one of the nice things about watching "intellectual" movies—the new words are a part of a scene (context clues) that already holds the viewers interest and there is a desire to follow the storyline (motivation). Motionary is likely to give users a lot of context through video, images, and sentences, but perhaps some form of grouping, sequencing, or narrative might facilitate a deeper motivation for understanding."—**Adam**

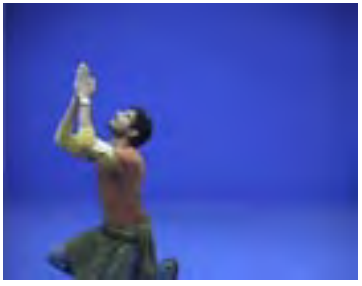
"I think that words of the day aren't any fun unless you already know them. It is more entertaining to find new words because you want to use them. I usually find thesauruses more fun than dictionaries—maybe I can suggest that you include a good tagging system, so that new words can be connected to other words. I might also add that this sounds like fun—how does one improvise a presentation of the word "predispositional?" Or, better yet, "syzygistic?"—**Phillip**

"I suggest you consider injecting a translation feature into your final project for children to learn vocabularies in other languages. I speak English and four other Chinese dialects. Sometimes, new words can get confusing to young bilingual children. For example, one will know a word in English but not in Mandarin. In addition, sometime one will know words in Mandarin but not English. And sometimes, one will know a vocabulary in both Mandarin and English but not in Shanghainese. A translation feature would be a nice addition to your final project for children to learn vocabularies in other languages. In addition, it would be fun to create some online competition to gain interest of your program."—**Isabella**

"I think there is potential especially in members presenting use of words in the context of their own culture and context. This can expose everyone to a diverse set of perspective about how words are used. For activities in any of your three modes, how much scaffolding or constraints do you want to give? On one hand, you want people to think of really creative ways to teach words. On the other hand, it would be neat to have different themes for people to focus on to."—**Justin**

VII
CONCLUSION



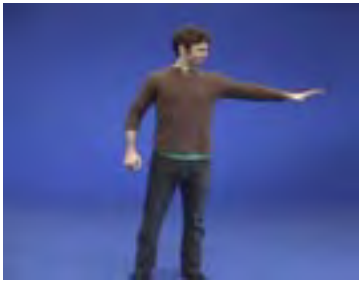












CONCLUSION

Getting people to move and interact with each other is quite challenging, but at the same time, it can be very rewarding. It is tricky to entice people and to make them move because we all feel safe in our own space, and we like to stay in our own comfortable body positions. Creating social interaction is rewarding, because something always unexpected happens. There is something refreshing when people are jumping, dancing, and improvising, some sort of "freedom." Being on the move means we all have less control over our bodies and expressions. People are full of ideas and while interacting they exchanges them and learn creatively. That learning is constant and creates new situations, meanings, and ideas. That creativity benefits the participants, other people who can learn something from it, like in *Motionary.*

One of the best ways to make people move is to give them a physical or a mental challenge. Through the ages, people have been drawn to physical activities and sport. To challenge people physically, consider activities that are not too difficult but can be playful, and that would allow multiple people to perform the same activity at the same time. For example, in *Jumping Squares,* jumping was not difficult but people liked to interact with other jumpers.

Another way to get people to move physically is bring out their competition or curiosity. In *Tell Me Your Secret* people had to use fencing principles to touch each other's target and to find out other player's secrets. People had fun even when playing with a simple prototype. People like to win. Good way to entice people to interact is to challenge them mentally and give them a puzzle, like a figuring out a word.

In *Motionary,* people had to creatively express the meaning of difficult words. Performing for motionary was a challenge for people, but also it was worthwhile for them because their performance could help someone understand a new word. Giving people the opportunity to teach someone something new is an excellent gratification for the user. People need the reward for participating in a project. They need to feel that they ether accomplished, learned or taught something.

In *Motionary,* participants needed some time to warm up, see how other respond and behave to take next steps in creating new scenes. They not only had to negotiate between themselves but the had to learn how to act and respond to each other. One person "handed" something (a concept, an idea for a scene) to another person, waited for a response, and then the other person responded. They play off each other.

Some psychologists specialize in creating situations to bring groups, for example new students or co–workers, closer together. Before people can collaborate creatively, they need to get to know one another and establish some clear rules of engagement. Creating interaction that is more playful rather than rigid and stiff can be more relaxing for the participants and make the first time interaction go smoother.

For me, creating successful social interaction compares to helping a living organism grow, flourish and give fruits. *Motionary* became such an organism because so many people were exited about this project and involved in it. The performers had a great time improvising together and what is equally important they created educative and playful learning tools for others. I enjoy designing useful spaces and tools, and I consider play and fun as useful as learning. Watching people interact, learn and enjoy themselves through the experiences I created gives me enormous satisfaction.




ADVICE FOR DESIGNING SOCIAL INTERACTIVE EXPERIENCES:

1. Get inspired, even with small and simple things: objects, words, poems, a chapter of a book and a falling leaf.
2. Think about how you can design an experience around one concept or goal.
3. Try bringing your concept or project down to one essential activity and then build around it. What kind of rules can you apply?
4. Look back into your past. Think what inspired you as a child and what you most like to do. Why is this so?
5. Build a simple prototype. Do not worry about details yet.
6. Give people a simple clear task. Create an open system of rules.
7. Trust yourself!
   Even if your idea seems to be very simple or silly—just try it!
   People do not need much to get involved, interact and to have fun.
   There is an inner child in all of us.
8. Always carry a camera with you.
9. Ethnography is essential: Observe. Film. Replay. Observe again. Make notes.
   Film user's behavior before, during and after the interaction occurs.
   Review recordings couple of times. Take screen shoots of important moment.

10. Compare couple of interaction clips by displaying them at the same time on one screen. You might notice similar rhythms and even more repetitions occurring in those samples.
11. Ask participants many questions.
    Find out how they felt and why they did certain things.
12. Draw conclusions and build on those findings.
13. Make revisions, change rules, test again.
14. Research what is out there; see what other people are doing.
15. Take it outside of your group or lab. See how other people interact with it.
    Think how the same project would work in different environments.
16. Spend more time on testing it with users rather than fixing details of the prototype.
17. Try things you usually do not like.
18. Test it on professional—people who work or who use similar tools often.
19. When you are stuck—do not force yourself. Go out. You might get stimulated in random places, even on a train.
20. See number 1.

What I learned at DMI program

Dynamic Media Institute is in essence a kindergarten for graduate students, and people learn most in kindergarten. I was encouraged to explore my interest and follow my own design process. I had an amazing opportunity to exchange my ideas with other DMI students and learn new things from them. The DMI program supports social learning and creative learning.

One of the most important things I learned during my course of study at the DMI was how to design experience for people. As a graphic designer, I was concentrated more on visual and usability aspect of design. Interaction helped me think about creating a larger emotional and psychological user experience.

During my study, I realized that ethnography is an essential part of the designing interaction. When filming the *Motionary* performances I was able to observe how people interacted between their performances. I watched many comical situations, where participants had fun together, negotiated, laughed and were involved deeply in their scene. Watching recorded footage repeatedly helped me see many important details, which would otherwise be missed. Having that option allowed me to compare similar patterns of gesture and movement found in other performances.

Another important discovery was finding new ways to conduct research. I learned how to explore various issues deeply and how to look at them from different perspectives such as networking. Networking is another excellent way of sharing and collecting interesting links.

I also learned to take risks and explore unknown territories. Sometimes my conventional perceptions, and not always correct perceptions, about something have stopped me from going in certain directions. Researching and user testing helped me overcome my false assumptions, many times I found true answers and valuable solutions. I also learned to trust my instincts and myself. In the beginning of my thesis research, I was not completely confident in the purpose of my smaller case studies. However, I kept on my projects.

My thesis was not only fascinating for me but it also sparked interest and enthusiasm of many participants and even complete strangers. People often find images of people moving in unusual way extremely interesting and some tell me "I have never seen something like this before." It is amusing to see so many people being drawn to issues of social interaction, the importance and meaning of the body language and the playfulness.

In the future, I want to keep on designing experiences that foster spontaneous and creative interaction. I have received many suggestions on, how my interaction experiences could be used in the future. I think that some of my projects could be used for helping people acquire new vocabulary, teaching social skills to autistic children, improving group's collaboration, for improvisation tournaments, to challenge high school students' creativity, for developing acting tools, and for helping people socialize.

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