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The Importance of Play
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“Play makes an important contribution to the social development of an infant. It allows the individual to gain personal knowledge of other group members; permits certain social skills to be practiced, such as fighting, without risk of injury; and helps the individual to establish long term friendships.” Vince Smith (2003: 86)

1. The relationship between culture, language and mind

Culture, language and mind are all inter-related. Indeed, human language by its very nature is unique, brilliant, an accomplishment which has allowed for our species to communicate worldwide, forever expanding the frontiers of our learning opportunities. It has aided humanity to preserve its history, albeit a subjective one. It promotes a sense of identity, comradeship and is absolutely necessary in order for a member of any human culture to function and survive adequately within a given society. However, it is also limiting, in that it confines our understanding of the world and of ‘the other’, be they from another cultural group or, dare I say, a non-human social group, towards its specific understanding that its cultural language can discern. It is flawed, in that it is interpreted by humanity, undeservedly, as a means of making us superior to all other life forms on earth. It is arrogant, in that during the course of cultural and language development humanity as a species have come to regard itself as superior to any other species, including of its self at times as the many conflicts between people, groups, and inevitably nations that both World Wars in the 20th Century alone has attested to. Thus, the point of view developed does not by any means preclude the possibility of the growth of speech being in high degree dependent on the development of thought. As Sapir states:

“We may assume that language arose pre-rationally – just how and on what precise level of mental activity we do not know – but we must not imagine that a highly developed system of speech symbols worked itself out before the genesis of distinct concepts and of thinking, the handling of concepts. We must rather imagine that thought processes set in, as a land of psychic overflow, almost at the beginning of linguistic expression; further, that the concept, once defined, necessarily reacted on the life of its linguistic symbol, encouraging further linguistic growth. ... [Thus], language is primarily an auditory system of symbols ![1](1949: 16-17)

Thus, communication is only effective when the hearer’s auditory perceptions are translated into the appropriate and intended flow of imagery or thought or rather, both combined. Therefore, the essence of language consists in the assigning of conventional, voluntary articulated, sounds or of their equivalents, to the diverse elements of experience. Inevitably, language just falls too short of the proverbial mark, leaving too many gaps, too many questions, too much room for fault to properly analyze and discern the concept of communication and culture. It is a tool, a very sophisticated tool, but nevertheless, had whatever conditions that had been present during its conception been absent, it is just as likely that humanity could have easily
developed another form of communication based on an already existing mode of thought and language, or rather protolanguage. According to Goodenough (1964) it is tool making and protolanguage that share the same processes. In assuming that protolanguage was used since the very beginning, there were in fact two obstacles to the use of this channel by earlier species than Homo sapiens; he states:

“One was the degree of cortical control over vocalizations, the other the structure of the vocal tract. Cortical control is required if vocalizations are to be voluntary, but it is not needed for the giving of alarm calls. Indeed, for alarm calls cortical control might be dysfunctional – if a creature, [including a human] (insert mine), takes time to ponder whether to call or not the delay could be fatal. However, cortical control is essential for linguistic utterances…! Control of vocalizations is indeed more strangely established in humans than in apes, but the difference now seems to be the scalar rather than absolute.” (1964: 142)

Indeed, Goodenough surmises that tool making and language developed side by side, however, one must adhere to the logic that it was in fact through observation that culture could have been sustained. A system of behaviour patterns, instincts, and proto language all must have played an important role in the socialization process, albeit a much more rudimentary form than that of the one discussed above. It is likely than that this innate ability was crossed well in advance of articulated speech, probably by the time of Australopithiains Afarensis. As Goodenough surmises, Afarensis was much smaller and lighter than Homo sapiens at a time when predators were larger than they are today. Thus, if the performance of modern apes is anything to go by, according to Goodenough, Afarensis descended from a line in which certain vocalizations such as alarm calls when spotting predators and food barks on the discovery of food were automatic and nearly impossible to suppress! Recall Jane Goodall’s telling anecdote of the ape that discovered a supply of bananas and, although anxious to keep them to itself, inadvertently gave away their location by its unsurpressible food barks. Thus, it wasn’t until Homo Habilis, according to Goodenough, when the ability to suppress such vocalizations, a voluntary silence if you prefer, did purposeful protolanguage develop.

Such evolutionary adaptations occurred usually as a result of changes in the environment. These changes take many forms, they may be as a result of climatic change or the inter-mingling of different social groups as well as different species be they potential prey or predators from other areas. Alternatively, an existing prey species may acquire a new defence mechanism, undoubtedly the use of tools, stone axes and spears may account for such an evolutionary shift as well. Nevertheless, these factors serve to answer how language developed, even at its basic level, but fails to take into account in greater detail how, as already mentioned above, observation plays a role in developing culture. Vince Smith (2003) attempts to bridge an understanding by demonstrating how primates, particularly chimpanzees, communicate through gestural signals, however, as he states:

“Humans also use gestures in their every day speech. These allow extra information to be passed… Language may have emerged not from vocalizations but from manual gestures, and switched to vocal mode more relatively recently in hominid evolution, perhaps with the emergence of Homo Sapiens. It is
interesting that human babies are able to make complex gestures before they have learned to speak, and children who make referential gestures at an early age tend to speak at an early age.” (2003: 56)

Contrary to conventional belief, it is humans, and not apes, who have the greater ability to ‘ape’ another’s behaviour. In a study on how children and chimpanzees communicate and learn from others, it was found that human children were much better at imitating than chimps. Children tended to copy the way that adults performed certain actions, even when the techniques used were relatively inefficient; the chimpanzees, by contrast, tended to observe the action and than tried to improvise their own strategy. Although the chimps’ approach appeared more creative, the children were taking advantage of important skills and knowledge learned from others.iii Although chimpanzees are incapable of complex speech, like humans they are nevertheless able to communicate through a simple repertoire of sounds, such as pant hoots, lip smacks and various grunts, and through non-verbal gestures. According to Smith:

“They vary the pitch, rate and volume of their vocalizations to convey different meanings in a variety of circumstances. The chimpanzee’s ear is similar to the human ear and can accurately differentiate far more sounds than the animal can produce. Unlike humans, chimpanzees lack the necessary anatomy for complex speech. In the chimpanzee, as in most mammals, the larynx is high up in the throat and serves as valve to stop water entering the windpipe when drinking. It is believed that some 100,000 to 150,000 years ago the human larynx descended, creating a gap in the throat, termed the pharynx or voicebox. This allowed sounds to be resonated, which in turn increased the clarity and variety of sounds that could be produced. The tongue also altered, becoming thicker and more muscular, and this allowed more rapid and precise control of the tongue’s shape, which further broadened the range of sounds produced. ... Although structurally similar, the human brain is about twice the size of that of the chimpanzee. A large brain is fundamental for the production of complex language. The human brain is asymmetrical. The left side is slightly larger than the right and is believed to control language. There are two areas on the left side of the brain, Broca’s and Wernicke’s areas, which are known to be responsible for producing and comprehending language respectively. Chimpanzees appear to lack Broca’s area in their brain, but have Wernicke’s area. This may indicate that, although chimpanzees are unable to produce vocal language, they appear to have the capacity for processing complex language – maybe not verbal language but a non – verbal one consisting of sounds and body gestures.” (2003: 55)

It is true that human culture varies enormously in such patterns as language, diet, dress, art and numerous other social traits. And it is beyond question that humans express culture more than any other species, and that this, coupled with our ability for language, sets us apart from all other species. However, equally, it is wrong to suggest that all traces of culture and language are unique to humans alone. After humans, chimpanzees demonstrate the most cultural variation, albeit on a much more rudimentary level. There have been documented as many as 39 different behaviours that vary culturally across different chimpanzee communities.iv These include behaviours such as tool use, feeding, grooming, and manners of courtship that are expressed in some root communities but not in others. As Smith illustrates:
“In the Tai Forest, in the Ivory Coast, chimps use stone tools to break open certain hard shelled nuts from species such as Coula edulis and Panda oleosa. They use a hammer and anvil technique: the hammer usually consists of a small rock or piece of wood, and the anvil is the larger hard surface, such as a rock or the root of a tree. The nut is placed in a depression in the anvil and hit with the hammer, until the outer shell is broken. The skill is learned by the infants through direct observation of the adults. A chimpanzee’s intentional use of tools to direct one’s attention to his or her desire to be groomed is a preverbal effort at communication with a human – a process of communication defined as ‘Proto-Imperative’. ... Barook’s (a chimp with which Smith worked closely with) thought process was complex and could clearly be broken down into several components. He saw a human and wanted that human to groom him. Being incapable of speech, he needed to find a way of communicating his intent, and so went to find a sign that the human would recognize. After shaping the sign into something symbolizing his desire for grooming – a grooming tool – he showed this to the human. Realizing that the human had seen the sign, he went to the only place where the human could groom him – inside the building. Before entering, he gave the human an encouraging ‘follow me’ glance. Then he entered and waited for the human to join him. Whereupon he gave the grooming tool to the human and pointed to where he wanted to be groomed.” (2003:193-195)

As we have seen, apes are capable of communicating using quite complex language, albeit non-verbal, and there is much cultural variation among chimpanzee communities in the type of tools and the manner of their use. And if culture is defined as a trait that is transmitted throughout a population through social or observational learning, than, according to Smith so must chimps transmit their own cultural behaviours from one generation to the next. Gestural communication is not unlike how humans in this day and age communicate still. Indeed, primates such as Gorillas have been successfully taught sign language and in so doing, provided evidence that cross species communication is quite possible. Despite not having the capacity for complex speech, the fact that apes are capable of learning complicated human sign language serves to illustrate further their capacity to learn our spoken language. It also underlines the value of focusing on their strengths rather than their weaknesses, for although apes may lack the anatomy for complex speech, they don’t necessarily lack the intelligence. Smith suggests further that chimps have the ability to invent their own personal sounds, using particular grunts to mean certain things. As he states:

“... I believe Sophie’s (Sophie lived with Smith for years as a result of her mother rejecting her at birth) use of a particular grunt to mean bed time was evidence of a chimpanzee’s ability to use what are called ‘protowords’. I also believe that, had I been able to imitate this sound, we would have been taking our first steps towards creating a common rudimentary language.” (Insert mine) (2003: 64)

Whether or not this seems feasible to some, whilst to others preposterous, matters little as empirical evidence has already begun to substantiate the capability of primates to comprehend language. Thus, a goal to survive, a way of life must exist between several beings, a system of shared understanding; however rudimentary needs to be in place.
Then and only then can culture exist. With regards to language, allow us to turn our attention to what has only been briefly mentioned; not of that regarding observation, for though it undoubtedly makes up much of the way in which humans and animals alike learn how to conduct themselves, socially as well as personally, it requires another vital ingredient, namely the act of *playing*.

### 2. Play in Residential Care

The thought of play may conjure up memories of childhood games with your brother(s) and sister(s) or with friends you went to school with and neighbours who lived nearby. It may bring you comfort and a sense of longing for times that seemed so simple compared to the hectic pace of the lives which we lead as adults. A notion which, although humans share with all other animals, can differ from person to person, animal to animal, depending on their particular circumstances whilst growing up. Unfortunately many children and animals share a similar, unfortunate fate and do not have an easy start in life. Whatever the reasons may be, a point only important in that it may aid in better understanding and assessing the need of each individual child, adolescent, or animal - nevertheless children often find their way into residential homes incapable or unwilling to play as a result of their past. Often, the grim reality is that many children end up in residential units due to abuse, neglect and simply because they have become a danger to others as well as to themselves. Whether it is a process of bad parenting or something more, these youth often lack guidance and understanding of the world into which they have been thrust.

It is an interesting example to compare and contrast what has been discussed thus far, for like the Feral Child, or the bewildered chimpanzee caught between two worlds, that of humanity and the wild due to encroachment upon their natural habitats, children and adolescents in residential homes lack many of the social graces that allow them to communicate effectively in society. Understandably mistrusting of adults and even of their peers, often more times than not many children and adolescents lose out on those years that are essentially vital to helping them develop into emotionally stable and mature adults. Thus, something as seemingly so simple as play can have tremendous effects on their lives. However there is more to playing than meets the eye and the following will discuss in detail both the different kinds of play that exist and the way which it helps develop the inter-personal skills needed to function within society and indeed, get through what is the difficult process of residential care. To begin with we have to understand what exactly is play? According to Healthguide:\[1\]:

> “Play is a state of mind that is safe, inquisitive and exists in the moment. It is also a bodily state of relaxation and an uplifting and engaged emotional state. Some say play is a spiritual state of profound connection and joy. Play can be something we do by ourselves or with others, but it is also something we can watch others do. Play is often described as a time when we feel most alive, yet we often take it for granted and may completely forget about it. Play can be entirely positive, or have a negative.” (Healthguide: 2004)

As adults we tend to forget, however unintentional on our parts, how important playing can be not only for ourselves but for those children and adolescents in care within residential units. Over time we sometimes become guilty of believing that it is
unproductive and even can be seen as counter productive to obtaining the life goals set out for our children. As Healthguide shows:

“New research on the brain contradicts this cultural dismissal of play, by emphasizing the importance of feelings and the necessity of feeling safe and relaxed in order to think clearly and productively. Play teaches us how to manage and transform our “negative” emotions and experiences; it supercharges learning, and is a foundational factor in good mental and physical health. And, it can make work more pleasurable.” (2004)

Thus the benefits of play transcend childhood even to adulthood, yet as adults we might often dismiss this as exactly that, child’s play! Psychiatrist and writer Mihaly Csikszentmihalyi describes playing as a “flow state”. Within the flow state we feel:

- **Involvement** – Complete focus and concentration, either due to innate curiosity or as the result of training.
- **Delight** – A sense of bliss and positive detachment from everyday reality.
- **Clarity** – Great inner clarity and a built-in understanding about the state of affairs.
- **Confidence** – An innate sense that the activity is doable and that your skills are adequate to the task. Additionally, you don’t feel anxious or bored.
- **Serenity** – A sense of peace and an absence of worries about self.
- **Timeliness** – Thorough focus on the present and a lack of attention to the passing of time.
- **Motivation** – Intrinsic understanding about what needs to be done and a desire to keep the moment of play moving. (Helpguide: 2004)

Why is playing an important part of our lives? One would be hard pressed to find any species of animal, including the vast cultural and ethnic differences of the human race alone that did not fall upon or require the explicit instruction of play as a basis for culturally transmitting the information we need to not only to defend ourselves, but just as importantly how to behave socially. A female chimpanzee’s maternal skills, for instance, are not innate – they need to be learned through observation and personal experience over a period of time. An adolescent female may get the opportunity to practice her maternal skills by carrying a younger sibling or the baby of a close ally much in the same way a little girl carries a doll in a toy carriage, complete with matching milk bottle and nappies to change the doll when it mimics urination. According to Smith:

“There have been many studies on the effects of maternal deprivation in non-human primates and in humans. It was found that in infant rhesus macaque monkeys, aged between 18 and 32 weeks, a temporary separation from the mother of just a week could still be detected in the behavioural responses of the infant up to two years later. Most notably, these infants showed a greater fear of strange objects. Animals that were reared in complete isolation tended to have difficulties interacting with other adults and were often inefficient mothers, failing to rear their own young. Isolated chimpanzees frequently console themselves with actions such as rocking and self-clutching, as Sophie did. The loss of the mother often results in the orphan becoming depressed, insecure and more vulnerable to aggression. Males, especially, have fewer friends, suffer more harassment and receive less support during aggressive encounters. Their social and sexual behaviour can be
affected, and sometimes this leads to their being sexually retarded. In a study of 71 chimpanzees reared in isolation with human care-givers, only 30 per cent became sexually competent as adults.” (2003: 82)

Thus, beyond words, beyond any act of vocalization comes socialization. Play provides this outlet, giving the chance to members of a particular cultural group, be they animal or human an opportunity to test the waters, so to speak and learn the social graces and etiquette that is expected of them within their particular society. By our very nature we are designed to play as it serves as an inborn ability that is hard wired into our genetic code. As Csikszentmihalyi surmises:

“Play is part of how humans have adapted and survived everywhere on Earth, from the tropics to the great deserts to the Arctic Circle. We want to play because it is instinctive and fundamental to our existence; it is one of the evolutionary mechanisms that enabled us to develop as a species. Playing helps us survive by connecting us to other human beings and to sources of energy and excitement within ourselves. Play is simultaneously a source of calmness and relaxation, as well as a source of stimulation for the brain and body.” (Helpguide: 2004)

Smith further illustrates this point by giving particular attention to grooming amongst chimpanzees. According to Smith grooming takes two forms: self-grooming and social grooming. He states that:

“Self-grooming serves mainly a hygienic function, keeping the body free from dirt, dead skin and ectoparasites, and is believed to be innate. [However,] social grooming serves many functions. As well as for cleaning the body, it is also used in a number of social activities, such as relieving stress and establishing and maintaining harmonious relationships between members of the community. Unlike self-grooming, social grooming is learned and perfected over time.” (Smith, 2003: 67)

You may be wondering whether, if humans and chimpanzees are so closely related, why we don’t groom each other, like other primates. According to Smith, we do, and have largely replaced the subtleties of physical social grooming with a vocal equivalent. It is believed that because humans live in large groups, effective grooming became inefficient as a means for servicing partners and maintaining social bonds. However, by gossiping – essentially vocal grooming – humans were able to maintain social ties with several people at the same time. However, it is important to distinguish the different types of play than when talking about play amongst children. As any social care practitioner will tell you it is their responsibility by leading as an example of what appropriate play constitutes. What does this mean exactly? The social interaction between children is vital to the structuring and maintenance of social ties as well as aiding the process of learning what the rules of culture is. By simply adhering to and understanding the need and function of playing, children, like chimpanzees become productive members of their community. We want to play because it is instinctive and fundamental to our existence; it is one of the evolutionary mechanisms that enabled us to develop as a species. Playing helps humanity survive by connecting humans to other human beings and to sources of energy and excitement within ourselves. Play is
simultaneously a source of calmness and relaxation, as well as a source of stimulation for the brain and body.

Play will be important to our future. Some futurists have said that we'll need to be more inventive, creative, and flexible to handle the tasks, flow and rhythm of life in this century and beyond.

In essence then:

“Play is a state of mind that is safe, inquisitive and exists in the moment. It is also a bodily state of relaxation and an uplifting and engaged emotional state. Some say play is a spiritual state of profound connection and joy. Play can be something we do by ourselves or with others, but it is also something we can watch others do. Play is often described as a time when we feel most alive, yet we often take it for granted and may completely forget about it. Play can be entirely positive, or have a negative.” (Healthguide: 2004)

There is a unique pattern of brain wave activity during the perception of humour – a pattern that organizes the brain and enables us to act more intelligent. When two people experience the same emotions, they are in synchrony and create a context of resonance, which is now thought to play a fundamental role in brain organization. Humour perception involves the whole brain and serves to integrate and balance activity in both hemispheres. Play is essential to successful attachment bonding between infants and those that care for them. Interactive play – playing together for the fun of it – brings about self-regulation in the infant and sets the stage for self-awareness, self-confidence and trust in self and others. Aggression, anxiety, mixed signals or indifference from parents, social care practitioners, and teachers stops the development of optimism, hope, and playfulness in children and leads to depression, fear and disillusionment in adults. Play and playing together for the fun of it is a powerful resource for creating emotional wellbeing and which transcends all species. Within residential units, for instance, the benefits of play can be found via the child’s, or adolescent’s, ability to develop social skills. Thus, developing skills of communicating trust and pleasure allow for children to refine their innate concepts of verbal and body language.

As well, notions such as safety and danger, freedom and boundaries, empathy, compassion and inevitably the capacity for intimacy all make up the emotional intelligence necessary for these children to develop relationships amongst their peers and with their families. It also eases their understanding of what they think they know of the world around them into what the reality of the situation is, empowering them to re-integrate back into society as productive members. Personal strengths, the ability to learn, their health, perseverance and even joy and happiness have been intrinsically linked to the act of playing. In essence it can be argued that language may facilitate culture, however it fails to grasp the essence that only play or physical acting can transmit. Playing in itself can help children, especially within residential care, to avoid such feelings as loneliness, isolation, anxiety and depression. When we play vigorously, we trigger a mix of endorphins that lift our spirits and distractions that distance us from pain, fear and other burdens. And when we play with other people, with friends and child care workers, we are reminded that we are not alone in this world. We can connect to others in delightful and meaningful ways that may ease the feeling of loneliness, if not dispel it entirely. Play acts as a remedy to violent tendencies and is a
powerful catalyst for positive socialization. Those who avoid or have never learned to play may become lost in the world of fear, rage, and obsessive worry.

The therapeutic benefits of laughter cannot go un-mentioned and have been studied by Dr. Lee Berk and fellow researcher Dr. Stanley Tan of Loma Linda University in California. They have been studying the effects of laughter on the immune system and in so doing have come upon some interesting results. The following is a summary of this research, taken from an interview published in the September/October 1996 issue of the Humour and Health Journal.

“Laughter activates the immune system – In Berk's study, the physiological response produced by belly laughter was opposite of what is seen in classical stress, supporting the conclusion that mirthful laughter is a eustress state -- a state that produces healthy or positive emotions.” (Helpguide: 2004)

Research results indicate that, after exposure to humour, the activity in the immune system increases. Laughter appears to tell the immune system to “turn it up a notch.” Laughter causes increases in:

- Number and activity level of natural killer cells that attack viral infected cells and some types of cancer and tumour cells.
- Activated T cells (T lymphocytes). There are many T cells that await activation.
- Antibodies IgA (immunoglobulin A), which fights upper respiratory tract insults and infections.
- Gamma interferon, which tells various components of the immune system to ‘turn on’.
- Antibodies IgB, the immunoglobulin produced in the greatest quantity in body, as well as an increase in Complement 3, which helps antibodies to pierce dysfunctional or infected cells. The increase in both substances was not only present while subjects watched a humour video; there also was a lingering effect that continued to show increased levels the next day. (Helpguide: 2004)

After all, what you may not realize is that playing can also act as a bandage to help heal emotional wounds. Healthguide states:

“When adults play interactively together for the fun of it, they are engaging in exactly the same patterns of behaviour that positively shape the brain and predict emotional health in children. And there is reason to believe that these same playful behaviours may also impact the adult brain and lead to positively changed behaviour. The brain, we now know, remains flexible throughout life and is most amenable to change in contexts, especially those contexts that involve others, feel safe and are emotionally rich. Studies show that an emotionally insecure individual can replace negative beliefs and behaviours with positive assumptions and actions by living with a secure spouse. Close, positive and emotionally fulfilling relationships heal and create emotional resiliency. Play provides a safe and joyous context for the development of such relationships.” (2004)

We find ourselves on a daily basis subconsciously reading each other’s body language not unlike the way primates size each other up in a manner of pant hoots and lip smacks. Play, like social grooming amongst chimps, constitutes an intricate role in
developing a greater understanding of each other and of ‘the other’ than language itself could ever possibly hope to demonstrate on its own. We are animals, a species of primate, a biological phenomenon dominated by biological rules, like any other species on planet earth. As Desmond Morris (2002) surmises:

“Human nature is no more than one particular kind of animal nature. Agreed, the human species is an extraordinary animal; but all other species are also extraordinary animals, each in their own way, and the scientific people-watcher can bring many fresh insights to the study of human affairs if he can retain this basic attitude of evolutionary humility.” (xvii)

3. Conclusion

It may be that social scientists and animal behaviorists will never agree as to whether or not culture, language and mind are solely a human construct or whether or not all animals, be it at different and varying meta-cognitive levels possess culture. A system of communication which although may not appear as intrinsically complicated as that of human language, nevertheless exists within all species. Human curiosity vs. human arrogance has to this day been unable to decipher this system of communication. We have examined the very nature and core of culture; we have torn apart and put back together the notion of language and mind; and finally we have examined how the basic function of play and social grooming amongst children and chimpanzees respectively allows for cultural information to be transmitted that inevitably becomes vital to their mental wellbeing and basic social acceptance within and amongst a group and inevitably society. Insufficient evidence exists still to determine whether thought determines language or rather language determines thought however culture in and of itself can function with or without language. Like our animal brethren we are linked to certain fundamental biological truths that can not be ignored if we are truly ever going to be able to comprehend the needs of the other, let alone provide adequate services to help them function within society.

4. Bibliography

Sapir, E. (1949), Introductory, Language Defined. 3-23
Smith, Vince. (2003), Sophie’s Story: Raising a chimp in the family. Butler & Tanner Ltd, Frome, Somerset; Great Britain.
I. ¹ Sapir, E. 1949. Introductory Language Defined. 11


IV. ³ Smith, Vince. 2003. Sophie’s Story: Raising a chimp in the family. Butler & Tanner Ltd, Frome, Somerset; Great Britain. 194

V. ³ Smith, Vince. 2003. Sophie’s Story: Raising a chimp in the family. Butler & Tanner Ltd, Frome, Somerset; Great Britain. 193

VI. ¹ Playing Together for Fun: Creative Play and Lifelong Games in Helpguide: The Center for Healthy Aging. Santa Monica, CA. December 15, 2004

VII. ³ Pronounced “chicks send me high” Csikszentmihalyi studied play in Sidney, Australia and described it as a flow state that requires just the right balance of challenge and opportunity. If the game is too hard or too easy, it loses its sense of pleasure and fun. Csikszentmihalyi research has been undertaken and confirmed in several countries, and now reaches 250,000 surveys. (Helpguide 2004)

VIII. ³ Animals like the wolf for instance use mock playing as a means of teaching pups how to fight and defend themselves from potential predators. Not unlike humans do when they teach their children, often via role playing, how to avoid strangers, including screaming out loud to avert attention to their predicament. Indeed, courses designed for women’s self-defence particularly rely on the use of role playing and helps to bond the members of their course in a game where through these exercises they are also having fun participating together in an activity that, like the above two examples, could potentially literally save their lives one day.

IX. ³ Smith, Vince. 2003. Sophie’s Story: Raising a chimp in the family. Butler & Tanner Ltd, Frome, Somerset; Great Britain. 40

X. ³ Smith, Vince. 2003. Sophie’s Story: Raising a chimp in the family. Butler & Tanner Ltd, Frome, Somerset; Great Britain. 68

XI. ¹ Playing Together for Fun: Creative Play and Lifelong Games in Helpguide: The Center for Healthy Aging. Santa Monica, CA. December 15, 2004