Everything seems to be connected and on so many different levels. When it comes to the human to human connection there are undeniable physical, mental, emotional, spiritual, and cultural connections. How are these connections created? Are they always natural or can they be forced into existence? How do they break? Can they be repaired? How do they die? These are some really thought provoking questions that I would like to dig into further in this paper. To narrow my focus I've decided to delve into the bond between mother and child, and even more specifically between mother and daughter, an area I have a lot of experience in being my mother's daughter. In doing my research I will try to confirm my beliefs which are: that human bonds can be created naturally and also forced and that these connections can be equally as strong. These bonds can also be broken very easily and are sometimes quite difficult to repair, but I believe can be repaired. Finally, the bonds we have with each other can die and that this, too, is natural. All along the way the mother-daughter bond is influenced by incredibly strong cultural connections, which is both good and bad.

The mental and emotional bonds between mothers and daughters start well before the child is conceived. There is a one-sided bond that starts in the mother's brain. It is setting expectations and imagining her new baby months or even years before conception. Once the mother is pregnant the bonding process really begins. The baby is obviously dependent on the mother physically, but not yet in any other way. The mother, on the other hand, starts to become emotionally dependent on the unborn child. One of the most obvious emotional ties starts as the mother begins to buy items for the baby's room, and even starts to design and paint the room. While this is an example of the individual bond between mother and daughter developing, it is also the start of cultural bonds making their way into the picture. The room will, of course, be pink and the toys, clothes, and various other items will be as "feminine" as possible, all culturally appropriate. Many of the mother's-to-be friends will be giving endless advice on how to handle the pregnancy and lots of tips and tricks on how to be a good mom in the early days and so the bond with the community starts before the mother even gives birth. I think this cultural influence can actually be a bad thing as it distracts the bond building process between the mother and her unborn baby. Jessica Zucker, Ph.D., states, "Pregnancy is an opportune time for culture to invite women to focus on the developing baby in utero- to slow down and create space for prenatal bonding, reflection, and moments of wonderment. Instead there is often societal chatter about what to buy, how to decorate, as well as inherited concerns about how to lose the "baby weight" even though baby has yet to arrive. All of these factors contribute to externally focused desires. A mantra missing from mainstream society is one of trust- trusting oneself and carving out time to get familiar with feelings associated with prenatal parenting" (Zucker). Even though the mother may be negatively distracted by "societal chatter," strong connections are developing anyway and they are about to get stronger!

It's delivery day and the struggle begins. Of course, I have no firsthand experience as a mother and certainly nothing I can remember as a baby being delivered, but I do think of this whole delivery process as a big fight. Sometimes the mother and baby are on the same team, and sometimes they are out for their own interests. Either way, going through this together strengthens an already developing bond. And of course the final physical connection is incredibly obvious immediately following the birth – the umbilical cord. This cord allows nutrient rich blood to pass from the mother to the baby. It is automatic and necessary and a true physical bond. Once born, the cord must be cut for obvious reasons. The cutting of the cord could also be viewed as symbolic in that one important connection between mother and baby has already died and will not come back. All other connections from this point on are by choice,

either the mother's or the daughter's; or are there hidden forces at work that continue to keep the bonds and connections strong?

So if once born, the connection between mother and daughter is strictly by choice, it must be an easy choice! Sure there is a small percentage of mothers that for whatever reason don't have a connection with their new baby but for the most part they do have a strong connection. Maybe there is something helping this connection along, more than just choice. "Human babies are born helpless, needing to be entirely cared for and protected. Luckily, they are born with all the necessary tools and "instructions" to attain such care for themselves, and to become a loved and loving part of their family and society. The ingrained neural and hormonal interactions provided for parent and child to assist them in this process are among the most powerful in nature. The hormonal cues are clear and compelling and our instincts can provide us with all the appropriate responses. Without taking great efforts to avoid and ignore such urges, parents will naturally follow the advice of their neurons and hormones, nurturing their babies and maintaining physical closeness with them" (Palmer). While choice is involved at various points in the relationship, nature does try to force the issue and has been setup to help us make the choice to keep the connection strong. Through hormones like oxytocin (the bonding hormone), vasopressin, prolactin, and various opioids nature conspires to keep the mother-child bond strong even once the umbilical cord is cut. "Oxytocin is a chemical messenger released in the brain chiefly in response to social contact, but its release is especially pronounced with skin-to-skin contact. In addition to providing health benefits, this hormone-like substance promotes bonding patterns and creates desire for further contact with the individuals inciting its release" (Palmer). As strong as these hormones are at deepening the bond between mother and child, they sometimes take longer to have an effect. This is especially true when the mother has gone through a very difficult delivery, or is suffering from depression. In most cases however, things do eventually turn around and the bond is made and becomes even stronger.

What about adopted children? Is the connection as natural and strong as I've described above? "...analysis suggests that adopted children can overcome early adversity and risks and form secure attachments as often as their normative counterparts. The same was true of foster children. These outcomes lend support to Bowlby's (1952, 1988) hypothesis that corrective attachment experiences may enhance attachment security. But this catch-up is not without limits: Children who are adopted after their first birthday are less capable of developing secure attachments" (van den Dries). From the above analysis it seems that if the child is adopted early in life the connections develop about the same way they do for non-adopted babies. Leave it too long though and things may not go as well. At the early stages of life it's no wonder that there is a strong bond. Babies and toddlers just can't fend for themselves. The Maslow Hierarchy of Needs is a great visual source to understand the placement of basic needs in common with all people. People need certain things in place before they can even consider other things. For instance, the most basic needs according to Maslow are physiological needs like food, water and shelter. Without these a person simply can't progress. A baby is entirely dependent on its mother to provide for these needs. Nature takes care of this by keeping the connection between mother and daughter strong.

How does the connection change as the young child gets older? It seems to me that the bond between mother and child becomes more of a choice over time as the child becomes more independent. It's as if nature takes control and forces the bond while it is necessary (i.e. the child is so dependent that it absolutely needs its mother to survive) but then allows the bond to become more of an option as the child gets older. I think this is what happens during the

teenage years when children try to test their independence. During this period the teenage daughter may stretch, or even break the connection to their mother. There are lots of articles on this and lots of cultural joking about kids in their teenage years. These stories usually end up talking about how the teenager eventually matures and realizes the connection to their mother is something they actually want and need. If things don't get too rocky along the way, the connection can usually be made or strengthened again and can continue to grow as the child becomes an adult. Because I am currently a teenager I think I can relate to how this works. I want to be my own person and sometimes feel like the bond to my parents needs to loosen to allow me to do this. Whether this is true or not doesn't matter since it's a very strong feeling and is probably nature's way of helping me become an adult. Since grade ten I have been in boarding school so the connection to my mother has been at a distance. I can still feel it, of course, and it is still there, but it is not the same as living in the same house with her. In some ways, it's better for me and in some ways and at times, it is strange and uncomfortable. While the connection isn't broken I think it is changing and will grow stronger as I get older. For now though, I am focused on building new connections with new friends, new opportunities, and my future. I find it easier to do this when I know I can count on my connection with my mother. It gives me a good feeling of stability.

What if this connection gets lost along the way? Can it be rebuilt? Many studies have been done regarding connections. Many of these experiments focus on how easily animals can be manipulated, including humans. B.F. Skinner, American Psychologist/Behaviorist believes that "Every person starts out as a blank space and is molded completely by their environment." Skinner conducted an experiment, involving work with pigeons. He trained them using a system called operant conditioning. He successfully got the pigeons to display the behavior he desired by conditioning them to respond to rewards (seeds). This experiment automatically brings me back to thinking about connections and the bond and trust Skinner must have had, or created, in order to alter the behavior of these birds. It scares me to think that somebody could have the power to alter my way of behaving so easily. He continued testing pigeons and realized he could complete the same results he found with pigeons on humans. He was so determined to test the experiment on humans that in the early 70's he set up an experiment at a youth hostel (Kennedy Youth Centre). He began observing the inmates and learned that many of them dropped out of school, hadn't held a steady job, and all had violated the law in some form. He set up a basic reward system. If they behaved well and attended lessons, they could earn points to improve their living conditions or earn brief vacations away from the center. Results were dramatic. Inmates began learning to read, write, do arithmetic, and began to acquire manual skills. Skinner's success was seen as a momentous achievement. To me, this shows that connections can be rebuilt and strengthened through some very basic systems such as the reward system used by Skinner. Even if the mother is no longer in the picture, connections to community and to those providing the rewards seem to be very beneficial.

Beyond the teenage years, how does the connection between mother and daughter change? I don't have direct experience with this yet but I can look at my mother and how she is connected to her mother. What I see is that the connection still exists. My Grandma (mother's mom) lives in a different city most of the time, yet my mother still communicates with her every week and talks about her a lot. They continue to have a bond even though they are separated by distance. Therefore, the bond must be strong to survive this. I think though that because there are not the same natural forces (e.g. hormones) in play at this stage of the connection that it does

become more of a choice. This also means that the connection should be protected and cherished because nature doesn't have a safety net in place for this bond as we get older.

To conclude, I believe the bonds between a mother and daughter are one of nature's most important tools. These connections start even before the baby is born and evolve as necessary, with nature only letting go when it knows things can work on their own. Even though the connections become more of a choice as the child gets older, it's nice to know that this choice is available and that it's usually one that both mother and daughter are happy to make.

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