

EMBRACING ACTIVE CURIOSITY
How It Benefits the Stage Manager

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Introduction

I have no special talents. I am only passionately curious. (Albert Einstein)

There are many traits associated with a good stage manager: organization, punctuality, decorum, intelligence, and the ability to handle stressful situations to name a few. All of these and more are necessary for a stage manager to perform his or her job effectively. But what of those stage managers who want to go beyond “good” and “effective” to “great” and “integral”? I believe the most important quality for a great stage manager to have is not a trait so much as it is a drive—curiosity. Curiosity is often ignored in favor of the above-mentioned traits, but it is essential to gathering and cultivating the many skills and attributes valued in a professional and experienced stage manager.

This paper will set out to prove that it is possible to actively train curiosity like any other skill, and that this conscious fostering of curiosity is of great use to the professional stage manager. The first section defines the psychological classifications of curiosity as well as what I term ‘active curiosity’. This section also examines the concept of curiosity through a sociocultural filter as a means to demonstrate its nature as a trainable trait. The second section explores areas of brain science—neuronal plasticity and learning—evidencing that active curiosity not only causes conscious learning, but can also assist in the fuller absorption of information. The third section transitions into a more direct focus on how active curiosity can benefit the stage manager, first through the most obvious route: the continual acquisition of new skills as a jack-of-all-trades. The fourth section delves into the effect of curiosity on interpersonal relationships and leadership/management styles, specifically within the theatre. Finally, this essay will turn its focus to the personal, emotional, and health benefits that can be gained from employing active curiosity over time.

1. The 'C' Word

...[C]uriosity is celebrated, but also portrayed as circumscribed and constrained in some way, needing champions, who may liberate and defend curious people and practices. (Phillips 493)

Curiosity has been an instinctual part of humanity since its genesis. Like other animals, homo sapiens had to be able to learn from and adapt to their environments to survive. Curiosity steers the predator away from using the immediate attack it knows will take down its prey and pulls it instead toward studying the actions of its prey to learn how *best* to take it down. Similarly, curiosity can be said to be responsible for most of human innovation. A scientist's curiosity to know whether his theory is correct impels him to experiment. Human curiosity about what exists beyond Earth has benefited us beyond our explorations of space; technology as a whole advanced greatly during the heyday of the space program from the 1960s through the 1980s.

Though curiosity is essential to our evolution and to developing our young minds, it often carries with it negative connotations. This is a pervasive theme in religion and mythology, the two best-known examples of which are Adam and Eve eating the forbidden fruit in Judeo-Christian texts and the Greek myth of Pandora's Box from Hesiod's *Works and Days*. Adam and Eve chose to eat of the tree of knowledge of good and evil and were banished from the paradise of Eden. Pandora's desire to know what was inside the box given to her as a present led to her releasing all manner of evils into the world. In both stories, the protagonists are tempted to disobedience by their curiosity, and their punishment is the loss of a utopian world. The moral of these tales could be interpreted to say that acting upon our curiosity is a destructive sin. If they are looked at within historical context, however, the stories seem to be told to reinforce the hierarchy of power and keep the uneducated masses just that—uneducated.

If the gaining of knowledge were looked at without the inherent power struggle it represents, the main societal negatives to curiosity would be that it is often seen as risky (as suggested by the idiom “curiosity killed the cat”) or distracting. Following through on one’s curiosity can be difficult, expensive, time-consuming and sometimes dangerous. But without risk there is no industry growth, no random discoveries, and no advancing the limits of that which we are capable of achieving. And this risk need not be a negative to the risk-taker; it can be a source of great excitement. Curiosity as a distraction is largely a newer construct due to the ease and speed with which one can find the answer to almost anything. Because this type of curiosity is easily satisfied it has become a habit to turn to Google anytime information is needed. Similarly, many websites now prey on our desire for instant gratification of curiosity with catchy titles for links (slangily referred to as ‘clickbait’).

Likewise, curiosity is now seen not only as distracting, but also somewhat lazy. Before mass communication, if you were only mildly curious you would generally never put forth the effort needed to satisfy that curiosity. A page from one of Leonardo DaVinci’s notebooks has a list of places and people he planned to visit to find out specific items of information that he wanted to know. Every piece of information required its own separate expedition, greatly increasing the amount of time, effort, and money needed to achieve the variety of knowledge he accumulated over his life. Nowadays there is no such sacrifice required to sate one’s curiosity, and that which is free tends to become less valued by society.

While there are no current studies that prove curiosity is a skill that can be honed over time, differences in curiosity levels between different socioeconomic classes show that the reverse is possible. Children from families lower on the socioeconomic ladder tend to be less actively curious than those from the higher tiers. While this would at first seem to be linked to

the children of wealthier families having more opportunities for additional tutelage or diverse extracurricular activities, a study into this curiosity gap shows that it is related to how comfortable the children feel about being openly curious and questioning (Leslie 97). The children from affluent families are more likely to have regular attention from one or both parents than are those from the lower strata who tend to have parents who work one or two jobs. The reduced amount of free time those working parents have leads to a different value being placed on that free time. Where a stay-at-home mom or dad may have the time and interest to answer the countless questions of a young child, the overworked parent may not have the time or patience to do the same. As a result, the children of the latter may infer that curiosity is an unnecessary luxury of those who can afford to be idler, again reinforcing the hierarchy of power through knowledge.

There are three types of curiosity as defined by psychologists: diversive, specific, and epistemic (Lowenstein 77). The negatively viewed type of curiosity described earlier as 'lazy' falls into the psychological classification of diversive curiosity, which is mostly concerned with finding stimulation to relieve boredom. This sort of curiosity is the kind that leads us to gossip, to frequently check social media, and to click random links on Wikipedia pages with no real purpose. Specific curiosity is the desire for a particular piece of information such as a fact or an answer to a riddle. This curiosity is what leads us to that first Wikipedia page (before we get distracted clicking on more links). Epistemic curiosity is the desire for deep and thorough knowledge in areas of interest. Both diversive and specific curiosity have been used in discussions of the animal brain, but epistemic curiosity is used only in reference to humanity.

A more general classification of curiosity is between trait and state curiosity, the first of which refers to the average level of curiosity a person has, and the latter of which refers to the

level of curiosity a person has about a particular subject at a particular time (Loewenstein 78). To put it another way, trait curiosity is somewhat fixed in its intensity and vague in its focus, whereas state curiosity fluctuates in intensity based on its focus. This greater allowance for fluctuation suggests that state curiosity can be consciously affected. Though the standard definition of curiosity is the “desire to know,” Webster’s Dictionary further clarifies this desire as “inquisitive interest in others’ concerns” and “interest leading to inquiry”. Both of these phrases use a variation of the verb ‘inquire,’ which suggests that curiosity is a conscious action rather than a passive trait that is out of one’s ability to change.

This paper is concerned less with the seemingly unfocused diversive curiosity than it is with epistemic curiosity. The focus here is on what I have named active curiosity: a desire for knowledge strong enough to create the conscious choice to push past any obstacles to that knowledge. This kind of curiosity is a value choice that often requires some level of personal sacrifice, similar to exercise or a healthy diet. And like any healthy regimen, it can be fostered into a habit over time.

2. Brain Basics¹

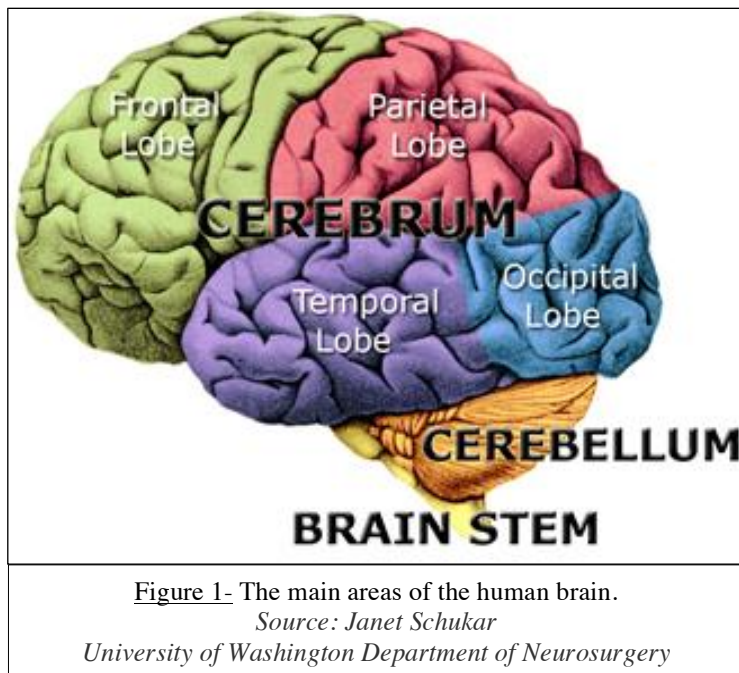
Curiosity is influenced by cognitive variables such as the state of one’s knowledge structures but may, in turn, be one of the most important motives encouraging their formation in the first place. (Loewenstein 95)

In order to understand how curiosity and learning affect humans on the surface level, one must also know something of what is being affected beneath the surface: the brain, which serves as the epicenter and largest part of the human central nervous system (hereafter referred to as the

¹ The bulk of factual information for this section is cited from *The Dana Foundation* (Sukel, 2014) & *How We Learn* (Carey, 2014). All other references are cited in-text.

CNS). The three main areas of the brain are the stem (used to communicate with the CNS and to control autonomic/involuntary processes such as breathing), the cerebellum (used in balance and coordination), and the cerebral cortex (most important to this study of curiosity). The cerebral cortex, or cerebrum as it is sometimes termed, is used to perceive, analyze, and respond to information, handling sensory perception and processing, as well as higher-level cognitive functions such as memory and decision-making.

The cerebral cortex is divided into two hemispheres connected by the corpus callosum, a bridge of wide, flat neural fibers that act as communication relays between the two halves. The popular notion that the two sides serve separately (i.e., right brain is for creativity, left brain is for analytical processes) is now considered false as the majority of cognitive processes are represented by cells ‘firing’ or activating in both hemispheres. Both sides are divided into the same four major lobes: the occipital, the temporal, the parietal, and the frontal, each serving its own function with regards to learning and memory (see Figure 1 below).



The occipital lobe, located at the back of the brain, contains the primary visual cortex, which is the brain region responsible for processing and interpreting visual information. The temporal lobe runs from the occipital lobe to the temple on either side and is the major processing center for language and memory. Running above the

temporal lobe is the parietal lobe, home to the somatosensory cortex, which is important to touch and spatial navigation. The frontal lobe is located, as its name suggests, in the front of the brain, directly behind the forehead. The frontal lobe is what separates homo sapiens from their ape cousins, because it allows for executive functioning, which aids in reasoning, decision-making, integration of sensory information, and the planning and execution of movement.

Brain cells, or neurons (see Figure 2 at right), are made up of what is called gray matter and white matter—though the live brain is actually pinkish in color. Gray matter includes the cell bodies and dendrites (cell extensions that receive information), while white matter is mostly made of axons (nerve fibers used to carry information to other cells in other parts of the brain and the

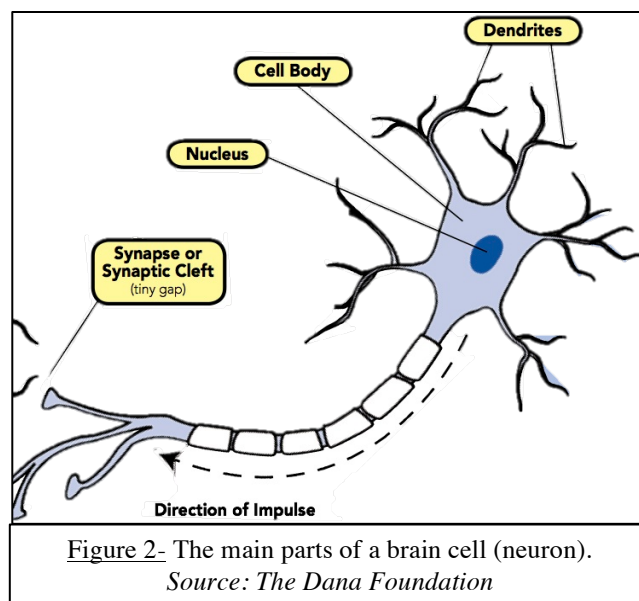


Figure 2- The main parts of a brain cell (neuron).
Source: The Dana Foundation

CNS). The axons are surrounded by a fatty, segmented covering called the myelin sheath. The greater the thickness of the myelin sheath, the better the ability of axons to carry signals rapidly. Chemical changes within a neuron cause an electrical signal that travels down the axon, triggering the release of a neurotransmitter. This neurotransmitter then crosses the synaptic cleft and attaches to receptors on the dendrites or cell body of another neuron.

Learning and experience happen when the brain receives and interprets sensory input. Not every perceived sensation is committed to memory, but those that sustain our interest for longer times or with more intensity are likely to be encoded into brain storage. The perceived sensations are decoded in the various sensory areas of the cerebral cortex, and then combined

into one single experience. The various threads of information are then stored in the appropriate parts of the brain. Encoding (the process by which a perceived item of interest is converted into a storable construct) begins with the creation of a memory trace (known as an engram) in response to the external stimuli. “[E]ngrams are generally considered to be the totality of neural changes that comprise a memory (Weinberger 34).”

Storage is the more or less passive process of retaining information in the brain, whether in the sensory memory, the short-term memory or the more permanent long-term memory. The more the information is repeated or used, the more likely it is to be retained in long-term memory. This process of stabilizing a memory trace is called consolidation. After consolidation, long-term memories are stored throughout the brain as groups of neurons that are primed to fire together in the same pattern that created the original experience. Memory storage is an ongoing process of reclassification resulting from continuous changes in our neural pathways and parallel processing of information in our brains.

Recall (or retrieval) is what is termed by the laity as ‘remembering.’ During the recall process, the brain "replays a pattern of neural activity that was originally generated in response to a particular event, echoing the brain's perception of the real event (Mastin).” Memory retrieval requires re-visiting the nerve pathways the brain formed when encoding the memory, and effectively pulls data from long-term storage into short-term or working memory, where it can be accessed. When the data is no longer required, it is re-stored in long-term memory in a similar pattern to the original coding of the data, thus re-consolidating and strengthening it. “The connections between the cells, called synapses, thicken with repeated use, facilitating faster transmission of signals (Carey 6).”

This thickening of the synapses between associated neurons is how curiosity and its subsequent learning are able to ‘rewire’ the brain to make it better suited to do the tasks required of it. In a well-known study performed by neuroscientists at University College London, MRI scans of the brains of London taxicab drivers showed that each of them had a larger than average hippocampus, which is the area of the brain used in spatial navigation. This study showed that the drivers’ hippocampi grew over time due to the formation of new neurons and the thickening of connective synapses. In effect, their brains changed to serve the knowledge they needed most: a mental map of London’s labyrinthine roads.

Almost all learning situations involve assigning significance or importance to experience, and that importance is given its weight by emotions. When those London taxi drivers were studying maps of the city in preparation for their operating license tests, their emotional need to do well for their jobs instructed their brains to make that knowledge a priority. This prioritizing of those associative memories directly led to their enlarged hippocampi. Their brains were adapting to better serve the task of most importance. This adaptation of the mind is an example of “learning-induced plasticity that determines the tuning of... neurons, providing a finer-grain shaping of the system, reallocating... resources on the basis of behavioral importance of past experiences (Weinberger 40).” In layman’s terms, the mind will tune itself to what is shown to be of importance to the person in whom the mind resides.

Louis Pasteur (a chemist and microbiologist) is famously quoted as saying “chance favors only the prepared mind.” Curiosity prepares the mind for learning by tuning it toward new and interesting stimuli. Those stimuli that we have trained our brains to consider important will be the stimuli that is “more effective in gaining attention in any situation (Weinberger 39).” A clear example of this is how the auditory areas of our brains are more attuned to hearing our names, to

the point where we often respond when hearing a sound somewhat similar. We can hear our own names even over the roar of a crowd because of the importance we have given that sound over our lifetimes. In the same way, there is a “neuroprotective function in the form of an increased ‘safety’ margin for processing and responding to important stimuli in the presence of... compromised functioning, such as fatigue... and the like (Weinberger 39).” What we have trained our brains to consider important is what the brain will be able to focus on even when we are not consciously controlling our thoughts. Even when fatigued (as stage managers often are), the brain can continue processing information on a subconscious level. This tuning can also help to avoid missing information due to hyper-focus on a specific situation. Once again, the more associations and reference points a person has, the more areas to which the brain can easily be tuned.

When a tennis player selects a shot, an airplane pilot responds to turbulence, or a lawyer constructs her argument, they are instinctually drawing on a storehouse of similar situations they have built up over years that enables them to instantly recognize the basic characteristics of the new situation and respond, without having to think it through from first principles. (Leslie 121)

Our brains have been likened to computers, with long-term memory represented by the hard drive and working memory represented by random-access memory (RAM). Like a hard drive, long-term memory has a much larger capacity for storage than working memory, but information has to be pulled into our working memory before it can be accessed, like booting up a program to run on RAM. Our working memory, like RAM, is limited in its processing power. In order to make more efficient use of that processing power, our brain uses shortcuts such as ‘chunking’ sets of association into schemata. A schema is an organized mental structure or framework of pre-conceived ideas about the world and how it works, which we can use to make

realistic inferences and assumptions about how to interpret and process information. These schemata are created and changed through our experiences of the world.

Chunking, in psychology, is the process by which the brain stores information in more meaningful clusters based on prior knowledge (Carey 178). For example, you have been able to read this paper without having to think of each typed character separately due to the fact that your brain has already chunked the letters into words for you. Someone who is just learning to read would need to spend more of his or her brain power processing each shape on this page, requiring much more time and energy. Chunking provides a head start on absorbing new information because there is less to learn in the moment. A driver will be more likely to remember directions to a new place if there are familiar landmarks and routes along the way.

Chunking not only helps with remembering facts (e.g. the acronym Roy G. Biv for the colors of the rainbow), but can also be used to deduce what may not be known. Piano students are often taught the mnemonic ‘Every Good Boy Does Fine’ to help them remember what notes are represented by each line on a treble clef staff, which is an example of chunking. Once those notes are engrained in memory, the brain can use them as a reference point for notes above and below the staff. “This ‘discrimination learning’ builds on itself, the brain hoarding the benchmarks and signatures it eventually uses to read larger and larger chunks of information (Carey 183).” Curiosity increases the number of reference points that the brain can then use to make new inferences and associations. These reference points make it easier for the brain to connect new information with data that has been previously stored. The more connections a piece of information has, the easier it is to retrieve it from long-term storage.

Cramming seeks to stamp things in by intense application immediately before the ordeal. But a thing thus learned can form but few associations. On the other hand, the same thing recurring on different days, in different contexts, read, recited on,

referred to again and again, related to other things and reviewed, gets well wrought into the mental structure. (James)

Recent studies in learning have shown that cramming the day before an exam is not all that helpful to information absorption, but that is mostly common knowledge. These same studies, however, also showed that studying a single subject in only one session was no better. The best way to learn something and keep it in long-term memory is a tactic known as distributed learning, which, as the name suggests, is spacing out study sessions over a longer period. This ‘spacing effect’ allows the learner to retain the information learned much longer than cramming does. After a first session, the brain processes what it can and commits it to memory. Because the next study session is not on the same day, the brain gets a chance to sleep on the new information, and sleep has long been known to be when many memories get consolidated and organized (Carey 206). When the learner returns to the material, he or she now has a base of knowledge to which new information can latch itself by making associations.

A similar tactic to distributed learning is interleaving, which involves mixing related but different material during study. This assists with distributed learning by allowing only part of each study session to be devoted to any one subject. Beyond the benefits of spaced learning, interleaving allows the brain to be more prepared for the conditions of real life. Studying in a quiet room is all very well, but it does not do the learner much good if the environment in which he or she has to apply that knowledge is vastly different from where it was learned. Interleaving can help to offset that problem by varying the circumstances in which a person prepares. “Interfering with concentrated or repetitive practice forces people to make continual adjustments, building a general dexterity that, in turn, sharpens each specific skill (Carey 156).” Luckily for those with naturally curious mindsets, both distributed learning and interleaving come easily.

3. Intellectual Curiosity

The real master has no tools at all, only a limitless capacity to improvise with what is to hand. The more fields of knowledge you cover, the greater your resources for improvisation. (Twigger)

Due to the need to communicate clearly and effectively with everyone involved in a production, it behooves the stage manager to be well-versed in all aspects of the theatre. This is not to say that an in-depth knowledge of all departments is necessary, but a general base of knowledge is crucial to understanding and helping to troubleshoot problems as they arise. Without a strong foundation of technical and artistic knowledge, the stage manager would lose his or her efficacy in facilitating the mounting of a production. Without a shared terminology, misunderstandings would arise due to the fact that most of the communication between departments is in writing. And without the knowledge of what is technically possible in the theatre, the stage manager would have difficulty in advising a director on what is feasible within the scope of the budget, the ability of the crew, and the limitations of the playing space. Having an actively curious mind that is ready to absorb information from all sources is vital to the stage manager who wants to become indispensable to those with whom he or she works.

As shown in the previous section, human memory is fundamentally associative, meaning that a new piece of information is better remembered if it can be associated with previously acquired knowledge that is already firmly anchored in memory. Thus, it stands to reason that a wider base of knowledge (brought about through acting on our curiosity) will allow for more associations and therefore will increase the likelihood of a new experience being stored in long-term memory.

Following this logic, training for specific tasks is possibly not as helpful as general curiosity, at least for a job as diverse as that of stage management. Curiosity inherently leads to

more sporadic learning than does specific training, which helps to internalize more of the information by allowing time for the brain to make its subconscious connections and associations. Interleaving is the best preparation for a life with lots of unexpected occurrences. “Since we cannot predict the context in which we’ll have to perform, we’re better off varying the circumstances in which we prepare (Carey 64).” The ability to focus and perform well in any environment is crucial to a stage manager’s success. There are very few days in the theatre when everything goes off without a hitch, so it is better to have learned how to work in chaos at times, rather than in the vacuum of an ideal scenario.

The most obvious benefit of an actively curious mind to the stage manager is the greater likelihood of picking up varied skills over time. Carl Cofield, who directed *The Seven* for his Columbia thesis production (and is currently directing Classical Theatre of Harlem’s production of Shakespeare’s *The Tempest*), referred to me as a “multi-tool” or “Swiss army” stage manager. This is not only because of the wide array of things I can do, but also because I was willing to step up into those additional roles as needed. My interest did not stop at gathering my skills; I thoroughly enjoy getting the chance to use as many of them as I can. I believe this willing flexibility to step outside of the stage manager ‘job description’ can only enhance the likelihood of my being hired, especially on a repeat basis.

Of course, cultivating a mind to be constantly learning is easiest if started early in life. Growing up, I was a voracious reader, and my love of reading and storytelling led me to the study of mythology and folklore, and through these studies I learned how to analyze plot and structure for deeper symbolism and meaning. I have found that that theoretical understanding of literature is directly transferable to the analysis of play scripts. As a result, I am able to be of more help to those collaborative directors who prefer a stage manager to be an artistic voice in

the room. My trivial knowledge from reading has come in useful on more than one occasion, especially when a dramaturg is not being utilized in rehearsals.

Working at the Frazier History Museum in Louisville, KY exposed me to a great deal of history and artifacts, and I became especially familiar with the many replicas of antiquated scientific instruments and weaponry we sold in the gift shop. One of the props used in rehearsals for the Broadway musical *Something Rotten!* was an astrolabe, a navigational instrument I recognized from my time at the museum as being invented in the mid 1600s—at least 40 years after 1595, the year in which the show is set. After mentioning this to the stage management team, it was brought to the attention of the prop designer who was grateful to us for having caught that unintentional anachronism.

Throughout my school years I took piano lessons and was involved in choirs and band. My curiosity pushed me to want to learn more about music, and along the way I taught myself guitar, various woodwinds, and different percussion instruments. That musical knowledge and interest has allowed me to step up past the regular duties of a stage manager, filling in as needed for musical directors and accompanists. In working on *The Seven* in the spring of 2014, I was better able to read in for absent actors because I had an easy familiarity with the singing and rapping involved. With *Fen* I actually became the musical director because our director preferred having a smaller group involved in the creative aspects of production. The fact that I have done a small amount of music recording and mixing has helped me greatly in creating basic sound designs for small projects and for use during rehearsals.

More than the varied skills curiosity can help one achieve, active curiosity allows for a more collaborative mindset that is open to seeing solutions across multiple departments. Brain science points more and more to the theory that:

They [curious learners] are the people best equipped for...knowledge-rich, cognitively challenging work.... They are also the ones most likely to make creative connections *between* [author's emphasis] different fields, of the kind that lead to new ideas and the ones best suited to working in multidisciplinary teams. (Leslie xvi)

Work within the field of theatre definitely qualifies as cognitively challenging and multidisciplinary. According to Leslie, those who take advantage of their curiosity by cultivating it are able to see in everything “additional layers of meaning and possibility, unavailable to ordinary observers.” (145) This is because of the questioning mindset that comes along with a high need for cognition (the scale used by scientists to rate a person's level of curiosity). The need for cognition is defined by Loewenstein as “a need to structure relevant situations in meaningful, integrated ways... to understand and make reasonable the experiential world (83).”

Perhaps the most frequent question in the actively curious mind is ‘why’. This genuine interest in reasoning and motivation will naturally focus the mind on seeking out the intentions of others, which can help the stage manager recognize and be able to note why the director, choreographer, and designers make the choices that they do. This awareness can have a positive impact on the stage manager's ability to maintain a long-running show, especially when rehearsing new actors who were not present for the director's original decisions. Knowing that background information will not only be helpful in general maintenance, but also in motivating others.

Among the fastest-growing trends outside of large-scale commercial theatre are devised and/or ensemble projects. Many of the ‘downtown’ directors with whom I have worked like to foster a collaborative feeling to rehearsals, and to that end, they tend to prefer stage managers who can offer an artistic voice. The varied skills and knowledge that are picked up by the actively curious mind throughout life will help to inform that artistic voice. Having a curious

outlook also assists the stage manager by giving him or her an inquisitive mind that can more easily find the places where the piece falls apart along with the ability to ask probing questions that may help the director and/or writer find and repair the underlying problems.

Curiosity helps us to ask the best questions by making us ‘disinterested critics’. This is not the same as being uninterested; disinterestedness is a “sophisticated manifestation of the intellect which is fired by curiosity and ‘pure’ interest (Furedy & Furedy 16).” In this sense, the disinterested person is one who has no direct interest or stake in a particular situation. While stage managers do, of course, have professional and emotional stakes in productions with which they are involved, there is little risk or reward involved for them whether the project’s artistic attributes are lauded or loathed. If the production is a failure from an artistic standpoint, the stage manager’s job prospects are not as directly affected as a director’s or playwright’s could be. This lack of risk could embolden stage managers (specifically those with good relationships with their directors) to “question the unquestioned, to refuse to accept what is assumed, ... to challenge the specialists and experts (Furedy & Furedy 15).” For these questions to be relevant and helpful, they need to be charged and supported by the wide array of knowledge brought about by acting on our curiosity.

Similarly, the fact that stage managers are often less directly involved in the artistic discussions between directors, choreographers, and designers can assist the stage manager to avoid certain biases that may be blinding those who are too close to the situation. The theory of the Gestalt (German for ‘shape’ or ‘form’) school of psychology states “that people perceive objects, ideas, and patterns whole, before summing their component parts (Carey 120).” This causes assumptions in the form of mentally fixed objects and ideas, which can subconsciously inhibit the use of those objects and ideas in applications outside their normal functions.

In summation of the intellectual side of curiosity, learning science shows that an actively curious mind will not only be better able to absorb information, but it will also process, store, and retrieve that information more efficiently. When a curious mind is fed new information, it can be more easily stored and categorized because of the vast array of knowledge that is already present. The curious mind is more likely to learn sporadically than a mind in training for a specific task. This spaced out type of learning strengthens synaptic connections and creates neuronal plasticity allowing for easier transfer of information and skills. This information-fed brain is then better equipped to make subconscious connections, helping the stage manager to find solutions more efficiently and effectively.

4. Curious Leadership

A lot of bad leadership comes from an inability or unwillingness to ask questions... but what they don't realize is that the dumbest questions can be very powerful. They can unlock a conversation. (Mike Parker; Leslie 99)

Curiosity is of vital importance when working with others, especially in such an emotionally charged environment as theatre. When someone is in a position of authority, it can be easy for him or her to assume that he or she is *the* authority, but fostering an actively curious mind can help to fend off that mental bias. Loewenstein's Information Gap Theory "views curiosity as arising when attention becomes focused on a gap in one's knowledge (Loewenstein 87)." Thus, if one is actively curious, it stands to reason that he or she is not only aware of the holes within his or her knowledge, but is also specifically focused on those gaps and therefore has a mind that is open to new ideas and change. Active curiosity makes us more likely to seek out the opinions and knowledge of others rather than relying solely on our own feasibly faulty faculties.

Active curiosity helps us to avoid bias of others' opinions through the conscious awareness of our own lack of knowledge about the private experiences of others. Even someone who is not the archetypal 'know-it-all' might have a subconscious generalization or assumption about another's intelligence or expertise in a given area (i.e. men know less about childbirth than women). With curiosity comes the recognition that others have separate lives from us and therefore knowledge about which we do not know. This recognition helps to stop those assumptions from becoming engrained to the point where potentially good advice is not truly heard because it is coming from an unexpected source (Schwarz 2006).

In the first episode of the final season of the television show *Breaking Bad*, Walt and Mike (two older, controlling characters) are having a heated discussion about how to erase the incriminating contents of a laptop computer inside a police evidence room. While they are arguing and getting nowhere, Jesse (a former addict whom they do not respect) suggests the best answer: a large magnet that can wipe the data from the computer. Because Walt and Mike have biases about Jesse's intellectual usefulness, they ignore him until he stands up and yells the answer at them. If Walt and Mike had been actively curious about Jesse's life outside of their relationships with him, they would have been more likely to consider that he had knowledge of which they might not be aware and could have avoided wasting time on an unnecessary argument.

I have had similar experiences when working with other stage managers and production assistants, the most recent being with one of the other production assistants (hereafter called Jane) on *Something Rotten!* Jane was very experienced and capable, but she allowed her experience to close her mind to others' ways of working. She knew her methods worked, and she was not interested in any suggestion of change. This situation was mostly manageable, but at

times it hindered our team efficiency, specifically when she would restart a task because someone else had started it a different way. Jane would often refuse help when offered because she wanted any tasks associated with her to be done her way. Her controlling nature overrode her curious empathy; she did not consider how she would have felt if the situation were reversed and others were imposing their methods upon her. If Jane had cultivated her curiosity, she might have been open to the possibility that no one person knows the best way to accomplish a wide variety of tasks.

Similarly, active curiosity can allow us to break out of our somewhat hard-wired self-focus. It is natural in the course of survival to keep one's own priorities first in mind, but in our current era of civilization, this is less necessary than it was for our hunting and gathering ancestors. Beyond the lack of necessity, this self-focus (if unchecked) can bring out a sense of egotism which can manifest itself unconsciously. It is not uncommon for leaders to pose questions that suggest they already have an answer in mind, even when they ask with honest intentions (Schwartz 2011). Active curiosity implies that the decision to ask a question is based on the need for an answer rather than a need to ask a question out of a sense of duty or responsibility.

There is a related distinction between the very similar expressions of sympathy and empathy. While both of these emotions tend to come from genuine feeling, sympathy can sometimes ring false like a rhetorical question. Hospital surveys have shown that empathy from doctors is more likely than sympathy to be received positively by patients (Leslie 158). Sympathy is concerned about how the subject feels, but empathy is actively curious to experience what the subject feels. Therefore sympathy—however well-meaning—may seem pitying, whereas empathy is more likely to be seen as a gesture of one's attempt to fully

understand the individual situation. Sympathy is a somewhat uncontrollable emotion that arises from a concern for others; empathy, like all active curiosity, requires an effort and a choice.

One of the most important tasks of good leadership is mediation, and successful mediation requires using active curiosity and empathy. It is not enough to find out what each side wants; we must find out *why* each side wants what it wants. Active curiosity, which supports a deeper focus on the reasoning behind each side's position (and what they choose to ask for), enables the mediator to assist in finding an inclusive and mutually appealing solution. British Diplomat Jonathan Powell (previously Tony Blair's Chief of Staff) has had a long and successful career in negotiations, and was heavily involved in the peace treaty between Great Britain and the Irish Republican Army. His advice in mediation is to "ask what people's underlying interests are—what do they *need*—then you're more likely to get to find an imaginative solution (Leslie 158)."

Of help when motivating others as a leader is the open attitude that comes with fostering an actively curious mind. This openness can heighten a stage manager's ability to naturally adjust to the 'energy' in the room, something with which more and more directors are becoming concerned, especially in ensemble theatre. A colleague stage manager and I were hired as replacements on a workshop of a play called *The Fall* due to nothing more than the director wanting a different atmosphere at rehearsals. The only complaint about the previous stage manager's performance was that she did not seem to be actively engaged in the artistic process in the way the director desired. Those stage managers who are 'hard-wired' into a specific way of leading a company and communicating with others lose some of their potential to be hired for certain projects because they are not able or willing to adapt their styles.

Charlie Munger (Warren Buffet's investing partner with Berkshire Hathaway) gives this advice on motivation: "If you always tell people why, they'll understand it better, they'll consider it more important, and they'll be more likely to comply." The actively curious mind will be better equipped to not only know the logic behind decisions, but also to infer what an unknown logic could be. Unlike assumptions, which are based more in the realm of feeling, inferences use already known information to draw likely conclusions (Schwarz 2006). Active curiosity helps to better inform these inferences.

5. Curiously Content

"The best thing for being sad," replied Merlin, beginning to puff and blow, "is to learn something.... Learn why the world wags and what wags it. That is the only thing which the mind can never exhaust, never alienate, never be tortured by, never fear or distrust, and never dream of regretting."

(T.H. White, *The Once and Future King*)

Writer David Foster Wallace made the case that the practice of curiosity is vital to a happy and well-lived life stating that "it is only through the exercise of our curiosity about others, that we can free ourselves from our hard-wired self-obsession." Being educated through our curiosity involves understanding how to think, and thus how to escape the default setting of selfish egoism. That focus on things outside of the self is more likely to lead to a happier stage manager than one who is too focused on what his or her life is lacking. The cultivation of a curious mind can also lead to greater work satisfaction due to its nature of intrinsic motivation.

The actively curious mind does not need rewards or praise from outside sources to continue learning, it enjoys learning for its own sake, partly due to the fact that "[o]ur desire for abstract information begins as a dopaminergic craving, rooted in the same primal pathway that also responds to sex, drugs, and rock and roll (Lehrer)." When our curiosity is sated, our brain

releases dopamine, a chemical neurotransmitter that produces feelings of pleasure. Our brains then come to associate a state of curiosity with a flood of dopamine in the same way Pavlov's dogs came to associate the ringing of a bell with food. When curiosity rises, dopamine levels rise in anticipation of the satisfaction of that curiosity, which increases feelings of contentment and lowers the chance of distraction.

Beyond the chemical happiness from dopamine production, the cycle of curiosity is naturally reinforcing. "Interest is self-propelling: It motivates people to learn, thereby giving them the knowledge needed to be interested (Silvia 2008: 59)." Curiosity sets in motion a cycle of internal motivation, which will enhance absorption not only of the object of our curiosity but also of our environs when we feel that curiosity surge. Research studies performed by Gruber et. al. "revealed that states of high curiosity enhance not only learning of interesting information, but also learning of incidental material." (491) And the more one learns, the more likely he or she is able to notice subtle differences, which will make more obvious the gaps in one's knowledge. Those gaps in knowledge, as stated in the previous section, are part of the driving force behind a person's curiosity.

Active curiosity in the form of interest provides a drive strong enough to overcome anxiety and the fear of failure, both of which might provoke one to avoid new situations (Silvia, 2001: 273). And just as active curiosity prods us to go outside our comfort zone, it can also provide us with a better ability to deal with stressful situations (Maddi & Kobasa 303). As shown in the second section, the actively curious mind is better prepared for change, thus negating some of the stress of that change. The reduced stress level of the actively curious mind in turn leads to multiple health benefits such as a lower risk of cardiovascular problems.

Beyond the health benefits of reduced stress levels, an actively curious mindset has been shown to decrease the likelihood of developing neurodegenerative diseases (Silvia 2001: 274). It is important to note that though state curiosity has been found to be a predictor of longevity and health, trait curiosity has no similar correlation (Swan & Carmelli 452). While not scientifically explained in the cited study, this distinction can be inferred as an endorsement for active rather than passive curiosity. Trait curiosity—how curious one generally feels—has no noticeable health or cognitive benefits; state curiosity—the intensity of one’s curiosity in any specific situation—does. In order to benefit one must seek out things about which to be curious rather than waiting for curious situations to arise.

Conclusion: Curiosity Skilled the Stage Manager

Curiosity prepares us for epiphanies by making us aware of our own blind spots, interested in our own ignorance. It makes us lucky. (Leslie 73)

The history of stage management is unclear, but, anecdotally and logically, most theatre practitioners believe the role of the stage manager grew out of other positions over time. The stage manager likely filled many roles (company manager, producer, dramaturg, technician) before evolving into what we know it to be today. Over the years there have been major advances in what is technically possible in the theatre, and those advances have led to the requirement of extremely skilled technicians and designers. The stage manager could no longer perform all these specialized tasks, and thus the position shifted. Ironically, as the different fields of theatre became more specialized, the stage manager’s role continued to become more diversified, dealing with all departments on-stage, off-stage, and office. To this end, it behooves the stage manager to actively embrace his or her curiosity.

Like every skill or habit, active curiosity can be either encouraged or stifled. As mentioned in the first section, research shows that socioeconomic patterns and childhood nurture greatly impact the likelihood of a child growing up to be actively curious. Though this active curiosity may not be as easy to start in adulthood when the brain is less naturally wired to be curious, it is possible to hone and enhance one's conscious ability the same as any other performance ability. The more varied the exercise, the stronger and more capable the muscle, and the easier it is to adapt that muscle to new exercises.

The brain strengthens its associations and synapses over time through repetition and reconsolidation of memories. Active curiosity not only aids in learning specific subjects, but also in preparing the brain for learning future subjects. It is easy to be daunted by a task with which one has no experience. Though curiosity cannot prepare the stage manager completely for every eventuality, the knowledge that he or she gains through acting on his or her curiosity can serve as an associative framework from which to extract relevant information and upon which to store new data.

An actively curious mind is always learning, as is the effectual stage manager. The more information a stage manager has, the better he or she is able to reason and problem solve. A wide breadth of artistic knowledge is required to communicate between the different theatrical departments; a stage manager who knows the terminology and workings of both the scenery shop and the rehearsal room will be better equipped to have discussions with the set designer on behalf of the director. A wide breadth of general knowledge outside of theatre is not necessary, but it can make the stage manager more useful and therefore more hireable.

Curiosity has an impact not only on intellectual knowledge but personal and emotional knowledge as well. A consciously curious mind is aware that it does not know everything and is

therefore open to differing opinions. The actively curious person will naturally be more empathetic, feeling a desire to know what it is like to walk in another's shoes, and will use the varied information he or she has gathered over the years to better understand the experiences and situations of others. In mediation this translates to delving into the heart of the problem—what is actually wanted—rather than taking what each party claims to want at face value.

Curiosity also aids in achieving the “flow state” of working, which can in turn lead to greater career satisfaction. The stage manager's job can often come with long hours and irritable co-workers. Being curious about everything around one's self automatically occupies the time and brings about greater focus and attention. That focus and attention is important to not only the work at hand but also to the enjoyment of that work. With that enjoyment comes lower stress levels and better overall health, allowing the stage manager to keep working the often-necessary long hours without becoming ill or worn down.

It seems that an actively curious mind and stage management go hand in hand. Stage managers are seen as jack-of-all-trades renaissance men & women of the theatre so it stands to reason that most would have a wide variety of interests through which they gathered their experience. But active curiosity has benefits to the stage manager beyond knowledge. The practice of active curiosity positively shapes the stage manager's leadership and communication styles, and it has been shown to decrease the risk for disease and increase the likelihood of career satisfaction. These benefits do not come from simply allowing oneself the freedom to be curious when encountering situations anyone would find mentally stimulating; they come from seeking out curiosities in the boring and mundane. Active curiosity requires both the admission that there is always more to be known and the conscious decision to explore that ever-expanding unknown.

Works Cited

- Bjork, Robert A., & Elizabeth Ligon Bjork. "A New Theory of Disuse and an Old Theory of Stimulus Fluctuation." *From Learning Processes to Cognitive Processes: Essays in Honor of William K. Estes*. Ed. A. Healy, S. Kosslyn, & R. Shiffrin. Hillsdale, NJ: Erlbaum, 1992. pp. 35-67. Print.
- Carey, Benedict. *How We Learn: The Surprising Truth About When, Where, and Why It Happens*. New York: Random House, 2014. Print.
- Gruber, Matthias J., Bernard D. Gelman, & Charan Ranganath. "States of Curiosity: Modulate Hippocampus-Dependent Learning via the Dopaminergic Circuit." *Neuron* 84.2 (2014): pp. 486-496. Print.
- James, William. *Talks to Teachers On Psychology: And to Students on Some of Life's Ideals*. New York: Henry Holt & Company, 1925. Ebook.
- Lehrer, Jonah. "The Itch of Curiosity." *Wired*. 3 Aug. 2010. Web. 8 Jun. 2015.
- Leslie, Ian. *Curious: The Desire to Know and Why Your Future Depends On It*. New York: Basic Books, 2014. Print.
- Loewenstein, George. "The Psychology of Curiosity: A Review and Reinterpretation." *Psychological Bulletin* 116.1 (1994): pp. 75-98. Print.
- Maddi, Salvatore R., & Suzanne C. Kobasa. "Intrinsic Motivation and Health." *Advances in Intrinsic Motivation and Aesthetics*. Ed. Hy I. Day. New York: Plenum Press, 1981. pp. 299-321. Print.
- Madsen, K. B. "Berlyne's Theory: A Metascientific Study." *Advances in Intrinsic Motivation and Aesthetics*. Ed. Hy I. Day. New York: Plenum Press, 1981. pp. 19-38. Print.
- Mastin, Luke. *The Human Memory*. 2010. Web. 18 Jun. 2015.
- Mayer, John D. *Personal Intelligence: The Power of Personality and How It Shapes Our Lives*. London: Macmillan, 2014. Print.
- McCrae et. al. "Personality Trait Development from age 12 to age 18: Longitudinal, Cross-Sectional, and Cross-Cultural Analyses." *Journal of Personality and Social Psychology* 83.6 (2002): pp. 1456-1468. Web. 17 Jul. 2015.
- Munger, Charles. "A Lesson on Elementary, Worldly Wisdom As It Relates to Investment Management and Business." Univ. of Southern California Marshall School of Business. Los Angeles, CA. 1994. Speech.

- Phillips, Richard. "Space for Curiosity." *Progress in Human Geography* 38.4 (2014): pp. 493-512.
- Schwartz, Roger. "Being Genuinely Curious." *Roger Schwarz and Associates*. May 2005. Web. 12 Jun. 2015.
- Schwartz, Roger. "Test Your Assumptions and Inferences." *Roger Schwarz and Associates*. Oct. 2006. Web. 12 Jun. 2015.
- Schwartz, Roger. "Genuine Curiosity." *Roger Schwarz and Associates*. Aug. 2011. Web. 12 Jun. 2015.
- Schwartz, Roger. "Using Curiosity to Create Accountability with Powerful People." *Roger Schwarz and Associates*. Oct. 2011. Web. 12 Jun. 2015.
- Shaw, Christopher A., & Jill C. McEachern. "Traversing Levels of Organization: A Theory of Neuronal Plasticity and Stability." *Toward a Theory of Neuroplasticity*. Ed. Christopher A. Shaw & Jill C. McEachern. New York: Psychology Press, 2013. pp. 427-446. Print.
- Silvia, Paul J. "Interest and Interests: The Psychology of Constructive Capriciousness." *Review of General Psychology* 5 (2001): pp. 270-290. Print.
- Silvia, Paul J. "Interest—The Curious Emotion." *Current Directions in Psychological Science* 17.1 (2008): pp. 57-60. Print.
- Sukel, Kayt. "Neuroanatomy—A Primer." *The Dana Foundation*. 27 Jul. 2011. Web. 17 May 2015.
- Sukel, Kayt. "Music Makes You A Better Reader, Says Science." *Good Magazine*. 28 Feb. 2015. Web. 16 Jun. 2015.
- Swan, Gary E. & Dorit Carmelli. "Curiosity and Mortality in Aging Adults: A 5-Year Follow-Up of the Western Collaborative Group Study." *Psychology and Aging* 11.3 (1996): pp. 449-453.
- Twigger, Robert. "Anyone Can Be a Polymath." *Aeon*. Aeon Media Ltd., 4 Nov. 2013. Web. 5 June 2015.
- Walker, Edward L. "The Quest for the Inverted U." *Advances in Intrinsic Motivation and Aesthetics*. Ed. Hy I. Day. New York: Plenum Press, 1981. pp. 39-70. Print.
- Weinberger, Norman M. "Learning and Receptive field Plasticity in the Auditory Cortex: Identification of a Memory Code?" *Toward a Theory of Neuroplasticity*. Ed. Christopher A. Shaw & Jill C. McEachern. New York: Psychology Press, 2013. pp. 31-43. Print.