Science Fiction as Pedagogy: Teaching Christopher Nolan's Interstellar *as a Triumph of Communication over Time and Space*

A recent and growing trend in the teaching of communication (and other discipline-based) concepts through film is the strategy of "thin slicing" or showing observers a series of short video clips in rapid succession (ranging from seconds to a few minutes) depicting specific behavioral interaction. Students are then asked to predict the outcome of the interaction based on the brief behaviors observed. In their study designed to examine best techniques for teaching small group interactions, Waller, et. al. (2013) began with the assumption that **"**the ability to quickly recognize group behavior in situ, understand how that behavior maps onto fundamental group processes, and then take appropriate action all represent critical skills for students of group dynamics" (448). Thin slicing quick clips of movies featuring group dynamics helped students "to develop the skill of real-time recognition of group-level behaviors—a skill necessary in the fast-paced, dynamic environments faced by many groups today." In other words, observing fictionalized interactions helped students to become competent in real-life situations.

There are good reasons to use commercial, even fictional movies over videos of real conversations or group interactions to teach communication theory. Waller and her colleagues cite three of them. To paraphrase, films are preferred when (1) we want to avoid some of the distracting and distorting cues common in natural conversation. Additionally, (2) film portrayals tend to be more dramatic and demonstrative, making it easier for students to observe the behaviors in question. Lastly, (3) we use films to teach concepts because students can work on exercises beyond the classroom, especially for extended assignments (460).

Using thin slicing of brief movie clips to teach specific concepts in the classroom does help students adopt behaviors for immediate use in real-life situations. And yet, observing and then adopting behaviors for real-life implementation isn't the only reason we show popular films in Communication courses. Often, and especially with introductory theory courses, we want

students to recognize and reflect upon the role communication plays in human interaction and relationship development. We also want students to understand narrative theory and the role communication "moments" play in the development of plots. By adopting a more deliberative, "wide-angle communication lens" approach, students are asked to perform a "functional analysis" on entire movies by tracking communication as agency, influencing the storyline within the traditional features of the dramatic, narrative arc: exposition, rising action, and resolution. Training student analysis for the purpose of answering macro-level questions, (e.g., "What is the role of communication in the development and resolution of conflict?"), students develop the skills to "see" the effects of communication as a contextually-rich, long-term process. In contrast to ad-hoc groups, relationship development over time is less linear or bounded by project-based constraints. Our wide-angle communication lens approach allows movie viewers and communication scholars to examine the quality of human relationships based on the evolution of the protagonist's communication processes.

What follows is a case study using Christopher Nolan's science fiction epic, *Interstellar* (2014), chosen to demonstrate the capacity of a film hailed for its visual effects and scientific accuracy to serve as a viable artifact for teaching the centrality of communication.

The analysis occurs in two phases: first, students would need to identify communication events within the plot, using either a plot summary or their first viewing of the film. In the second viewing, students work to isolate and categorize specific and significant communication events within the larger narrative, creating a timeline of when and how they occur. Following the development of this descriptive timeline of communication events, a second step determines the function of each communication event relative to how specific segments of communication influence the plot. For this, we created a two column approach to help students analyze the

function of communication within the larger narrative, noting whether the event served as (1) exposition, (2) a component of rising action or conflict, or (3) conflict resolution.

By segmenting the movie into significant communication events, we approach movie analysis for the purpose of explicating communication theory as a feature of plot development. We understand films as dramatic narratives, but we don't usually take note of how communication events function to establish and develop the narrative. Once we applied our 2-column approach to a film, we are able to "see" the various forms of communication that our pre-disposed perspectives might have obscured.

Wide Angle Lens Communication Analysis

Communication Event: What was said? What happened?	**Function:** Exposition? Rising Action/Conflict? Resolution? How does this communication event influence the plot? Does it maintain/disrupt/re-establish equilibrium? Is the communication honest, dishonest, direct, indirect, relaxed, tense, *understood*? **What DOES the Communication DO?**

The exposition phase of drama on film works to expose viewers to information about the main protagonist, and/or the setting and mood of the narrative. Viewers need this information to make sense of the plot as it unfolds. Tracking the protagonist's communication strategies across the length and breadth of the narrative also serves to reveal how communication functions to characterize the conflict that ensues and the many ways in which the protagonist works to solve problems and resolve the conflict at the end. This approach accounts for the protagonist's skill (or lack thereof) in selecting the best methods for persuasion alongside the setting, mood, mindset, topic, and purpose of communication events. It is not an uncommon plot device in

popular films to move toward resolution at the end by showing the protagonist's evolution to his or her most communicatively-sensitive and developed self. The "wide-angle lens" approach helps students to understand and analyze a variety of communication styles and strategies and discern how they function as the plot gains momentum and recurring conflicts are eventually resolved. To "see" communication events as serving narrative functions, students need to document the expansive array of communication strategies, including miscommunication, deception, threats, and even relationship-straining, disaffirming tactics. By focusing on the protagonist-as-communicator and identifying patterns of style and strategy, we learn how communication functions in the larger narrative as equilibrium gives way to the central conflict and the plot evolves to its most complex phase.

Christopher Nolan's *Interstellar*

Movies that feature the development of relationships may be expected to teach a thing or two about communication failures and successes. But, what about a movie that is heralded as a science fiction visual extravaganza? We decided to try out this wide-angle, analytical approach on a movie that was purported to travel outside the typical galaxy of dialogue-rich relational development and interpersonal communication. Christopher Nolan's *Interstellar* was released in theaters in November of 2014. From the outset, the movie was heralded as a visual achievement, stocked with heavy doses of complex scientific theories involving time and space and exotic galactic occurrences. "If it's spectacle you want, this delivers" proclaimed *The Guardian's* Observer Film Critic Mark Kermode. The *Christian Science Monitor* hailed Gargantua, "a huge, rapidly spinning black hole" as "the astronomical centerpiece" and "star of the new movie." This, in an article that answers in the affirmative whether the movie "got the science right," at

least with regard to black holes. The other "plausible but fantastic ideas from modern physics, including wormholes, time travel, and extra dimensions" garnered less positive critiques on the scientific front, but they were huge hits with the lay audience.

Jeffrey Bennett, an astrophysicist himself, writes in the *Huffington Post* Blog that, "there's a lot in *Interstellar* that is real, solid science. This probably stems largely from the fact that Caltech professor Kip Thorne -- who has long been one of my physics heroes -- served as an executive producer on the film." The movie generated a flurry of discussion about the accuracy of the science and the cutting-edge, captivating visual effects. It received dozens of nominations for awards. Notably, while nominated in five categories for an Academy Award, (Best Original Score, Best Sound Editing, Best Sound Mixing, Best Production Design, and Best Visual Effects), four of the categories are "technical" in nature, and only the Best Visual Effects nomination resulted in an Oscar win. *Interstellar* did win, with ten other movies, The American Film Institute's "Best Movies of the Year," but the preponderance of the wins were in the "best visual effects" category. It even won an award for "Outstanding Created Environment in a Photoreal/Live Action Feature Motion Picture" from The Visual Effects Society. Additionally, the Critics' Choice Movie Awards honored *Interstellar* with their "Best Sci-Fi/Horror Movie" award. *Interstellar* is, for all intents and purposes, firmly fixed within the sci-fi genre and credited for its extraordinary visual effects, a singular career achievement for Director Christopher Nolan.

Despite the exotic allure of science fiction and stunning visual effects, by the second time we watched the film, we did so with our wide-angle, communication lenses in place. We were finally able to "see" the centrality of communication at the narrative's core.

Before we can explore what this film can tell us about communication, we need to offer a summary of the plot, even at the risk of spoiling the movie for the uninitiated. A summary is necessary for this film because *Interstellar* is a fictional account and requires more structural information than the depiction of a drama based in historical fact. Additionally, this summary is analogous to our viewing of the film before we adopted the wide-angle communication lens. We will then be able to identify the advantage of our approach over the standard summary of observable plot components. We chose the following *Wikipedia* Plot Summary to keep the description as brief and critically-neutral as possible:

Plot Summary

Crop blight has made growing food on Earth nearly impossible, threatening the existence of humanity. Joe Cooper, a widowed former NASA pilot, runs a farm with his father-in-law Donald, son Tom, and daughter Murphy. Murphy believes her bedroom is haunted by a poltergeist. When the "ghost" creates a pattern of dust on the floor, Cooper realizes an unknown intelligence is using gravity to communicate, and interprets the pattern as geographic coordinates, which Cooper and Murphy follow to a secret NASA installation.

There, they meet Dr. Brand, a college professor of Cooper's. Brand reveals that a wormhole, apparently created by an alien intelligence, appeared near Saturn 48 years before and leads to a distant galaxy, 10 billion lightyears from Earth and the Milky Way, with numerous potentially habitable planets. Twelve volunteers have gone through it, knowing they were unlikely to be able to return, each to assess a different planet's suitability as a new home for humanity. Three – Miller, Edmunds and Mann – have sent encouraging data from planets near Gargantua, a supermassive black hole. Brand recruits Cooper to pilot the spacecraft *Endurance* to evaluate as many of the planets as possible, while he works on "Plan A", a theory to harness gravity for propulsion, which would allow humanity to leave Earth. However, should his efforts fail, the *Endurance* also carries 5,000 frozen embryos as "Plan B", to provide for humanity's survival. Cooper agrees to the plan, angering Murphy.

Cooper's crew consists of three scientists – Romilly, Doyle, and Brand's daughter Amelia – and robots TARS and CASE. Traversing the wormhole, they first head to Miller's planet, an ocean world where time is severely dilated due to the proximity to Gargantua; for each hour there, seven years pass on Earth. While Romilly and TARS stay on the *Endurance*, the rest take a lander to the surface, where they find wreckage of Miller's lander but not its black box. Brand and Doyle venture out further, attempting to find more data. Cooper realizes that the land in front is not mountains but a single, giant, wave. The tidal wave strikes, killing Doyle and waterlogging

the lander's engines. By the time Cooper, Amelia, and CASE return to *Endurance*, 23 years have elapsed back on Earth.

Murphy, now an adult, has been assisting Dr. Brand with his research. On his deathbed, he admits to her that he solved the equation long before and deemed Plan A impossible, and that he lied to everyone, pinning his hopes on Plan B. Murphy notifies Amelia of her father's death, then accuses her and Cooper of abandoning Earth. She continues the research, believing Plan A might work if they could get more data regarding Gargantua's singularity.

With limited fuel, Cooper decides to go to Mann's planet, rather than Edmunds', as Mann has been transmitting. After being revived from stasis, Mann assures the crew that while the frozen planet has an ammonia-laden atmosphere, the planetary surface is fit for human survival. However, when they are alone, Mann tries to kill Cooper, revealing that he falsified the data so he would be rescued. Mann then flees, intending to take the *Endurance*. Meanwhile, Romilly is killed by a booby trap Mann had set inside his own robot.

Amelia rescues Cooper, and they race to the *Endurance*, where Mann is attempting to dock. Mann defies Cooper's order not to open the airlock, which fails catastrophically. Mann is killed and the *Endurance* is severely damaged. Cooper manages to use the landing craft to stabilize the ship. Using the black hole's gravity as a slingshot, they set the ship on course to Edmunds' planet; but being close to a black hole, 51 years would pass on Earth.

Cooper jettisons himself and TARS into the black hole so that Amelia and CASE can complete the journey. Cooper and TARS plunge into the black hole, but emerge in a tesseract, which appears as a stream of bookshelves, with portals that look out into Murphy's bedroom at different times in her life. Cooper realizes that the tesseract and wormhole were created by fifth dimensional beings from the future to enable him to communicate with Murphy through gravitational waves, and that he is her "ghost". He relays data that TARS collected from the black hole in Morse code by manipulating the second hand of a watch he gave to Murphy before he left. Murphy uses the information to solve the remaining problem concerning Plan A.

Cooper emerges from the wormhole and is rescued by the crew of a space habitat orbiting Saturn. Aboard, he reunites with Murphy, now elderly and near death. After sharing one last goodbye, Cooper, along with TARS, leaves the habitat to rejoin Amelia, who is with CASE on Edmunds' Planet, which was found to be habitable.
https://en.wikipedia.org/wiki/Interstellar_%28film%29#Plot (Retrieved 11.08.15 8:15pm).

This written summary does note those instances where communication (good and bad) is featured in a particular scene. And while this summary is fairly comprehensive—in a "big picture" way—it is worth taking the time to highlight significant communication events we believe drive the storyline. These highlights include the sequence of communicated deceptions

(lies and secrets) that occur: Brand's secret regarding the impossibility of Plan A's success to manipulate Cooper and the others into Plan B; Astronaut Mann's deception about the hospitability of his planet in order to manipulate a rescue; and, Cooper's decision to secretly sacrifice himself so that Amelia can get to the Edmunds planet. The summary does mention some of the subsequent revelations, when each of the deceptions is exposed and trust between characters is undermined. However, and this is significant to those of us who are watching the film as a series of communication events, the summary barely mentions the many scenes where one-way, asynchronous communication reaches the *Endurance* crew across vast chasms of time and space in the form of video messages from family members left on Earth. Time and space distorted communication the crew thought they were receiving from the astronaut Miller, and the lack of "transmissions" (communication) from astronaut Edmunds caused Cooper to choose the two planets that were least hospitable—in part, because he didn't trust Amelia's emotion-laden instincts. Mistrust, misunderstandings, distorted and intentionally deceptive communication weave throughout the extraterrestrial central narrative. In fact, if we were to characterize this "rising action" and conflict phase of the film, we'd not be able to resist the perception that the central action of the film is more about communication failures than any other type of conflict. The price everyone must pay for these communication failures (intentional and accidental) is enormous, including the passage of many decades while the crew in space and Murphy on earth each work to correct miscalculations guided by communication gone awry.

Let's test that premise by examining three significant scenes, each one aligned to either the exposition, rising action/conflict, or resolution phases of the plot, using our wide-angle lens to compare what was said to how the communication functions in the narrative. All dialogue was transcribed by the authors independently:

Wide Angle Lens Communication Analysis
Scene 1, at the Expository Phase of the Plot
***Interstellar*, School Suspension Scene**

Communication Event: What was said? What happened?	**Function:** Exposition? Rising Action/Conflict? Resolution? How does this communication event influence the plot? Does it maintain/disrupt/re-establish equilibrium? Is the communication honest, dishonest, direct, indirect, relaxed, tense, *understood*? **What DOES the Communication DO?**
Cooper: Are we done here? Principal: No, Ms. Hanley is here to talk about Murph. Ms. Hanley: Murph, is a great kid. She's really bright, but she's been having a little trouble lately. She brought this in to show the other students, the section on the lunar landings. Cooper: Yeah, it's one of my old textbooks. She always loved the pictures. Ms. Hanley: It's an old federal textbook. We've replaced them with the corrected versions. Cooper: Corrected? Ms. Hanley: Explaining how the Apollo missions were faked to bankrupt the Soviet Union. Cooper: You don't believe we went to the moon? Ms. Hanley: I believe it was a brilliant piece of propaganda, and that the Soviets bankrupted themselves, pouring resources into rockets and other useless machines. Cooper: Useless machines? Ms. Hanley: And if we don't want a repeat of the excess and wastefulness of the 21st century then we need to teach our kids about this planet, not tales of leaving it. Cooper: You know… one of those useless machines we used to make was called an MRI and if we had any of those	This expositional scene is critical to "rising action" events of the film and foreshadows what comes next. It establishes how protective Cooper is of Murph and the strength of their relationship. The communication between Cooper and Murph's teacher and principal is tense, with incomplete exchanges and stifled expressions. Cooper clearly doesn't buy the school authorities' view of his daughter's perceptions (about the moon landing) or her actions (standing up for herself). The scene serves to establish the closeness between father and daughter; it also sets the stage for what will become a recurring theme of the movie: Cooper is always on Murph's side. This scene exposes audiences to the "Cooper and Murph against the world" type of bond they share. Their bond is based on evidence, on truth, on trust and on love. When the rising action phase complicates their bond and separates father and daughter, trust

left, the doctors would have been able to find the cyst in my wife's brain before she died, instead of afterwards. And then she would have been the one sitting here listening to this instead of me, which would have been a good thing because she was always the calmer one. Ms. Hanley: I'm sorry about your wife, Mr. Cooper. But, Murph got into a fistfight with several of her classmates over this Apollo nonsense, so we thought it would be best to have you come in to see what ideas you might have for dealing with her behavior on the home front. Cooper: Yeah, you know what...there's a game tomorrow night. She's going through a bit of a baseball phase. Her favorite team is playing and there's going to be candy and soda. I think I'll take her to that. [Scene change to outside the school, Cooper walks back to the truck.] Murph: How did it go? Cooper: I got you suspended.	is also jeopardized, even lost to some extent. When Cooper and Murphy are most separated by time and space, when the threads of their connection are most strained and their communication collapses into one-way and accusatory monologues by the adult Murphy, the conflict of the plot is at its most intense and the dire consequences of their disconnection are most urgently felt. The fact that Cooper so quickly jumps to Murph's defense in this scene, trusting her judgment implicitly, will ultimately serve him and the narrative well when the two face more serious challenges when separated later in the film.

Wide Angle Lens Communication Analysis
Scene 2, at the Rising Action/Conflict Phase of the Plot
***Interstellar*, dialogue between Cooper and Amelia on "love"**

Communication Event: What was said? What happened?	**Function:** Exposition? Rising Action/Conflict? Resolution? How does this communication event influence the plot? Does it maintain/disrupt/re-establish equilibrium? Is the communication honest, dishonest, direct, indirect, relaxed, tense, *understood*? **What DOES the Communication DO?**
[4:20] Leaving Miller's Planet, The Aftermath Cooper: CASE, what's the problem? CASE: Too waterlogged, let it drain. Cooper: [expletive] Amelia: I told you to leave me. Cooper: And I told you to get your ass back here! Amelia: Why didn't you leave me?	This scene firmly establishes what is at stake for the main characters. It puts the crippling loss into the forefront of their experiences. In this scene alone, the components of loss discussed include astronaut Miller who died soon after reaching the planet, astronaut

Cooper: The difference is one of us was thinking about the mission! Amelia: Cooper, you were thinking about getting home! I was trying to do the right thing! Cooper: Tell that to Doyle. CASE, how much time? CASE: 45 to an hour. Cooper: The stuff of life, huh? What's this going to cost us, Brand? Amelia: A lot. Decades. Cooper (anguished, exasperated): What happened to Miller? Amelia: Judging by the wreckage, she was broken up by a wave just after impact. Cooper: How does the wreckage stay together after all these years? Amelia: Because of the time slippage. This planet's time she just landed hours ago. She probably just died minutes ago. CASE: The data Doyle received was just the initial status echoing endlessly. Cooper: We weren't prepared for this. Decades… We have the survival skills of a boy scout troop. Amelia: We got this far on our brains. Further than any human in history. Cooper: Well not far enough! And now we're stuck here and there won't be anyone left on earth to save. Amelia: I'm counting every minute, same as you, Cooper. Cooper: Is there any possibility, some kind of way maybe we can jump in a black hole and gain back the years? Amelia: Gain back the years? Cooper: Don't shake your head at me. Amelia: Time is relative. Okay? It can stretch and it can squeeze…but it can't run backwards. It just can't. The only thing that can move across dimensions…like time…is gravity. Cooper: Okay. The beings that led us here, they communicate through gravity… Amelia: Yes. Cooper: Are they talking to us through the future? Amelia: Maybe. Cooper: Well, if they can… Amelia: Well THEY are beings of five dimensions. To them, time might be another physical dimension. To them, the past might be a canyon that they can climb into. The future, a mountain they could climb up. But to us, it's not, okay? I'm sorry. But you knew about relativity.	Doyle who was lost trying to save Amelia's life, the hope of any meaningful or useful data from the planet, decades for Cooper with his children, the possibility for Amelia that her father may no longer be alive even though this is left unspoken, lost fuel, and worst of all, the hope of saving any of the people left back on Earth. This scene establishes loss as a central theme in the narrative conflict. It is telling how prominent loss is and what is at stake. This scene also serves to expose the motives of the remaining characters to demonstrate what is at stake and what they have left to lose. Another recurring theme includes the fragile nature of life and the devastating ripple effects from one wrong decision, when every minute counts.

Cooper: (big sigh) My daughter is ten years old. I couldn't teach her Einstein's theories before I left. Amelia: You couldn't have told her you were going to save the world? Cooper: No. When you become a parent, one thing becomes very clear. And that's that you want your children to feel safe. That rules out telling a 10 year old that the world's ending. CASE: Cooper: Cooper: How long for the engines, CASE? CASE: A minute or two. Cooper: We don't have it. Helmets on! Brand, co-pilot—you're up! CASE, load the cabin oxygen through the main thrusters.	

Wide Angle Lens Communication Analysis
Scene 3, at the Resolution Phase of the Plot
***Interstellar*, The Tesseract Sequence**

Communication Event: What was said? What happened?	**Function:** Exposition? Rising Action/Conflict? Resolution? How does this communication event influence the plot? Does it maintain/disrupt/re-establish equilibrium? Is the communication honest, dishonest, direct, indirect, relaxed, tense, *understood*? **What DOES the Communication DO?**
Cooper and TARS the robot communicating while Cooper makes sense of the Tesseract he finds himself in. Communication is direct, 2-way, trusted, synchronic between Cooper and TARS. Cooper: I thought they chose me. They didn't choose me, they chose her! TARS: For what, Cooper? Cooper: To save the world. All of this…is one little girl's bedroom, every moment, it's infinitely complex. They have access to infinite time and space, but they're not bound by anything. If they can find a specific place IN time, they can communicate. That's why I'm here. I'm going to find a way to tell Murph, just like I found this moment. TARS: How, Cooper?	Resolution: This scene returns the main protagonists, Cooper and his daughter, Murphy, to equilibrium. Their relationship is re-connected through communication. The Tesseract is a structure and Cooper needs only to find the right method of communicating with Murph, all the while trusting that she will finally recognize the sender of the message as well as the message intent. From the violent chaos of unbounded space, Cooper is thrust into the Tesseract and uses it to connect with his daughter. In this scene, communication is

Cooper: Love, TARS, love. It's just like Brand said, my connection with Murph, it IS quantifiable. It's the key. TARS: What are we here to DO? Cooper: Find how to tell her. The watch. The watch, that's it. We code the data into the movement of the second hand. TARS, translate the data into Morse and feed it to me. TARS: Translating data to Morse. Cooper, what if she never came back for it? Cooper: She will. She will. [Parallel scene on Earth showing Murph returning for the watch.] TARS: How did she know? Cooper: Because I gave it to her. TARS: Roger, Morse is dot dot dash dot. [Cooper whispers] Dot dot dash dot… TARS continues: dot dash dot dot. [Murph tells her brother, "He came back! It was him, all this time. I didn't know it was him. Dad's going to save us!"]	both the goal of the scene and focus of the dialogue. Cooper uses his relationship with Murphy to find the right "key" and give her the messages he is trying to send. The robot doesn't understand how Cooper knows his daughter's behaviors before she does them; it is Cooper's human connection to his daughter that allows the communication to find shared meaning across time and space.

Each of these scenes is pivotal in the film's narrative. This last scene functions to resolve the central conflict borne of communication failures and deceptions. Beyond merely the exchange of information, this scene depicts *shared* communication, where sender and receiver encode and decode "on the same wavelength." The long night of communication failures is over once father and daughter re-connect and reunite in the light of day.

For a deeper understanding of what it is our method offers, it is useful to compare our treatment of this last "Tesseract" scene to a description offered by an online reviewer:

> "They emerge in a five-dimensional location, where time appears as a spatial dimension and portals show glimpses of Murph's childhood bedroom at various times.

> Cooper realizes that the wormhole's creators are future humans transcending time and space, who have constructed the tesseract *so he can communicate with Murph as her "ghost" and save humanity*. Using gravitational waves, Cooper encodes TARS's data on the singularity into the adult Murphy's watch through Morse code, allowing her to complete Brand's equation to launch the space stations" (http://www.35bricksent.com/archives/interstellar/2/27/2015, retrieved 04.01.15). [Emphasis added.]

In this description, Cooper is depicted as communicating with Murph "as her 'ghost'" and saves humanity in the process. In fact, this is not what happened at all—but only a wide angle lens focused on the function of communication in the scene—and across the film's narrative arc—can clarify what did happen. At the moment Murph finally realizes, even recognizes her father, they become re-connected and shared meaning is again revived between them. This scene isn't an isolated occurrence with only "ghostly" ties to the opening scenes of the movie. In fact, Murphy never did communicate with her ghost. Her "ghost" was merely a misreading of her father's attempts to communicate with her; all efforts to share meaning with her "ghost" resulted in misinterpretations. Further, once father and daughter re-connect, *she* is able to save humanity. With the achievement of communication with a capital-C, the Tesseract dissolves and father and daughter are again reunited and in sync—a resolution foreshadowed in the movie's earliest communication events between Cooper and Murphy.

In the nearly three hour film, gravity is identified as the one force that can transcend time and space, but even gravity is enlisted in the service of communicating coded messages. And, in the end, it is communication—between future humans to robots to Cooper and ultimately to Murphy--that saves humanity. *Interstellar*, it turns out, is a movie about the species-saving achievement of human communication.

Conclusion

A macro analysis of *Interstellar* reveals that communication functions to foreshadow, develop, and resolve the conflict before bringing the narrative to conclusion. As the wide-angle lens and a focus on communication events in the movie reveals, neither science nor science fiction serve as either the source of the narrative conflict or the resolution of that conflict. Communication, rather, is central to all three traditional components of the narrative arc within the film.

There is merit in the micro analyses that proliferate on college campuses when instructors assign movie clips in quick succession to demonstrate specific course concepts. Students can discern the small details and learn how to replicate or avoid behaviors they observe. But, if teachers of communication wish to encourage thoughtful deliberation over quick observation and challenge students to "see" the function of communication over the course of complex human interactions (including dishonest, deceptive, and one-way examples), then the macro analysis we offer here has promising applications. Students must first identify what was said and separate that from how the communication functions. When dialogue-rich movies threaten to obscure the role of communication in a movie's narrative arc, the macro approach works well to uncover the communicative function. When visually resplendent films threaten to distract viewers from the role of human communication in a film's exposition, rising action, or resolution phases, the macro approach gives focus to the analysis. As a pedagogical tool, the wide-angle communication lens delivers dividends to those students who enjoy criticism and close textual analysis of films but also want to examine the role of communication as a narrative component. Both are possible once we realize they do not need to compete with each other for our attention.

In the end, we are reminded of the question the robot TARS asks Cooper about their purpose in the Tesseract, and the profoundly simply answer that Cooper provides:

TARS: What are we here to DO?
Cooper: Find how to tell her.

And *that* is the essential communication challenge.

Works Cited

Champoux, J.E. Film as a Teaching Resource (1999). *Journal of Management Inquiry, 8 (2), 206-217.*

Hahn, D.F. [On Kenneth Burke and "Terministic Compulsion," p. 121]. *Political Communication: Rhetoric, Government and Citizens* (2002) Strata Publishing Co., PA. 2nd ed.

Waller, M.J., Sohrab, G., & Ma, B.W. (2013). Beyond 12 Angry Men: Thin-Slicing film to Illustrate Group Dynamics. *Small Group Research* 44(4), 446-465.

Weaver, R. *Language is Sermonic*. Johannesen, R.L., Strickland, R., and Eubanks, R.T., eds. Baton Rouge: Louisiana State University Press, 1970 (p. 20).

Wichelns, H.A. (1925). The Literary Criticism of Oratory. In *Readings in Rhetorical Criticism*, Burgchardt, C.R., Editor. Pages 3-28, 4th Edition, 2010.

Film Reviews:

Bennett, J. *Interstellar Science: That's Relativity*. http://www.huffingtonpost.com/jeffrey-bennett/interstellar-science-that_b_6130228.html. Published 11.11.14; retrieved 04.01.15.

Kermode, M. *Interstellar review – if it's spectacle you want, this delivers*. http://www.theguardian.com/film/2014/nov/09/interstellar-review-sci-fi-spectacle-delivers. Published 11.09.14; retrieved 04.01.15.

Stein, B. *Does Interstellar Get the Science right?* http://www.csmonitor.com/Science/2014/1106/Does-Interstellar-get-the-science-right. Publish 11.06.14; retrieved 04.01.15.

No Author. Interstellar Review. http://www.35bricksent.com/archives/interstellar/2/27/2015 Published 02.27.15; retrieved 04.01.15.