

The New English Class

The New English Class:

A GUIDE TO THE WRITING GAME LINGUA GALAXIAE

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About the Author

ryan Steele served meritoriously in the US Marine Corps followed by eight years trading for commercial banking clients on and off the floor of the Chicago Mercantile Exchange. Steele then left the securities industry and attended UC, Irvine, to study English under such luminaries as Jacques Derrida. Afterwards, Steele attended graduate school while he taught inner city high school English in Los Angeles. After five years of teaching, Steele moved to the *LA Weekly* where he exposed administrative dysfunction within the Los Angeles school district. As a result of his work for the *Weekly*, Steele was hired by the California Legislature where, armed with subpoena power, he investigated public-school issues statewide, held public hearings, and issued legislative reports – five of which are held by the US Library of Congress. Steele’s many publishing credits include *Road to Belmont*, in which he documents the causal relationship between adult administration and student success.

Foreword

This book is not an attempt to replicate the writing game, *Lingua Galaxiae*, which teaches process through practice. So, keep in mind while reading that the central value of the Game comes from the guided practice of process, the daily writing and critiquing, not from the kind of general understanding this book provides.

What this book does attempt to do is to provide theoretical background for each of the Game's 88-steps. If you are looking for a better understanding of the Game than is provided here, or if you believe some aspect of the book or Game is deficient, then academically assert yourself and play the Game. *Lingua Galaxiae* is not a thing; it is a system for managing change.

A video tour of the Game, *Lingua Galaxiae*, is available for viewing here: <http://linguagalaxiae.com/tour.html>. Viewing this video is essential for understanding this book. Please view this video now or when it is referenced later in Chapter 1.

CHAPTER 1

Learning and Gaming

Language is the only instrument of science,
and words are but the signs of ideas.
SAMUEL JOHNSON,
PREFACE TO *ENGLISH DICTIONARY*

High-school English is significantly deficient on two fronts: we are failing to teach students the nature of language while simultaneously failing to teach epistemology, that is, how we know what we know. A solution to these deficiencies is *Lingua Galaxiae*, an intensive online writing game that studies language as a system in the context of change. Each player has a personal writing coach who provides critiques of the player's daily writing assignments and final portfolio and ensures that it is ready for college applications.

Since the advent of modernism, great strides have been made in the areas of language and knowledge. Unfortunately, few of these advancements have made their way into US high-school classrooms. Instead, we have four years of language arts when what we need is a balance of art and science.

The deficiencies in high-school English are glaring when compared to high-school science. There was an explosion of new ideas at the beginning of the twentieth century so that virtually every academic discipline underwent a major transformation, and the science of physics was no exception. A review of high-school physics standards demonstrates the legacy of these early twentieth-century transformations. Although there is no agreed-upon national-science standard as of yet, the following people and ideas appear either directly or indirectly in secondary-science curricula throughout the nation:

- **Max Planck** (1858–1947) is the father of quantum theory and the author of Planck’s constant.
- **Erwin Schrödinger** (1887–1961) developed a number of insights into the field of quantum theory, which formed the basis of wave mechanics, including his Schrödinger equation and his famous thought experiment, Schrödinger’s cat.
- **Louis de Broglie** (1892–1987) also made significant contributions to the world of quantum physics by demonstrating that not only light but all matter functions as either a wave or a particle.
- **Werner Heisenberg** (1901–1976) was another important contributor to the world of quantum physics and is best known for his uncertainty principle.

Although there was a similar explosion of new ideas pertaining to language around the beginning of the twentieth century, the English Common Core makes no mention of these people, their ideas, or any of the academic developments since then—as if the twentieth century never happened. Putting aside the Common Core’s failure to mention the Greeks, Thomas Aquinas, or John Locke in the context of language, the Common Core makes no mention of those who helped shape the modern era of language theory and epistemology, such as the following:

- Friedrich Nietzsche
- Ferdinand de Saussure
- Roman Jakobson
- Sigmund Freud
- Karl Popper
- Roland Barthes
- Jacques Derrida

There is not a single mention of any of their contributions to the modern understanding of language anywhere in the Common Core. It is not hyperbole to conclude that today’s Common Core English standards would feel as much at home in a classroom 150-years ago as they do today. The end result is a population made less aware about the very tool necessary for thinking: language.

Any claim that language theory is too complicated or controversial for the high-school classroom is utter nonsense. I challenge anyone to identify any portion of present-day language theory that comes even close to the intellectual demands and controversy generated by the inexplicable but observable reality of quantum mechanics where an atom can be observed in either of 2 contradictory situations (Rosenblum).

A great deal can be said as to why high-school science has kept up with the advancements in research while high-school English has not. However, that is not the point of this book or the Game, *Lingua Galaxiae*. Rather, this approach to language study is concerned with taking stock of where we are now and moving forward by providing an understanding of language and epistemology that is accessible to the average sixteen-year-old.

The Game and Language Theory

Why is teaching language theory so important? Because it is through the discipline of language theory that language can be discussed successfully as a whole system of interacting parts. The *wholeness* of language as a system, the listing of the many parts of language, is supplied by all the accomplishments of those theorists, beginning with the ancient Greeks, who helped develop what is today a complex understanding of language (chapter 8).

Beyond the merely rational, to understand language is to free the mind to wonder. Consider the impact of Albert Einstein's theory of general relativity not just on physics and the other sciences, but also on the larger public imagination. While Einstein was challenging Newton's laws, literature and poetry were being revolutionized respectively by James Joyce and T.S. Eliot. At the same time, Pablo Picasso was busy changing the nature of line and perspective while Henri Matisse was changing the way we think about color. In music, tonality was forever being changed by Igor Stravinsky and Arnold Schoenberg.

The world of wonderment brought on by the likes of Einstein, Planck, and Heisenberg provided physics with thought experiments that are still used today to push the envelope of physics by suggesting further areas of research. If wonderment fosters a greater understanding of physics, then why can't wonderment do the same for language? By failing to teach the nature of language

in high school, we are foregoing all of the unknown advances that could come from a better understanding of the very tool we use to think and communicate.

Then there is the practical side of things. Teaching the nature of language is also important because it enhances problem-solving skills. As will be discussed in chapter 4, the first step of analyzing a system is to discover all its parts; this also happens to be the first step of problem solving: understanding the context of a problem by discovering all of the influences relating to some dysfunctional outcome.

Additionally, teaching the nature of language protects the individual and the group from those who covertly manipulate language for profit and power. The discussion of systems theory in chapter 5 explains why the manipulation of language undermines the ability of human systems to achieve purposefully set goals, and the discussion of propaganda in chapter 10 explains how this undermining of language is accomplished.

The political ramifications of teaching language as a system can be found in the contrast between Plato's concern for "Who should rule?" and Karl Popper's question of "How do we arrange our institutions to prevent rulers (whether individuals or majorities) from doing too much damage?" While Plato is concerned with the politics of who is elected, Popper is concerned about the corrupting influence of human nature regardless of who is elected.

Learning about the nature of language in the context of systems theory provides more information along with the tools for managing this increased volume of information, which results in increased overall awareness—not to mention better grades and a greater sense of self.

The Game and Systems Theory

A common theme throughout the modern era was the replacement of the simple with the complex. In every example of modern thinkers, the respective disciplines were expanded or created to be understood, not as a grouping of individual and autonomous parts but as systems of interacting parts. The modern era is full of such examples, including the parallel development of atomic and language theories.

At the beginning of the twentieth century, the smallest unit of matter was

the individual atom; likewise, the smallest unit of language was the individual word. Both disciplines underwent a fundamental change as atoms became understood not as autonomous individual *things* but as systems of interacting parts. In the same way, modernism ushered in an era in which words themselves were no longer considered individual things but were now understood as systems of interacting parts (chapter 8).

In both linguistics and physics, the classical notion of *difference* gave way to the more sophisticated interactions of systems. Chapter 8 explains the role *difference* plays in meaning and the way in which, upon closer inspection, differences of meaning are interconnected through a *relationship* of opposing parts that make up a whole.

If A cannot exist without B, when A and B represent a relationship between two sides of the same coin, then how do you separate A from B for the purpose of defining their difference?

The same concept is alive in physics, where the parts of an atom are understood not to be autonomous but to exist as the result of relationships. A similar analogy can be found in the elements of time, space, and matter, all existing as a relationship of parts. Writing in 2015 for *Scientific American Magazine's* issue celebrating one hundred years of general relativity, Walter Isaacson explains,

With his special theory of relativity, Einstein had shown that space and time did not have independent existence but instead formed a fabric of space-time. Now, with his general version of the theory, this fabric of space-time became not merely a container for objects and events. Instead, it had its own dynamics that were determined by, and in turn helped to determine, the motion of objects within it.

The Game concludes by drawing on the theme of the relationship between differences by juxtaposing propaganda with the nature of language. Rather than a distinct set of ideas, propaganda is understood as the mirror opposite of the rules governing language as defined by the Game. From the perspective of propaganda, the game's Rules of Discovery and Logic are not defining

parameters that limit and guide language use as it relates to the physical world but are a proactive part of the propagandist's tool box for manipulating language in service to the agendas of those who pay.

Similar expansions of understanding during the modern era that applied a systems approach include the following:

- Sigmund Freud expanding the understanding of the human psyche to include a system of three interacting parts: the Id, the Ego, and the Super Ego;
- Karl Marx, pushing back against the self-serving economic models of his day, insisted that economics be understood as a whole system that must include all of its relevant parts, including labor;
- Ferdinand de Saussure explaining how words (signs) are not isolated units but are comprised of interacting parts, the *signifier* and the *signified*, that interact like two sides of the same coin.

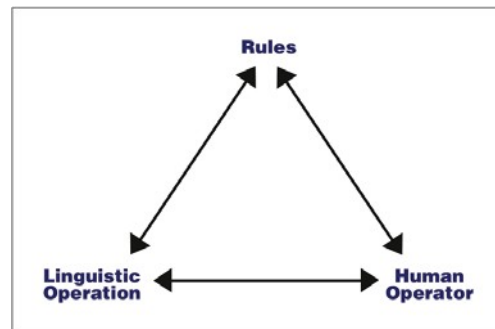
Despite the complexity of all of these systems, the most complex of all systems is the system that accounts for our internal selves. This complex system of self-knowledge is also directly tied to learning (chapter 3). As such, the Game begins with the question "Who am I?" Incorporating quotes from virtually every major thinker throughout world history, the Game requires each player to ask "Who am I?" throughout the game. Furthermore, the Game makes this question an integral part of the Game's final portfolio assessment.

The application of systems theory to language is particularly significant for the Game because of the role played by the individual. The Game's primary structure of language is the interplay among three forces:

- Linguistic *Operation* of language
- Human nature of the *Operator* of language
- *Rules* mitigating the relationship between the *Operator* and *Operation* of language

The Game presents these three competing ideas as its primary learning structure, which is represented by a triangle of competing forces where each element stands in a collective relationship of tension and balance with the

other two. Human nature is an essential part of language because language does not meaningfully exist outside of its use. As such, it is not possible to separate the human mind from its use of language.



Language as a system of interacting parts

As will be discussed in chapter 5, systems theory demands attributes that keep the human *Operator* in check. These attributes include the following:

- Wholeness
- Accountability
- Transparency
- Integrity
- Balance
- Sustainability

It is through the demands of systems theory that human tendencies to cut corners in the pursuit of self-interest is kept at bay in service to the system's purposeful goals. Systems theory does not make these demands because of some moral code but because of self-interest built from heightened awareness of the greater whole. By incorporating these ideas into the Game, the player learns through the practice of *process* rather than the memorization of *content*.

The modern era ushered in an awakening to the idea that understanding was not a product of *difference* but a product of a far more complex set of relationships forever in a state of change. It is systems theory that provides us with the tools to comprehend and manage this new world of constantly changing

and complex relationships. Through the work of famed Austrian biologist Ludwig von Bertalanffy and his book *General System Theory*, the Game focuses on the introduction and formal development of systems theory in the twentieth century to build its framework (chapter 5). But before this can happen, the Game introduces an idea that is as relevant today as it was when the ancient Greeks began struggling with it two and a half millennia ago: change.

The Game and Change

Chapter 2 discusses how the Game addresses change, but, for now, it is important to understand how the Game itself practices what it preaches. How do you teach and test for an idea that is defined as a moving target? But, more fundamentally, how do you teach change when the answer itself might conceivably change between now and Friday's test? The answer is to teach *process* over *content* so that the lesson is not the memorization of individual academic units but the practice of processes. This notion of content versus process is essential to understanding the Game in that *process* is the management of *content*. *Lingua Galaxiae* teaches elements of content, but only secondarily, as the primary focus is on process.

Augmenting this structure of championing process over content is the characterization of all the Game's ideas as "tools." These tools are like those found around the house, in that they require the following:

- Training
- Skill building
- Maintenance
- Replacement

In this way, the ideas, or tools, of the Game accommodate change. The first tool of the Game is the question "Who am I?" This question is a perfect example of a tool because of the way it represents *process* over *content*. You have to be honest with teens and acknowledge that the question of self-knowledge can never be fully known, no matter how much effort an individual puts into the investigation. Therefore, the question of self-knowledge is not a *thing*, or an

element of *content*, but a *process*. And because change is constant, the process of asking the question, the tool itself, will evolve as the individual evolves.

The notion of *wholeness* provides another good example of a Game tool. Systems theory requires that practitioners seek to account for all elements of a system so as to understand the whole system. But, of course, it is not possible to know whether all parts have been accounted for because that would require omnipotent knowledge of all places and times. Therefore, the tool of *wholeness* is not a thing but a process for making a best effort at accounting for all the parts of a system.

The Game's rules and definitions are themselves tools, as is evidenced by the first rule: "The physical world is in a constant state of change." This emphatic statement is intended to challenge the player. All a player needs in order to challenge this statement is to find a single contradictory example. As players rack their brains, trying to think of a way to prove this statement wrong, they are learning process. When players think an example justifying change has been found and attempt to apply the example, they are learning process. When players think they have succeeded but are then shown the error of their analysis, they are learning process.

**If you have not yet watched the video tour of the game,
please do so now: <http://linguagalaxiae.com/tour.html>**

Further complicating the discussion of change is the question of how to teach process when even process itself is susceptible to change. The Game satisfies this quandary not only by accommodating change, but also by proactively encouraging players to change the Game for points. Players use the Game's own rules and definitions, along with outside evidence, to demonstrate examples of inconsistency within the Game. Putting students in a position of academic authority is potentially problematic as lessons could become untethered from their academic foundations and drift off into meaninglessness. The answer is facilitated by the Game *via* the requirement that any effort to gain points through a game change (Change Order) be accomplished through a demanding academic process. To attempt changing the Game, a player must present a

Change Order to the Gamemaster that satisfies the following criteria within a set minimum and maximum word count:

1. **Identify.** Where should the game be changed?
2. **Solve.** How should the game be changed?
3. **Argue.** Why should the game be changed?
4. **Support.** Provide evidence to support your change.
5. **Conclude.** Advocate for your Change Order in a single sentence of fewer than twenty-one words or, for extra points, compose your conclusion as a haiku.

Change Orders are submitted to the Gamemaster, who either rejects it or initiates a back and forth exchange of edits until the Change Order is accepted. If it is accepted, the player receives points. If the Change Order involves either a glossary definition or code rule, the respective definition or rule is changed and the content of the Change Order is permanently recorded as historical precedent through a pop-up icon attached to the respective definition or rule. In this way, not only can the game be changed by a player, the history of any change is recorded and made available, just as precedent functions within the law.

This back and forth exchange of text between player and Gamemaster effectively provides players with a private writing coach throughout the Game's four-month cycle. Due to the fact that the Gamemaster is required to edit player essays within twenty-four hours of submission, there is a cap on the number of players each Gamemaster can accommodate. For each essay, the Gamemaster provides comments using colored text within the player's text, as well as comments in a separate field, all of which stays with the player's respective essay throughout the Game.

This is how to teach writing: practice, practice, and more practice with a tutor looking over the student's shoulder and providing advice. *Lingua Galaxiae* provides each player with a level of writing instruction that is even better than a private tutor because the roles of writing coach and Step production are kept separate; this allows for a team of educators to focus on different specific tasks. The Game combines the efforts of these two elements to create a product that would be impossible for a single person to produce. In short, *Lingua Galaxiae*

represents a model of education that could only be replicated by an institution through significant increases in the number of and assignment of teaching staff.

In each player's private domain is the My Points page that breaks down the player's points into five categories:

- Change Orders (accepted)
- List Change (add/delete from a list, add/delete a list)
- Player Recruitment (player's friend/associate completes sign up)
- Step Completion (Step essay is returned from Gamemaster, revised, and saved)
- General (miscellaneous content, including ways to earn extra points listed on the Player Commons page)

The Game proactively manages exchanges between the player and Gamemaster internally behind the scenes. Whether it involves a submission of a Change Order or a daily Step Essay, the item's pop-up window provides the player with a linear progress chart showing the status of each submission from conception to acceptance. The Game is "smart" in the sense that a player's submission may not move forward until the requirements of a specific step have been satisfied. In this way, players are prevented from building on past mistakes and having to redo previous work, which undermines student motivation.

The encouragement of players to change the Game is an intentional act of tapping into youthful angst. There is no greater motivator of teen learning than explaining how adult ideas are possibly wrong, incomplete, or hypocritical. As teens are transitioning from a life where they have been told what is true, many, by age sixteen, are starting to notice examples of adult hypocrisy. The Game harnesses this burgeoning awareness as a means of stimulating intellectual curiosity and action.

The Game and Science Fiction

Why is the Game named *Lingua Galaxiae*, which is Latin for language of the galaxy? The Game uses a science-fiction backstory that revolves around the future discovery of time travel here on Earth. We are in the twenty-first century, but we still teach language as if Isaac Newton remained the dominant force for

understanding the physical world. How can we expect to discover time travel using an archaic understanding of language, which is the primary tool of discovery?

As an antidote, the Game was created and recently seeded on Earth by a group of time travelers with a name that loosely translates as the Coalition of Time Traveling Societies (CUTTS). As the story goes, a newbie time-traveling civilization disrupted one of CUTTS' annual dinners, and the whole event was ruined; it appears the group arrived late, mined precious metals during the opening ceremony, and then ran off with the emperor's daughter to parts unknown. In the wake of this dreadful affair, CUTTS organized the game *Lingua Galaxiae* for civilizations about to discover time travel so as to prevent future difficulties. More detail about CUTTS can be found at [Facebook.com/CUTTS2040](https://www.facebook.com/CUTTS2040).

Anything with UFOs is great for the classroom. As with most controversies over religion or politics, teachers risk the ire of parents and hurt feelings of students who might be ridiculed for expressing their beliefs. The exception is UFOs, which can generate broad disagreement among students without any blowback; and, besides, UFOs are fun. A great book for reading aloud in the classroom is John Mack's *Abductions*. Mack was a Harvard professor, psychiatrist, and Pulitzer Prize recipient who was disowned by academia for his research on alien abductees.

There is so much information about UFOs available to students. While much of it is junk, a great deal of it is tantalizingly difficult to ignore. For instance, there is former NASA astronaut and Princeton physics professor Brian O'Leary, who has made numerous statements—many available on YouTube—concerning his belief in alien encounters on Earth. Speaking on video shortly before his death in 2011, O'Leary said, "There is abundant evidence that we are being contacted, that civilizations have been visiting us for a very long time". All of this is excellent fodder for discussing the nature of evidence (chapter 4).

The more serious edge of the Game's science-fiction tale is the link between scientific advancement and a more sophisticated understanding of language. *Lingua Galaxiae* seeks to live up to its name by creating an understanding of language that will speed the discovery of time travel. The study of space-time is vibrant and productive for stimulating thought. Every week sees a handful

of new press reports of hard-science news concerning advancements in the understanding of time and space. These reports draw people's attention to scientific journals that usually elude the general public. Yes, the science-fiction story of *Lingua Galaxiae* is all made up, but the context of the story, current advancements in science, makes for a fun and thrilling tale.

The Game's Player Commons page features a countdown clock that displays the time between now and the discovery of time travel here on Earth, in about twenty-five years, so that a player today could easily be on the future science team that discovers how to conquer time and space. Another section of the Player Commons page, *Time Travel in the News*, includes hyperlinks to news stories discussing the latest in time-travel-related discoveries. The reason the Game incorporates a science-fiction component is because learning should be fun. Furthermore, identifying an otherwise-unknown third party, CUTTS, as the game's originator eliminates the distraction of teacher adulation; after all, I'm nobody, just the hired help.

The Game and Education Theory

The notion of *wholeness* as described by systems theory goes to the heart of what is known about learning theory: namely, the building of context. Learning is directly tied to context because it is through context that the human brain creates memory — the greater the context, the greater the quality and quantity of the learning experience.

To put it simply, a well-crafted lesson begins with what the student already understands, point A, and then moves in small digestible steps to the lesson objective, point B, without ever letting the student feel adrift. By formally incorporating the tool of wholeness into the classroom, the instructor strives to maximize context.

Another reason that context is tied to learning is because humans learn in different ways. Context provides greater complexity and, thereby, more ways for accessing the same set of information. The value of studying a system is not to gain a greater understanding of the system's parts but to learn from the relationships, or interactions, between the parts. It is through the study of

relationships that opens ideas up to the various modes of learning. In this way, learning theory and systems theory share important characteristics.

Additional structures found in the Game read like a checklist of education theory stretching back over the last fifty years. Jean Piaget (1896–1980), the father of developmental psychology, had a significant impact on learning theory, specifically with regard to creating learner-centered models. Kenneth Henson, writing in his essay “Foundations for Learner-centered Education: A Knowledge Base,” lays out a number of practices based on Piaget’s research that include the following:

- Providing experience-based educational opportunities,
- Contemplating the learners’ individual qualities and attitudes during curriculum planning,
- Allowing learners’ insights to alter the curriculum,
- Nourishing and supporting learners’ curiosity, and
- Involving learners’ emotions and creating a safe learning environment.

Providing Experience-Based Educational Opportunities: The Game equates *experience* with *discovery* in that players discover, on their own, ways the Game can be changed. In this way, players gain real-life experience of using the world of ideas to effect meaningful change.

Contemplating the Learners’ Individual Qualities and Attitudes: The Game is designed to reach a broad spectrum of players, from mainstreamed sixteen-year-olds to undergraduates, law students, and beyond. The design is based on one simple idea per daily Step, each of which is accessible to all. From this simple and accessible point, complexity is added. The energy of the videos is light and fun, and players are left to put as much effort into their daily writing assignments as they choose. I’ve taught advanced placement students, students recently emigrated from poor countries, Native Americans, and older teens just out of the juvenile justice system. This spectrum of experience has given me the insight to create education models that are broadly accessible.

Allowing Learners’ Insights to Alter the Curriculum: The Game’s use of Change Orders to facilitate player challenges and the possibility of making changes to the game directly allow players to alter the curriculum in a very

real way. Beyond passively allowing learners' insights to alter the curriculum, the Game proactively encourages players to alter the curriculum by awarding a successful Change Order the highest number of points available in the Game.

Nourishing and Supporting Learners' Curiosity: Each daily Game Step includes some current event as a way of demonstrating the Step's lesson. The background of these events is supported by numerous documents and links in the player's My Game Room. If players choose, they can spend considerable time reading the outline, PowerPoint, news links, and PDF articles related to a specific Step. Since each Step has its own web page, players have access to all these supporting documents throughout the Game. In addition, each Step page provides players with a communal chat wall, where they can discuss related Step issues with other players who are also working on a specific Step—all in the service of curiosity.

Involving Learners' Emotions and Creating a Safe Learning Environment: A very specific effort has been made to make this Game fun. Specifically, the Game seeks to foster a low-stress environment through the self-deprecating character who hosts the daily Step videos. In addition, within this learning model, there is little room for academic or social disappointment. The Game uses a system of work-flow management to prevent the player from building on errors. As long as the player has enthusiasm, everything in the world of letters can be fixed through the editing process. All chat walls are monitored, and there is zero tolerance for unsocial behavior.

Piaget himself said it best when he commented, "Education, for most people, means trying to lead the child to resemble the typical adult of his society... but for me and no one else, education means making creators... You have to make inventors, innovators—not conformists" (Bringuier).

Piaget was also focused on the relationship between learning and morals and believed in two basic principles related to moral education: children develop moral ideas in stages, and children create their own conceptions of the world. Piaget argued that morality is best developed through peer interaction and not through learning from a top-down external authority (Piaget). The Game specifically models this approach to morality through its rules (Codes), which are based on observing the physical world and designed to mitigate the impact of

human nature on language. These rules must be justified by the Game itself and are open to player challenge.

Another major player in education theory is B. F. Skinner (1904–1990), who was a Harvard-based psychologist, inventor, and philosopher. Because he believed that human behavior can be affected by small consequences, something as simple as “the opportunity to move forward after completing one stage of an activity” can be an effective reinforcer. Therefore, Skinner was convinced that, to learn, a student must engage in behavior and not just passively receive information.

The underlying structure of the Game specifically addresses Skinner’s concerns by allowing players to actively interact with ideas while preventing them from advancing with a faulty product. The Game is comprised of eighty-eight stages, or Steps, where progress from one Step to the next is prevented until the player has submitted an essay to the Gamemaster that satisfies set parameters. Players can go back to completed Steps to reference provided materials and chat discussions but are prevented from advancing out of order.

The Game also mirrors the basic tenets of holistic education:

- Connections
- Flexible pacing
- Transdisciplinary inquiry
- Metalearning
- Community

Connections: The Game is about learning a process for understanding the infinitely complex world of connections. Once two parts of a system connect or interact, a new, third system part, the outcome, is created, in an often-unpredictable process. In this way, systems theory can be described as the study of multiple layers of interconnections that can quickly develop in a nonlinear manner.

Flexible Pacing: The daily video accompanying each Game Step is designed to be created fresh each day so as to capitalize on the “going-on-now” capacity of current events related to energy, war and the environment. Therefore, the best way to play the game is to complete each Step on the day it becomes

available. If players fall behind in the Game, they can either stay behind or work their way back to become Step current. The final portfolio project is completed at the player's space. As such, the Game provides players with flexible pacing.

Transdisciplinary Inquiry: The Game incorporates the numerous disciplines that influence language, including the following:

- Writing
- Linguistics
- Philosophy
- Ecology
- Education
- Physics
- History
- Politics
- Psychology
- Economics

Metalearning: Writing in the *British Journal of Educational Psychology* in 1985, John Biggs defined metalearning as a state of "being aware of and taking control of one's own learning". The Game's use of Change Orders to facilitate player challenges to the game directly satisfies Biggs' call for students to experience academic control. Beyond passively facilitating this metalearning experience, the Game proactively encourages players to effect change by awarding points for their efforts.

Community: A common problem with digital learning is the lack of community created by the separation between students and between class and the teacher. The Game addresses this concern by facilitating community through three different forms of chat walls with various functions situated at different places in the game. There are two general areas where a player goes during play: Player Commons and My Game Room. The latter is oriented toward the individual player, whereas the former is a common space open to all players. The Commons hosts a chat wall where any player at any time can begin or enter a conversation on any topic. My Game Room is fundamentally different, as players can use it to travel through all their completed Steps. Within each

Step, a specific chat wall is internally maintained throughout the Game. Once a player has completed a specific Step, the chat wall for that Step will remain, as will all the other elements of the Step for future reference. A third chat wall exists in a space where players can communicate privately with each other and the Gamemaster. In this way, the Game builds community regardless of where the players are physically located.

The Game and Practice

The Game creates a strict learning environment in the same way that a sports coach creates training exercises within parameters narrower than those found on the playing field. Specifically, the Game requires that all arguments be based on evidence from the physical world derived through the five senses. In this way, the Game forces players to develop specific skill sets. Through the Rules of Discovery (chapter 4), players are introduced to the distinction between the physical world of the five senses and the metaphysical world born of the imagination untethered from the constraints of physical evidence. It is in this context that metaphysics is defined and placed outside of the game without prejudice. Metaphysics isn't "wrong", it just exists outside the parameters of the Game.

Clearly I am not using the term metaphysics in a way that specifically tracks Aristotle's work by the same name. Here, I am using the term in specific juxtaposition with physics so as to create a simplistic distinction between thought based solely on physical evidence, *physics*, as opposed to ideas that begin with physical experience but are otherwise born of the of the imagination, *metaphysics*. Such a distinction is inherently simplistic and artificial, and used for the express purpose of training game players to intellectually perform within a very narrow range of thought.

Think about the football coach who trains players using old rubber tires laid out flat in a pattern. Players are required to run over the tires with knees high and with the balls of their feet hitting the center of each tire as a form of training to improve power, agility and speed. Obviously, there are no tires on the actual field of play. In the same way, *Lingua Galaxiae* trains players using age appropriate thought structures to promote strength, speed and agility of thought. To use the physics vs. metaphysics duality as an example, there is

nothing about the way this game defines metaphysics that prevents a sixteen year old playing the game today from gaining a more nuanced understanding of Aristotelian metaphysics later in college.

Each of the Game's eighty-eight Steps is accompanied by a video generated daily so as to accommodate the use of current events. Each Step requires players to complete an essay of more than twenty-five words but fewer than 651 (the average length of a newspaper op-ed). Before a player can advance to the next Step, the essay from the previous Step must be submitted to the Game-master, who reads each essay and responds with a personalized critique within twenty-four hours of player submission. In this way, the Game turns a major dynamic of digital learning, the capture of education dollars coupled with the elimination of expensive teachers, on its head so that the Game provides each player with daily individualized attention from a trained educator.

On the backside of the Game, the Gamemaster receives each essay and has the ability to make comments back to the player in a distinct field. The Gamemaster can also insert comments directly into the player's text using colored text. All of these comments become a permanent part of the player's database that will be used in composing the final portfolio project. The effective result is that the Game provides each player with a private writing coach.

The Game culminates with a work-product portfolio that becomes the means of assessment. Within a player's personalized work space is a page that holds all player work product next to a web-page builder. The player selects text from his or her Steps and Change Orders and uses them to create a final multimedia portfolio that includes the question "Who am I?" Once completed, the player publishes his or her portfolio, which contains four navigation tabs and a URL that ends with the player's name. This web address can then be used in college applications.

The Game introduces the parts of language in the following order:

The Parts of Language

- Chapter 2: Change
- Chapter 3: Self-knowledge
- Chapter 4: Rules of discovery

- Chapter 5: Systems theory
- Chapter 6: Human nature
- Chapter 7: Rules of language
- Chapter 8: Language theory
- Chapter 9: Logic
- Chapter 10: Propaganda

These parts of language are not an attempt to provide a final answer as to what constitutes language, for it is possible that such a question can never be answered — that the answer is itself a process in the context of change, which is further complicated by human nature. My hope is that this effort will motivate others to build competing models. Observe the following and your efforts will be fruitful:

- Thou shalt not discriminate against the inclusion of a system element based on any form of ideology.
- Every act must be in service to the rules and goals of the system.
- Always honor change.

Conclusion

Nothing about the ideas presented here is original. The key point is that teaching sixteen-year-olds about the nature of language and systems theory can be a straight-forward process, no more difficult to teach than general relativity or even Algebra II. Teaching the nature of language only seems difficult because academia has made no effort to make these ideas accessible to the general public.

The cause of academia's negligence, why we do not teach the workings of language, is unclear. One possible explanation is that the increase in overall awareness provided by studying language is inversely connected with the success of advertising and its sister industries of communications and public relations. Entrenched or centralized powers dislike the teaching of systems theory because it exposes who or what they are in the larger context of society and pressures them to decentralize, not for ideological reasons but for the sake of a more successful economy and society.

Chapter Bibliography

- Bringuier, J.-C. 1980. *Conversations with Jean Piaget* (B.M. Gulati, Trans.). Chicago: University of Chicago Press. 132
- Biggs, John B. 1985. "The Role of Meta-Learning in Study Process." *British Journal of Educational Psychology* 55: 185–212.
- Henson, Kenneth. 2003. "Foundations for Learner-Centered Education: A Knowledge Base." *Education* 124 (1): 5–16.
- Isaacson, Walter. 2015. "How Einstein Discovered General Relativity amid War, Divorce and Rivalry." *Scientific American*. September 2015: 44. <https://www.scientificamerican.com/article/how-einstein-discovered-general-relativity-amid-war-divorce-and-rivalry/>
- O'Leary, Brian. 2012. <https://www.youtube.com/watch?v=yO0T05kQkbs&feature=youtu.be>
- Piaget, Jean. 1932. *The Moral Judgment of the Child*. Glenco, Illinois, The Free Press. 113
- Rosenblum, Bruce, and Fred Kuttner. 2011. *Quantum Enigma: Physics Encounters Consciousness*. Oxford: Oxford University Press. 87
- Skinner, Burrhus F., and James G. Holland. 1961. *The Analysis of Behavior: A Program for Self-Instruction*. New York: McGraw-Hill. 380