Flatland Study Guide

Flatland by Edwin Abbott Abbott

BOOKRAGS

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Plot Summary

Set in the world of Flatland, A. Square is a plane form living in a two dimensional reality. His place in the social hierarchy is in the middle class, and he describes effectively the other classes within his world. The dangerous Women, or single lines, the dull yet powerful Isosceles Triangles, or soldiers and laymen, the Equilateral Triangle, or tradesmen, the Nobility class, or Polygon class, and the Circles, or Priests, all combine to make a social order within Flatland. Their existence is complete with class strife, discrimination, alteration, regulation, wars, and power struggles, just as any other society in existence.

When A. Square dreams of another world, Lineland, he is struck by a need to explain to the inhabitants the error of their one dimensional viewpoints. Although A. Square tries repeatedly to explain the second dimension to the inhabitants, the King of Lineland is not convinced. A. Square, believing he is superior to the Lineland inhabitants, eventually loses his temper, and is threatened by the Lineland subjects.

Waking from his dream, A. Square is soon visited by a stranger claiming to be of a third dimension. Just as he felt the need to teach Lineland individuals the error of their views, the stranger, Sphere, attempts the same with A. Square. His efforts through analogy, description, explanation, and action all fail, however, as A. Square believes his world to be superior to all others. However, when A. Square threatens Sphere, he is thrust into the third dimension to see for himself the reality of a solid existence.

A. Square learns that each millennium, a member of the land of Spaceland comes to Flatland to explain the third dimension. He and the Sphere listen, however, as the Circles of Flatland plan to imprison or kill anyone during this millennium change who claims a visit from such a creature. When Sphere enters the hall of Circles, he is threatened by death, but disappears again into the third dimension. Upon returning to Spaceland, A. Square tries in vain to force Sphere to show him other dimensions, but Sphere, not knowing of these dimensions, becomes angry and A. Square is sent back to Flatland to teach others of the third dimension.

On his return, A. Square has a vision of Pointland, the land of no dimensions. In the vision, the single existence in Pointland is contemplating his own perfection, and Sphere explains that to the Point, there are no other existences. As the only creature, it believes itself to be the center of all things, and the definition of perfection. When A. Square attempts to convince it otherwise, the creature hears only its own voice, since it remains unaware of any other being.

On his return to Flatland, A. Square attempts to convince his countrymen of the existence of the third dimension. As foretold, however, he is imprisoned for his views, and remains behind bars for the rest of his days. A. Square hopes his writings will inspire other individuals in a later time to pursue other dimensions, as he now realizes his knowledge is lost on his hierarchical society.

Introduction

Introduction Summary

The novel "Flatland" is an imaginative, delightful novel about the inhabitants of a two dimensional world. A. Square, the narrator of the tale, journeys through lands of no dimension, one dimension, and three dimensions, and learns not only the differences in terms of geometry and mathematics, but also of the social order and the class hierarchy. Through his journey, A. Square becomes convinced of other, yet undiscovered dimensions, but when he attempts to teach his countrymen of such concepts, he is imprisoned. First published in 1884, "Flatland" still holds a charming place in literature, both as an instructional guide to dimensional spaces as well as a barbed, harsh, satiric narrative of the social structure of Victorian society.

Banesh Hoffmann discusses the background of the novel by focusing first on the period in which *Flatland* was written. Hoffmann notes that while fourth dimensions and the space-time concept are household words in the modern era, the novel was written in 1884, when Einstein had not even propounded these theories. Hoffmann also notes that while mathematicians and physicists during the late 1800 were considering the concepts of dimensions and abstract theories of relativity, the public did not even realize such issues existed. However, as Hoffmann notes, the author of *Flatland*, Edwin Abbott, was a headmaster whose field was classic literature. While Hoffman notes the novel fails to identify time as a fourth dimension, he also points out that time, even within the modern four-dimensional world, does hold a key place in the theory of dimensions, as it does in *Flatland.* Hoffman states that the modern age only has one more dimension than that of Abbott's lands, and that in reading of the three dimensional characters in Abbott's two dimensional world, one can look at the world in an new way. Hoffmann closes the introduction by noting the novel may be over 100 years old, but in Abbott's defeat of time, it still holds a sense of enchantment for modern readers.

Introduction Analysis

In his introduction, Hoffmann points out a number of key concepts needed to examine *Flatland* thoroughly. His observations about the accuracy of the novel, even prior to Einstein and relativity, show the novel to be an astounding and prophetic work in dimensional theory, as it was written prior to those concepts becoming well known factual information. Additionally, Hoffman's notes on the enchanting character of the novel are well deserved. By reading *Flatland*, one is able to view the world of three dimensional space and time in an entirely new light. Time, as Hoffman points out, is as inescapable to us as to those inhabiting Flatland, and this concept, regardless of the accuracy of the portrayal of the dimension, holds the key to all dimensional theory.

Preface to the Second and Revised Edition, 1884

Preface to the Second and Revised Edition, 1884 Summary

The editor is attempting to defend some aspects of Flatland. Referring to the square in the novel as his friend who is now old and senile, the author is acting as his interpreter, and is discussing common criticisms of the novel. First, the author dictates A. Square's defense against the criticism that the inhabitants of Flatland must understand the dimension of height, since they can conceive the thickness of their neighbors. A. Square defends this by noting height in Flatland is immeasurable and implies direction, of which Flatland inhabitants cannot conceive. Thus, while inhabitants understand another dimension, they see it as brightness rather than height, since without light, the line they can see disappears.

The author then mentions the criticism of A. Square's apparent hatred of Women in the novel, as his descriptions of them as straight lines and the lowest order of class appear to imply this. However, the author notes, A.Square is merely adhering to popular Historic belief. Throughout history, he notes, Women have been discussed in classic literature as seemingly unimportant, and while A. Square may not agree with such a concept, he does acknowledge the opinion exists in Flatland as well as in Spaceland.

Finally, the author defends A. Square's attack on the Circles of Flatland, or the Priests. A. Square, according to the author, notes the power over the population Priests have consistently held, and that the societal view of Flatland presented in the novel merely shows the true nature of humanity, that "Revolutions cannot always be suppressed by slaughter, and that Nature, in sentencing the Circles to infecundity, has condemned them to ultimate failure."

The author closes by noting A. Square's wish that readers of Flatland understand that not all aspects of the country are meant to correspond to Spaceland. However, he also notes his hope that, taken as a whole, the novel is enlightening as well as amusing, and that "moderate and modest" minded inhabitants of Spaceland are able to discern between those concepts of Flatland that cannot correspond to reality, and those areas that are precise in their reflection of modern reality.

Preface to the Second and Revised Edition, 1884 Analysis

This section, written by Abbott himself, appears to be his defense against contemporary critics of the novel. The novel, masking as an adventure in dimensional theory, is also

clearly a firm statement on the aristocratic and hierarchical society of the Victorian era. As such, one can assume such a novel was hailed by some, and criticized harshly by others. This preface appears to both appease critics as well as defend Abbott's right to think differently than others in his time.

His defense of the thickness concept is valid, in that his defense includes a corresponding analogy to the three dimensional world. His observations of height as a measurement unattainable in two dimensional space as well as his notes on height as an unseen byproduct of brightness to those within Flatland help readers to understand his defense. Similarly, his defense of the harsh view of Women in the novel is also understandable, in that in his era, Women were not considered productive members of the scientific world, nor have they been throughout history. Abbott's note that his wording is meant to convey these attitudes shows his intention to present a true-to-form view of the society in which he lives. Finally, his defense of the view of Priests as aristocratic is again explained in terms of his own views on society. Abbott notes the power of Priests throughout history to sway the population, and often, to curb revolution, even if by force. His view clearly implies his belief that man and nature are in constant combat, and that Priests, in their attempts to remain in power, often forget that nature is the driving force behind all dimensional and perceptional theory.

Abbott's closing statements in the preface again reveal the theme of his own societal belief system. He notes his wish that critics realize the novel is, at least in part, fictional, and that not all phrases are meant to convey a view of society. Conversely, he also notes his wish that more modern thinkers discern the situations meant to be satirical commentary on the Victorian era, and the situations meant to simply enhance the readability of the novel.

Chapter 1, Of the Nature of Flatland

Chapter 1, Of the Nature of Flatland Summary

The narrator, A. Square, opens the novel by describing his world of Flatland to those in Spaceland. He equates the world to a vast sheet of paper on which shapes move about freely, but are unable to rise above or beneath the surface of the paper, just as shadows cannot move above or beneath their surface. He mentions believing this Flatland was a universe, but has since become enlightened, and no longer believes this to be true.

A. Square explains that he and his countrymen cannot distinguish one another as specific shapes, but see only straight lines. He uses the analogy of a penny on a table to explain his point. If one views the penny from above, one can see the shape, but when on an even surface with the penny, the form becomes only a straight line. He uses the Equilateral triangle, the tradesmen class in Flatland, as another example, noting that when viewed from above, the shape is clear. When viewed on an even plane with the paper on which it is drawn, the shape becomes merely a straight line. He also references sailors in Spaceland, noting that they often see only a straight line of land when sailing, even though the land in the distance may be filled with mountains and hills. A. Square also notes that since there are no shadows in Flatland, nor any alterations of light, any changes in projection or retraction are also not discernable. A shape coming toward an inhabitant appears only to become larger, and one going away appears to become smaller. He closes by noting he will eventually discuss how the inhabitants recognize one another, but will first discuss the climate and houses of Flatland.

Chapter 1, Of the Nature of Flatland Analysis

This brief introduction to the inhabitants and the world of Flatland introduces a vast amount of information in a very short chapter. A. Square, the narrator of the novel, uses three-dimensional examples to explain his two dimensional world, making it simple for three dimensional readers to comprehend his viewpoint. Through his analogy of the penny and the triangle, the narrator ensures a base understanding of the two dimensional world from the beginning of the novel. Additionally, by adding comments on brightness, distance, and relative viewpoint, the narrator explains how such concepts as distance, height, and shape are foreign to the members of Flatland.

In addition to this obvious introduction to the theme of dimensional theory, Abbott, as A. Square, also introduces additional themes used extensively throughout the novel. His brief note that Equilateral Triangles are the tradesmen of Flatland introduces the societal aspects of the novel, and the beginnings of Abbott's discourse on the hierarchical society of the Victorian era. Further, through his discussion of Spaceland, Abbott foreshadows his eventual journey into the three dimensional world.

Chapter 2, Of the Climate and Houses in Flatland

Chapter 2, Of the Climate and Houses in Flatland Summary

A. Square begins his discussion by noting there are four points to a compass in Flatland, those of North, South, East, and West. He notes the lack of a sun limits the inhabitants' ability to discern direction, but also mentions a natural pull to the South. The rain, falling at intervals, falls from the North, furthering their ability to tell direction. Houses have roofs to the North and the floors to the South, and tree trunks in the country also serve as guides. A. Square mentions, however, that the natural pull to the South is so slight in temperate climates that even Women can walk Northward without difficulty. In less temperate climates, however, the pull to the South is strong enough in males that they are, by birth, supposed to give any lady they pass the North side.

Houses in Flatland are windowless, since light is present at all times. While the inhabitants used to question where the light came from, the effort caused many to go mad, and in response, the Legislature first taxed those who thought to discuss the topic, and then made the topic illegal to pursue. A. Square laments only he knows the answer to the question, but cannot explain the light of the third dimension to his countrymen, and is mocked as a madman.

Houses in Flatland are five-sided, with two Northern sides making a roof, East and West sides, and a floor to the South. The East side contains a door for Women, and the West contains a door for men. Square and triangular houses are outlawed, since the sharp points of their angles can hurt passerbys. Only government buildings are allowed to be triangular, since the general population should not be near these buildings.

Chapter 2, Of the Climate and Houses in Flatland Analysis

In this chapter, Abbott introduces several themes and concepts used throughout the novel and informs the reader of the nature of Flatland. His descriptions of direction and houses are particularly revealing. The pull toward the South appears to symbolize an understanding of gravity, and the rain, always falling from the North, indicates stability of position. His comments about the lack of windows and constant light remind the reader that he exists in Flatland, where such concepts as directional lighting would not apply.

In addition to the obvious geometrical and dimensional references, Abbot introduces several concepts related to the underlying theme of the story, that of the satiric view of Victorian hierarchy. Abbott refers to Women in the chapter as "delicate", and seems to

view them as sub-inhabitants, a view common among society at the time of *Flatland*'s composition. Additionally, Abbott discusses the use of taxation and laws to prohibit the inhabitants from using free thought about light direction, introducing a common theme of the novel, that of the use of authority to dictate the lives of "lower" classes. Further, Abbott notes the use of taxation and legislature again in the design of houses. Finally, Abbott's reference to his own knowledge of light direction, and his clear lament that he is unable to share his knowledge with others, foreshadows again his problems later in the novel as his knowledge comes into contact with the power structure of his society.

Chapter 3, Concerning the Inhabitants of Flatland

Chapter 3, Concerning the Inhabitants of Flatland Summary

A. Square begins by mentioning that full-grown inhabitants of Flatland are eleven inches wide. He then discusses the classes of the population, which coincide with their shape. According to A. Square, Women are straight lines, while the soldiers and lower class of workmen are Isosceles triangles. He mentions their two equal sides are in sharp contrast to their very small base. The result is a near straight line, in that their angles are so sharp as to nearly not exist. The middle class is made of Equilateral triangles, while the professional men are Squares or Pentagons, the class of which A. Square is a member.

The Nobility class is made of Hexagons through Polygonal, or many-sided, shapes. When the number of sides of an individual is so numerous as to be indistinguishable, the individual is included in the class of Priests, or Circles, who make up the highest class in the society.

A. Square next describes the process of evolution in Flatland. Each male child born is born with one more side than his father. In this way, each generation moves one step closer to nobility and Priesthood. However, males born to the tradesmen class, or the Equilateral triangles, and males born to soldiers and workmen, or the Isosceles triangles, whom A. Square refers to as barely human since their sides are not equal, do not have this trait. As a result, the sons of these inhabitants remain locked in their lower class role. A. Square notes, however, that the more intelligent of these classes often breed male children whose bases are slightly longer. Over time, and with the help of arranged marriages, these offspring can eventually give birth to Equilateral triangles.

Additionally, A. Square notes that, on occasion, a true Equilateral triangle is born to an Isosceles triangles. He notes this rare occurrence requires careful planning, intelligence, and many generations. Once it occurs, however, the child is taken away from the Isosceles parents and given to a childless Equilateral. The child is never allowed to return to his parents, nor his ancestors, out of fear he will retreat to his Isosceles ways. Such a birth is celebrated by all classes, since the lower class sees the birth as hope, and the higher classes see the birth as a barrier to revolution from the lower classes.

The Aristocrats of Flatland know that, without any hope for advancement, the lower classes might rise up to conquer even the Circles. However, A. Square notes, Nature has seen to it that, as intelligence and knowledge increase, strength and power decrease since the sharpness of the angles decrease. Thus, A. Square notes, the soldiers, powerful but "almost on a level with Women in their lack of intelligence", are unable to outwit higher classes. Once they can, they are no longer powerful in strength.

A. Square notes the ability of the Aristocratic Circles and Polygons to use this law of nature to stifle agitation by showing the lower classes there is at least a small hope of advancement. Similarly, State physicians have become capable of manipulating individuals into more equal shapes, and thus can remove possible leaders from the lower classes and place them into upper class society. Those individuals, after manipulation, are then housed in State hospitals. Those who cannot be reshaped and confined are executed. As a result, the lower classes are left without leaders, and are led by Circles, whom the Chief Circle pays to squelch rebellion, or are led through jealousy and suspicion by the Circles to mutual warfare, and thus die by one another's angles. One hundred twenty such battles are recorded annually, and all end in death.

Chapter 3, Concerning the Inhabitants of Flatland Analysis

This chapter provides a wealth of information, both on the dimensional theory of Abbott, as well as on his clear views of modern society. On the surface, Abbott's discussion of classes is an exercise in geometry, in that each class of individuals, from the lowest class of Women to the Priestly class, increase in line and angle until none are found. This hierarchical society is easy to comprehend for the logical reader.

Beyond this surface explanation of geometric shapes, however, lies a litany of harsh barbs aimed at modern society, and the tactics Aristocrats use to force their opinions on lower classes of society. Through symbolism, Abbott's geometric characters represent an attack on society, beginning with his discussion of the classes of Flatland. Not much is said of Women, since they are obviously looked down on in Flatland, as they were in Abbott's own society. The soldiers and lower class of workers are also looked down upon, and seen as "barely human" and as un-intellectual as Women. Clearly, Abbott is noting the tendency of his own class in society to view the working class as a lower order of humankind.

Abbott also symbolically attacks the evolutionary process, or at least the Aristocrat's use of the process to inhibit the lower classes. His comments about the increasing sides of male children show clearly his link between this and evolution in society. However, his acknowledgement that those of the lower class are not given this privilege is again a barb against the views of lower class society. These classes are not, in Flatland, able to achieve any higher class. This belief resembles that of Abbott's own society in regard to the working class. Further, his brief reference to arranged marriages being used by authorities to increase the chances of a successful Equilateral birth show his own knowledge of the practice of arranging marriages to increase intelligence or physical prowess. His mention of the fate of children born Equilateral, that of their removal from the home into a more "appropriate" setting, may symbolize Abbott's view of the social services system in his own era.

Perhaps more important to his portrayal of the atrocities of Victorian society is his discussion of the use of Nature and the laws of Nature by the higher classes to control the thoughts, actions, and emotions of the lower class. Abbott mentions the Priest's use

of hope, salvation, ambition, and achievement to control the leaders of lower class rebellions. Without leaders, Priests know the lower class will fail in any rebellion, symbolizing tactics commonly used in aristocratic societies such as Abbott's. Furthermore, his use in *Flatland* of surgical manipulation to make inhabitants more "regular" clearly symbolizes his view of the criminal justice system. In Flatland, Priests and doctors manipulate individuals into shapes that can dictate their removal from society, just as the criminal justice system manipulates inmates in an effort to "reform" them. As in Flatland, those unable to be manipulated are simply exterminated. Abbott's closing remarks again show his sharp criticism of aristocratic society. In Flatland, the priests use their own messengers to bring hope and salvation to lower classes to avoid rebellion. If unsuccessful, the same Priests use manipulation to pit those classes against one another in war. Clearly, this discussion symbolizes the efforts of church leaders to convert lower class societies, and when such efforts fail, the common tactic of the upper class to go to war.

Chapter 4, Concerning the Woman

Chapter 4, Concerning the Woman Summary

A. Square begins by discussing the power of Women in Flatland. He compares Women to needles. For all intensive purposes, Women are entirely pointed, being nothing more than a straight line, with sharp points at either end. He also mentions Women can make themselves nearly invisible. The mouth or eye portion of a female is painted, but the rear portion is not, resulting in a very small, nearly indiscernible point. He mentions that the point of a woman is deadly to people of Flatland. As a result, the States of the world have enacted laws to protect society. First, Women must always enter a home through the East door carefully, to avoid any collision. Secondly, Women must consistently hum, so anyone near them is aware of their presence. Third, any female with any condition causing involuntary motion is destroyed. In more strict areas, Women are forbidden to stand in a public place without constantly swaying, are forced to be followed by their husband or son, or are simply not allowed in public. However, in the case of the latter, society suffers as the race diminishes and there are more domestic murders, so many such areas have abandoned this law. Women in confinement often take their aggressions out on husbands or sons, and A. Square points out entire villages have been destroyed in this way.

A. Square also noted the power of fashion to protect citizens from females. As mentioned, some States require Women to sway their backsides, but in most pretentious Women, such a practice is customary. The upper class is believed to have the more perfect rhythm and movement, which lower class Women attempt to simulate.

A. Square also points out that Women are not devoid of a want for affection, but that their shape prevents spontaneous passion. He adds that their inferiority among all other races and shapes shows their complete lack of brainpower, and their lack of reflection, judgment, forethought, and memory. Enraged Women do not recall ties to family and can slaughter each member without recollection. He notes that Women should not be angered when out of their "apartments", designed to trap them into a submissive position where they are not able to turn around. When in their "apartments," however, he notes men can say or do anything, since the females will not recall these actions later. He also mentions problems in military class homes, in that the men of the household tend to use their angles instead of their good sense to avert a woman's fury, which often results in their death. However, the Circular class recognizes this as both a way to rid society of the most brutal of the Isosceles class, and a way to stop revolution.

He also mentions the caution of the Circles dictates that the Women of these households always keep both eye and mouth directed toward the Master of the house. In working class homes, Women are allowed to turn their backs, leaving moments of silence. A. Square notes that Women in upper class homes talk incessantly, and since Women in general have nothing useful to say, or wit, or sense, many would prefer the danger of their sharp point to their chatter. A. Square admits the deplorable

circumstances of the woman in Flatland, but also notes that since they have no hope, no memory, and no anticipation, their deplorable conditions are not recalled.

Chapter 4, Concerning the Woman Analysis

This chapter recounts Abbott's view of how his Victorian society thinks of Women in a harsh, blunt manner. While his explanation of the dangers of a single line to other shapes in a two dimensional reality certainly assist in comprehending such a world, it is obvious his point in this chapter is far more social than mathematical.

The role of Women in Abbott's society is clearly one of subservience, with the existence of laws regarding how they are to act, walk, move, speak, look, and be confined. Made servants to both their husbands and society, these "lines" are looked upon as virtually useless. Too stupid to know their plight, too flighty to comprehend their condition, and too dangerous to let free, Women in Flatland are doomed to forever remain imprisoned in their own shape.

While some may view this chapter as Abbott's own views of Women, his verbiage in the last half of the chapter suggest otherwise. A. Square admits the deplorable condition of the Women in society, and then seemingly sarcastically notes they are too dimwitted to notice. His wording and tone in this chapter suggest Abbott is merely criticizing the modern view of Women as a subservient species.

In addition to his blast against society's treatment of Women, Abbott also includes in this chapter a harsh attack on the higher class order, in his discussion of military men and their wives. A. Square notes in the chapter that the eventual death of military men at the hands of their wives serves to rid society of the "unwanted," in the views of the upper class majority. This symbolic representation of the views of Victorian society on lower class crime clearly suggests Abbott's disdain for such a view. Further, his discussion of the Circle sect using these murders to stop revolution is again simply symbolizing the world in which Abbott himself lives.

Chapter 5, Of Our Methods of Recognizing One Another

Chapter 5, Of Our Methods of Recognizing One Another Summary

A. Square begins by discussing the difficulty with which inhabitants of Flatland recognize one another, since all appear as straight lines in the two dimensional world. He then explains that, in some cases, individuals are recognized by sound. In lower classes, tone and inflection can indicate the Equilateral, Square, and Pentagon classes. However, the aristocratic shapes are less easily identified, since their tones are assimilated, and since lower classes can imitate higher classes well.

As a result, another method, that of feeling, is used by many. Feeling involves the touch of one individual of the angle of another, which, through practice, can help to easily identify other classes. However, A. Square notes that with higher nobility classes, this is still difficult, since it is easily possible to confuse a ten-sided shape with a twelve-sided shape. He also notes the practice of feeling must be done carefully, to avoid harm from sharp angles, and relates a story of his ancestor, who accidentally speared a higher class through the thorax. A. Square mentions his Grandfather was intelligent, with a brain or angle of 59°30, but that the act set his family back, so that the next generation was born with a 58° brain, and did not achieve a 60° brain until five generations later.

A. Square then answers the question of how these inhabitants can know of angles, even though they cannot see angles. He notes that the inhabitants can infer angles, and that the Law of Nature provides an alphabet, of sorts, of angles, each at one-half degree intervals. Specimens of each angle are kept in schools as instructional tools. There are a number of the smaller angle specimens, whose lack of intelligence prohibits any civil rights, which the States place into schools without food, allowing them to perish only to be replaced with new shapes. A. Square notes that more expensive educational boards keep the same specimens for years by feeding them, which reduces the Isosceles race, a practice A. Square agrees with. A. Square closes by noting that when sound and hearing fail, another method is needed for recognition.

Chapter 5, Of Our Methods of Recognizing One Another Analysis

On the surface, this chapter introduces several themes related to Abbott's two-dimensional world. His discussion of the inability to tell apart other shapes due to each inhabitant's relative perspective again reiterates the viewpoint of an inhabitant of Flatland. Additionally, by explaining the process of feeling, and the danger associated

with such a practice, Abbott skillfully explains possible solutions to the sight recognition problems in Flatland, and allows insight into these difficulties.

This chapter is again used to discuss Abbott's social theory, as well. Abbott's mention of the ability for lower classes to imitate higher classes nearly perfectly reflects Abbott's own society, in which lower class individuals often attempt to imitate the lives of those in the aristocracy. Further, the story of his grandfather, and the setback of their evolution as a result of his folly, again show the beginnings of evolutionary theory in Abbott's work.

However, it is Abbott's discussion of the Isosceles triangles in the schools that speaks most clearly of Abbott's attack on Victorian society. In his discussion, Abbott mentions the use of starvation to cut costs in schools using Isosceles triangles as teaching tools. This is done because these shapes are mentally incompetent, and thus without any civil rights. The State, as their caregiver, recognizes this and simply uses them until they die, then replacing them with new individuals. Abbott is using these poor shapes to symbolize the use of mentally challenged individuals by his own government in forced labor, making a clear statement against such practices through the characters of Flatland.

Chapter 6, Of Recognition by Sight

Chapter 6, Of Recognition by Sight Summary

A. Square admits first that he is preparing to seem inconsistent, in that he has already stated the inhabitants of Flatland cannot see shapes, but only see lines. However, he is now about to explain how sight recognition is possible among the higher classes. Such a practice is only possible, according to A. Square, because of the dense fog that appears in all torrid areas of Flatland. This fog allows inhabitants to judge distance, since objects further away tend to disappear into the fog more than objects closer to the individual. If an individual places his or her glance on the bisection of the angle at the center of the shape approaching, his or her view will lie evenly between the shape's sides. For shapes whose sides are at sharp angles, such as an equilateral triangle, the perceived line of vision of the viewer fades rapidly at the sides. In viewing a Pentagon, however, the side of the vision line fades less rapidly into the fog, since the angle of the viewed individual is not as sharp. A. Square notes that, with much practice, this ability allows higher class individuals to judge angles. He notes that in some cases, one must ask the viewed individual to turn so he or she is facing the viewer, in order that they might bisect the proper angle.

A. Square notes this ability is taught only to the finest of the States, and that even the most learned individuals still have difficulty in large crowds. Only with such teachings can one exist in such a crowd, and A. Square notes it is his experience that if one is to be in a crowd of Polygons, one should be a Polygon to avoid any embarrassment. He also notes that it is only through an avoidance of the feeling method that one can learn sight recognition. Higher class youths are sent not to public elementary schools, where feeling is taught, but to Seminaries where the art of sight recognition is the rule. There, feeling is considered a serious offense. However, for the lower class, such schools, and therefore such abilities, are unattainable since tradesmen cannot afford to have their children learn such abstract studies. As a result, the higher-class children overtake the lower class children rapidly.

A. Square also notes that those aristocratic children who fail their final exams are in a sad situation. Unable to work in the elite section and despised by the lower class, these individuals are left in limbo, and often turn to one another for companionship. From these unions, Irregular shapes are often born, and those shapes often become the leaders of rebellion. As a result, the States believe those individuals who fail exams should be imprisoned for life or killed.

Chapter 6, Of Recognition by Sight Analysis

Again, Abbott uses two distinct storylines to present his themes, those of the world of mathematics and geometrical shapes, and that of his discourse on Victorian society. Geometrically, Abbott's explanation is very detailed, in that he uses specific examples to

explain how to bisect an angle visually, and to use such information to determine angle degree and shape. His detailed and easy-to-follow explanation allows for full understanding of such a geometric trick.

The second section of the chapter is devoted again to Abbott's discussion of Victorian society. His comments on embarrassment in crowds as a result of being of a lower class, and thus less able to function as the crowd functions, clearly represents his view of the social norm in his own era. Additionally, his comments related to the inability of tradesmen to teach their children abstract lessons, and the resulting intellectual gap between higher and lower classes, symbolizes Abbott's own experiences with this in his world. Because lower class individuals cannot afford to send their children to colleges and higher educational attainment, the lower class continues to remain without the skills needed to achieve a higher class, resulting in a repetitive cycle of the class structure.

Chapter 7, Concerning Irregular Figures

Chapter 7, Concerning Irregular Figures Summary

A. Square begins by discussing the assumption throughout previous sections that all shapes are regular, with equal sides, and straight lines. He notes that the entire existence of Flatland revolves around the regularity of shapes, in that without regularity, recognition would be impossible, and danger would be present at all times. Rather than being able to feel a single angle for recognition, or use a single angle for sight recognition, one would have to feel or view all angles and, according to A. Square, civilization would become barbaric. He uses the example of using sight recognition when meeting three tradesmen, and inviting them into one's home. If one of the men was irregular, he would not actually fit in the home, and would become stuck.

In Flatland, A. Square notes, irregularity is not only immoral but criminal. Irregular shapes are scorned by parents, ignored by society, excluded from most jobs, not allowed to marry, and eventually forced into government work for low wages. Still, A. Square believes this situation to be necessary for the good of the rest of Flatland. He asks what the result would be if these Irregulars were allowed to breed, noting businesses would have to make adjustments to allow them to shop, ticket takers would be required to measure all citizens prior to seating them in theaters, the military would fall into disarray, and other aspects of life would fall into peril. A. Square notes his belief that the Philanthropists who plead for a revocation of the Irregular laws are wrong, and that all Irregulars are hypocrites and mischievous.

A. Square closes the chapter by noting his belief that the destruction of infants whose angles deviate more than a half degree from correct angularity is not acceptable, since many great men have achieved much with higher angle deficiencies. Additionally, he notes there are now surgical corrections that can be attained for some individuals. However, he does note that if recovery is unlikely, and if the individual is still an infant, he suggests Irregular offspring be "painlessly and mercifully consumed."

Chapter 7, Concerning Irregular Figures Analysis

Again, this chapter has two threads of storyline, that of the geometric dangers of irregular shapes in a two dimensional world, and the social treatment of the handicapped in the Victorian society of Abbott. The author's notes on the complexities associated with irregular shapes in Flatland clearly explains the relative necessity of regularity in a two dimensional world. His explanation is easy to follow, and adds a layer of complexity to the geometrical world of Flatland that many would otherwise miss. His point, explained through the example of the tradesmen, is well developed, in that without regularity, life for the inhabitants of Flatland would be difficult, as well as dangerous.

Abbott's statements on A. Square's feelings towards irregulars are another symbolic attack by Abbott on his Victorian society. Clearly, Abbott believes the world he lives in sees its own irregulars, the disabled or those contrary to the norm, to be useless and bothersome. His comments about theaters, shops, the military, and buildings being forced to altercation to accommodate these individuals suggests he is sarcastically implying his society would rather ignore the disabled than make necessary adjustments. Even his comments at the end, discussing possible surgical solutions for those against the norm, suggest a tendency in his society to force change on anything outside of the normal population. His final statements referring to the proposed killing of irregulars serves only to further Abbott's clear distaste for his society's treatment of atypical individuals.

Chapter 8, Of the Ancient Practice of Painting

Chapter 8, Of the Ancient Practice of Painting Summary

A. Square points out life in Flatland is dull, but that this was not always so. He explains that Chromatistes, an ancient ancestor, developed color and a style of painting. He painted his home, his children, and eventually himself. When others saw him, they saw immediately the benefits to color, in that no one had to use feeling or sight recognition to see his shape, nor had to determine whether one side was front or back. His movements were easily noted, and suddenly, others wanted color. The trend spread and soon, nearly all shapes in all areas were painted. Within two generations, all but Circles and Women were painted in Flatland.

Circles, however, had no sides to paint, but only a circumference, and clearly, Women had no sides either. However, the rest of Flatland participated fully in the Color Revolt. Many realized the artistic, practical, and aesthetic value of color, but the military in particular was an amazing sight. Twenty thousand Isosceles triangles, painted orange and purple, the militia of Equilateral triangles, painted in red, white, and blue, the artillery segment of Squares, painted in mauve, marine, gamboges and umber, the officers of Pentagons and Hexagons painted in a rainbow of color, all served to increase the power of color. A. Square notes it was during this time that much poetry and art developed.

Chapter 8, Of the Ancient Practice of Painting Analysis

This chapter introduces the first true account of a "revolt" in Flatland, that of the Color Revolt. While this chapter focuses solely on the beginnings of the revolt, it is clear, since Circles and Women are not involved, that Abbott is foreshadowing an eventual conflict between the aristocratic Circles and the lower classes. There is little in the way of dimensional theory in this chapter, other than the notations on the lack of edges in Circles and lines. However, this chapter is clearly designed not as a portion of the two dimensional theory, but as the beginnings of a tale of revolution in society. This is shown most clearly in the description of the colored military. One can see all classes represented within the military, and can see that as one grows in sides, one also grows in rank. Further, one can see the clear spread of this new fashion in Flatland, but can sense an upcoming class war between Priests and lower classes.

Chapter 9, Of the Universal Color Bill

Chapter 9, Of the Universal Color Bill Summary

A. Square begins by noting that although the time of the color war was one of importance in art, it was also one of decay in intellectual pursuit. Sight recognition, now unneeded, was halted in schools, as was feeling recognition and other higher mathematical courses. The Isosceles race, now not required to serve as specimens, began to grow in number. Soldiers and Artisans began to note their equality to higher classes, since the intellectual and recognition issues in those higher classes began to fade as Color Recognition became popular. They began to promote an end to the subsidies for higher education.

As the upper class Circles began to disagree, the leaders of the Revolution began to demand all citizens, including Circles and Women, to present themselves for painting. Women were to have their front section painted red with their backs painted green. Circles were to be colored in the same design. This concept, designed by a disgruntled Irregular Circle was designed to bring about the end to Circle reign, since it would be impossible to tell a Circle from a woman. Further, by bringing about this clear increase in the status of Women, the leaders of the revolution believed they would win the war for colorization. A. Square explains that, since one would view a straight line as merely a line with red and green, so too would a Circle, viewed at the line of diameter, appear the same. As a result, Women were highly in favor of the Universal Color Bill. A second agenda of the bill was to demoralize the noble Circles. Forced to color their shapes, and with the art of sight recognition slowly fading, many believed the Color Bill would destroy the aristocracy.

Chapter 9, Of the Universal Color Bill Analysis

This chapter, unlike the last, does return to at least a marginal discussion of mathematics and geometry. Abbott explains how Circles and Women would be viewed similarly by discussing the view of a diameter, and how such a view would create a likeness between Women and Circles to most inhabitants.

More importantly, however, this chapter introduces the concept of class war, revolutionary leaders, and the demoralization and destruction of aristocratic government. Abbott points to the Color Bill as the unifying agent of the era, in that using color made all inhabitants equal. The class structure begins to break down, and one can see the resemblance of this to many class revolutions throughout history. The aristocratic Circles and Women initially refuse colorization, but after manipulation of the Women by Revolution leaders, they support the Bill. In this way, as in regular society, the manipulation of the masses has the power to persuade others to join the cause. In doing so, the proponents of the Bill aim to gain all the strength needed to pass laws

prohibiting the use of the lower class for profiteering or other means. At the same time, the morality of the Circles can be destroyed, thus causing the Aristocracy to fall.

Chapter 10, Of the Suppression of the Chromatic Condition

Chapter 10, Of the Suppression of the Chromatic Condition Summary

A. Square explains that the Color Revolution continued for three years, until it seemed almost certain the lower classes would win. During the revolt, many Polygons were slaughtered by Isosceles, and many Circles perished at the hands of their wives, angry at their husbands' refusal to submit to the Bill. Just when it seemed the Priests would have to agree to the Bill, an Isosceles triangle, pretending to be a higher class shape, accosted a young maiden, consummating the relationship. When the woman discovered the truth, she committed suicide.

The Women of Flatland were now against the Color Bill, and the Circles saw their opportunity, and called an emergency Assembly of the States. The Circles stated they were planning to concede to colorization, but wanted first to review all aspects of the process. The Chief Circle noted to the Workmen that their children, soon to be made part of the Regular class, would no longer have this ability, since class would be gone. Further, government would be run by the Convict class, since they were the majority class, and the Women would not be safe. Following a cry of "come death" from the Chief Circle, the Isosceles and Regular classes began to fight, a band of Women soldiers slaughtered some of the Isosceles Criminals, and the rest began to fight amongst themselves. In the end, seven score thousand of the Criminal class lay dead, and order was thus restored.

The Circles then began to abuse their power. All triangles were measured for irregularity, and those suspected of irregularity were killed. Homes of the military and artisan classes were inspected, and thousands were killed for their failure during the Revolution to pay the needed tribute of Criminals to the education department. Color was abolished, and even words denoting color were criminalized.

The right to make color is now the sole property of the Chief Circle, only to be passed to his successor. One factory produces color still, and the workmen are killed and replaced each year to avoid a leak in process information. A. Square notes the level of fear is still high in the Aristocracy concerning the near overthrow of their way of life.

Chapter 10, Of the Suppression of the Chromatic Condition Analysis

This chapter clearly shows Abbott's own feelings towards the power of the Aristocracy in his own era. Through the use of deception, illogical yet persuasive arguments, and

manipulation, those in power successfully pit the lower classes against one another, use the Women as soldiers, and virtually slaughter an entire class, simply to avoid colorization. This resembles the use of similar tactics throughout history by both governments and religious organizations to subdue lower classes and halt revolution. Abbott's clear compassion for the lower class revolution shows his own ties to their cause, and his own belief in the equality of man, regardless of shape, size, or color.

Chapter 11, Concerning Our Priests

Chapter 11, Concerning Our Priests Summary

A. Square begins by noting he is about to discuss his journey into Spaceland, but must therefore skip some details, such as how the inhabitants of Flatland move without feet, build without hands, why rain always falls from the north, and other information. He does, however, feel it is necessary to discuss the controllers of Flatland, the Priests. He notes that the term does not have a religious connotation alone, but power in all higher aspects, such as business, art, trade, science, government, morality, and theology. While they do nothing, they are the cause of everything done.

A. Square next explains that Circles are not really Circles, but merely Polygons with sides too numerous to count. He also points out that since the feeling method of recognition is outlawed by Circles, their sides are even less apparent. Since Circles seek to hide their circumference and perimeter, this assists them in their goal. He notes that the average perimeter of a Circle is three feet, and thus, a Polygon with three hundred sides has each side of only a tenth of an inch. He also states that Circles accelerate in sides with each birth, but with each generation, fertility begins to suffer. As a result, Circles with many sides rarely have sons, but if sons are born, they tend to have a vastly larger number of sides than their father. Further, physicians have begun to alter the sides of small infants by breaking their bones and resetting them into more sides. While many do not survive, the practice is still popular in the hopes of achieving a Circular form. The child is reviewed after one year. In many cases, the child has already died, but in rare cases where it has not, the child is returned to the parents as a Circle.

Chapter 11, Concerning Our Priests Analysis

This chapter again combines geometrical information and social commentary. In terms of geometry, Abbott discusses the properties of a Circle, explaining the concept that all Circles are merely polygons with hundreds of sides. He discusses the concept of perimeter and diameter in a way that is simple to comprehend and informative. His use of mathematical equations to explain how circumference can be used to determine side length is also imperative to the inhabitants of Flatland.

In terms of Abbott's social discussion, he is clear in this chapter that the process of evolution is drastically different among higher classes than lower classes, but that much of the shroud of mystery and illusion surrounding the Circles is a product of their own making. He mentions that, by eliminating the process of feeling, Circles can hide their sides well, appearing even higher on the evolutionary scale than they would otherwise appear. This symbolism says much of Abbott's opinion of high-class society, and their attempts to falsify even their own class levels. Further, Abbott's symbolic discussion of doctors rearranging the sides of children in an effort to make them perfect is an astounding viewpoint for Abbott's time period, particularly when viewed in terms of

current procedures. Abbott foresaw what is now reality: the alteration of the human body to achieve a societal idea of perfection. While Abbott is obviously against such a concept, his insight into such matters shows again his position as a modern thinker in the Victorian era.

Chapter 12, Of the Doctrines of our Priests

Chapter 12, Of the Doctrines of our Priests Summary

A. Square begins by discussing the doctrine and theology of the Circles, or priests. He explains that the doctrine "attend to your configuration" is the primary focus of Circles. This doctrine focuses solely on the advancement of one's shape, in all aspects of life. He further explains that rather than focusing on will, or strength or any other attribute, the Circle focuses only on configuration, believing the rest to be worth nearly nothing. Pantocyclus, the ancient Circle, believed any fault or defect resulted from a deviation of the regular figure. As a result, no behavior is either appraisable or punishable, since the behavior stems solely from one's shape.

A. Square notes this is ideal, but impractical. In behavioral issues where consumption is not an issue, it is difficult, at times, to discern if one is using his or her shape as a mere excuse to rebel. A. Square himself believes in scolding his grandsons, rather than blaming their configuration. He also notes many Circles agree, choosing to speak of right and wrong as though one has a choice between the two positions. By default, this set of doctrines opposes those of Spaceland, since such doctrines imply a respect for one's children, rather than the other way around. In particular, however, A. Square holds the Circle's doctrine for Women to be the most incorrect. Women deemed irregular are forbidden to marry, but A. Square notes that Circles, most able to choose a perfectly regular wife, are the least likely to do so. They may choose a Woman with an irregular grandfather, simply because her voice is appealing. He continues to note that while, at present, such choices do not provide terrible results, since the loss of a side or two in a Circle is not demeaning, the issue could begin to increase, creating disastrous results for the Priest class.

In addition, A, Square mentions a concern regarding the treatment of Women, and its effect on the males of Flatland. Women have long been thought of as emotional rather than rational, and have thus stopped being taught to read, write, or do mathematics. As a result, the men are forced into duality, having to retreat to emotional speak when conversing with Women, but expected to learn and grow when dealing intellectually with men. A. Square believes this burden too much for men, and sees a negative effect occurring on the intelligence levels. Further, he fears the consequences of a woman who is able to speak the language of men. He implores the Circles, thus, to reconsider the education of Women.

Chapter 12, Of the Doctrines of our Priests Analysis

This chapter again focuses mostly on Abbott's opinions of his society. The Circles, or Priests, clearly value their status above all else, not unlike the aristocrats of Abbott's

time. Additionally, their constant reference to status above all else shows their high regard for shape, or class. The opinion that behaviors are related to one's shape represents a clear symbol for the sociological theories being developed during Abbott's era. His lack of belief in such theories, and the lack of belief in others, appears to represent the difficulty sociological theorists had in propounding their theories in the late 1800's.

Abbott's discourse on the education of Women is particularly interesting. In previous chapters, Abbott introduced the theme of Women as second class citizens, and of their submissive status in Victorian society, or Flatland. However, in this chapter, A. Square also notes the need for the education of Women, if only to increase the abilities of men. His final note, that of his fear of intellectual Women, show Abbott's own beliefs towards Women, in that he clearly recognizes the intelligence and power in these creatures even if his society does not.

Chapter 13, How I Had a Vision of Lineland

Chapter 13, How I Had a Vision of Lineland Summary

A. Square dreams one evening of a land unfamiliar to him. In this land, there appear to be many straight lines and points, all of whom move in a single, straight, directional line, and chirp occasionally. Certain he is seeing Women, A. Square attempts to speak to them, and is ignored. Angered, he positions his mouth directly in line with one woman, and is amazed to discover he is addressing the King of Lineland, a new dimension. Lineland, according to the Monarch, or King, is made of men, straight lines, and Women, the small points. Being in Lineland, no being can move above or below, and thus, must continue to move in a single directional line. Thus, if one is next to man A currently, one will remain next to man A until death.

As A. Square asks for clarification, the King explains that no one in Lineland can see but a single point, and can only recognize males from females by voice. When A. Square asks of family, the King informs that unions of marriage and the birth of children occur by sound only. Once a week, every male being in Flatland emits sounds from two mouths, a bass and a tenor. Marriages are formed when those voices blend perfectly with the soprano sounds emitted from one woman, and the concerto sounds emitted from another. Once this occurs, the man is then married to the two Women, one of whom produces two girl children and the other, one male child.

Chapter 13, How I Had a Vision of Lineland Analysis

In this chapter, Abbott retreats to his mathematical world, and introduces the theme of single dimensional objects. The inhabitants of Lineland live in a single dimension, in that they are only able to move in a single direction in a straight line. They can only see points, as is true in a single dimensional viewpoint. To combat any discussion of how the world would be populated, Abbott uses an imaginative technique of sound harmonization to explain marriage, as well as birth.

Abbott's use of specific details in this chapter, such as the concept of neighbors and the movements of these one dimensional beings, as well as his discussion of the King's lack of attention until A. Square moves into his one dimensional view, explain this one dimensional world clearly and accurately. Even those with no concept of geometry or mathematics can imagine such a world through Abbott's use of examples and description.

Chapter 14, How I Vainly Tried to Explain the Nature of Flatland

Chapter 14, How I Vainly Tried to Explain the Nature of Flatland Summary

A. Square, in an attempt to enlighten the King regarding his incorrect belief of Lineland as true space, asks how the inhabitants of the land distinguish between points and lines, and the position of one another. Square discusses his observation of varying lengths of lines and point sizes, but is interrupted by the King, who notes his incompetence. The King explains the inhabitants tell size and distance by sound. He uses the example of his wives as proof. He states that his wives are very far away, but can tell his length and position by his voices. Each can hear the North and South, and the time interval between the voices indicates the length of his line. Square asks the result of an inhabitant faking a voice, and wonders if the inhabitants ever feel one another. The King objects, noting that to feel one another would mean instant death, since the only area within reach to feel is a sharp point. Further, he notes such effort would be futile, since he can tell the distance and form of each subject by hearing alone.

A. Square notes his amazement at the hearing ability of Lineland inhabitants, but also notes their limitations of sight. He speaks of noting the movement right to left and left to right on his arrival, in response to which the King asks for clarification. He attempts to explain to the King about moving out of his Space, but is unsuccessful. His attempts to explain movement, by asking if the King ever wishes to move in the opposite direction, also fail. Finally, A. Square moves upward, to show the King the concept, but the King only sees Square disappear from view. The King, however, does still not comprehend.

A. Square infuriatingly tells the king that he, A. Square, is the completion of what the King professes to be, that he is a line of lines, can see lines and infer shapes, and is superior. At that, the King furiously moves toward Square menacingly, as do his subjects, and just before being pierced, A. Square awakens in Flatland.

Chapter 14, How I Vainly Tried to Explain the Nature of Flatland Analysis

This chapter explains further the differences between one and two dimensional worlds. Abbott's use of mathematics is particularly helpful in this chapter, as he explains how inhabitants of Lineline use sound to judge length and distance. Further, his explanations of why Lineland individuals do not use the feeling method further illustrate the point that one dimensional beings see only single points. A. Square's attempts to explain his own two dimensional world fail, but introduce concepts represented later in the novel when similar attempts are made by members of Spaceland to Square himself. Finally,

Square's own superiority complex shows clearly that while he judges the Circles for their own arrogance, he himself acts in a similar manner when presented with those he feels are beneath him.

Chapter 15, Concerning a Stranger from Spaceland

Chapter 15, Concerning a Stranger from Spaceland Summary

A. Square is teaching his grandson mathematics on the last day of the millennium. He explains, by making a square from nine smaller squares, each of three inches, that one can tell the perimeter of a square by squaring the length of a side. He then shows him if he were to take a point that is three inches, move it parallel to itself by three inches, then move it parallel three inches in each direction, he can make a square of nine inches. His grandson, a bright Hexagon, notes that if this is possible, it must be possible to create a Square in such a way, then if the Square could move parallel to itself, it could create a different shape that was three inches each way. Disturbed, A. Square tells him to go to bed.

As he and his wife contemplate the boy's statements in the last minutes of the millennium, A. Square feels a presence in the house. The couple move toward a voice who states the grandson is correct, and Square's wife assumes, seeing only a line, that the presence is a female. When she is permitted to feel, however, she feels no angles, and fears she has disrespected a perfect Circle. The presence tells her he is a Circle, but none like she has seen, and tells her he must speak to her husband alone. She retires, and Square notices the new millennium has begun.

Chapter 15, Concerning a Stranger from Spaceland Analysis

This chapter represents a blend of concepts, from basic geometrical explanation to the position of Women, to the introduction of the concept of Time and Space. In the beginning, Square explains mathematical computations to his grandson, and in doing so, clearly explains the concept of determining perimeter to readers, as well. His grandson, however, is obviously bright, and begins to ponder another form of shape, disturbing A. Square. It is clear by his reaction that Square is not bothered by the concept, but by the possibility of such a concept. Additionally, the added description through the chapter of the passage of time serves to briefly introduce the concept of time and space as relative, an idea used in the next chapters.

Square's relationship with his wife and her reaction to the appearance of a shape in the home shows clearly what is meant in the novel by Women being creatures of emotion. As is true in Abbott's own era, Women are often more emotional than males, and more apt to respond to situations with feeling. When she finds no angles on feeling the shape,

she again reacts with emotion, fearing an inexcusable offense. Again, this clearly shows the image of Women in Victorian society.

Finally, the introduction of the stranger foreshadows Square's own journey into Spaceland. It is clear, through the stranger's description of himself, that he is not of the same world, and through his statement of "many Circles in one," it is obvious he is from a land of three dimensional objects. Square's timely notice that a new millennium has begun symbolizes the upcoming change for him as his world is changed through the revealing of Spaceland.

Chapter 16, How the Stranger Vainly Endeavored to Reveal to Me in Words the Mysteries of Spaceland

Chapter 16, How the Stranger Vainly Endeavored to Reveal to Me in Words the Mysteries of Spaceland Summary

A. Square notes the changes in size and brightness of the figure in his home, and is unsure what shape the figure represents. Approaching, Square feels the Circle from his eye all the way around, and is amazed at the perfection of the object. He asks where the stranger comes from, and when the stranger replies he is from Space, Square questions the figure, asking if he is not still in Space. The stranger asks Square to define Space, to which he replies it is height and breadth infinitely prolonged.

The stranger explains that Square is only aware of two dimensions, but the figure is from a third, that of above and below, directions Square cannot see because his eye is not on his side, or his "inside" as Square would call it. . As with the king in Lineland, Square is unbelieving that his "inside", or side in Spaceland is visible. When Square asks for proof of this other dimension, the figure describes all other family members in the home, the shape of the home, and the shape of objects in the home. However, as with the King, Square knows such information can be obtained in other ways and is not convinced.

The stranger tries again by using an example of Square's wife. The stranger asks how many dimensions the woman is, and Square replies she is of two. The figure points out that the fact the woman is visible surely at least indicates a third dimension. He continues by noting the line has a height, and when Square incorrectly assumes he means what Flatland inhabitants call brightness, the figure immediately corrects him. However, when asked to measure Square's height, or indicate a direction of height, the figure is unable to do so.

The figure tries again by explaining that the inhabitants of Flatland live on a Plane, and are not able to rise above or below it. They are surface figures. The figure asserts he is not a figure, but a Solid, that of a Sphere. He reminds Square that, on his visit to Pointland, he had to represent himself as a single dimensional point, just as the Sphere has had to represent himself as a Circle in order to be seen. To prove his abilities, the Sphere rises above Flatland, and Square sees him first diminish, then disappear. Square is still unable to conceive the concept.

Sphere attempts the use of analogy. He asks the square to imagine a point moving Northward, which is a straight line with two extremities. He then asks him to imagine the

line moving parallel to itself in four directions, which is a square of four extremities. Sphere then asks Square to imagine the square moving parallel to itself, creating a shape Sphere calls a Solid Cube with eight terminal points, or angles and six sides. With that, Square throws himself at the figure, believing he is being fooled, and attacks.

Chapter 16, How the Stranger Vainly Endeavored to Reveal to Me in Words the Mysteries of Spaceland Analysis

Abbott's use in this chapter of mathematical principles and examples explains clearly the aspects of a three dimensional world, as well as the difficulties in explaining such aspects to a two dimensional being. Even though the Sphere in the chapter uses many of the same examples as Square himself used with the King, Square is unable to believe what he is being told. Even when he is shown the exact diminishing of view as Sphere rises above Flatland, Square is unable to imagine Sphere is truthful.

Through his use of description, Abbott again describes clearly the concept of a two dimensional world exiting on a single Plane of existence, and a three dimensional world encompassing such an existence with the added dimension of height. Through his analogy, Sphere is able to convey the concept of three dimensions, but Square is frightened and attacks, just as the King attacked in the previous chapter. This fear of discovery symbolizes a similar issue in the Victorian era of Abbott. As numerous discoveries were made during that time, several individuals, fearful of a change in their relative knowledge of the world, reacted strongly against such concepts, just as Square and the King react strongly to threats to their own worldly views.

Chapter 17, How the Sphere, Having in Vain Tried Words, Restored to Deeds

Chapter 17, How the Sphere, Having in Vain Tried Words, Restored to Deeds Summary

A. Square finds he is unable to harm the Sphere, and feels him move out of Space. To further prove he is real, the Sphere goes to a cupboard, removes a tablet, and returns the table to Square without opening the doors. He also describes various articles within Square's cupboards, and within the homes of others. Returning back to Flatland, Sphere touches the side of Square, and he feels sudden pain. Once again, Square attempts to pierce the Sphere, and calls for help. When Square refuses to stop as Sphere commands, Sphere propels him into Spaceland.

Chapter 17, How the Sphere, Having in Vain Tried Words, Restored to Deeds Analysis

This chapter, while short, explains further the differences between three dimensional and two dimensional worlds. Sphere is able to retrieve objects and see the contents of cupboards because in Flatland, nothing has a top or a bottom. Since this dimension is not known to inhabitants, there is no need, or way, to cover these areas. Additionally, by touching Square's side, Sphere proves he is able to touch areas Square cannot. When all else fails, Sphere projects Square into Spaceland, foreshadowing the next few chapters.

Chapter 18, How I Came to Spaceland and What I Saw There

Chapter 18, How I Came to Spaceland and What I Saw There Summary

Square is in awe at the three dimensional world around him, and finds great beauty in the Sphere before him. The two return to look at Flatland and Square can now see his mentor's truths before him, as he can see the entire existence of Flatland, including the interiors of all things, including his home. As he looks over his world, Square declares he is a God, since Flatlanders note that any being who can see all things in omnivident, and thus, a God. Sphere notes with scorn that if this is true, the killers and robbers of Spaceland are also Gods, since they too can see all things in Flatland. Sphere asks if omnividence makes one more just, more merciful, or less selfish, to which Square replies those emotions are only in Women. Sphere notes in Spaceland, such aspects of humanity are far more revered than mere understanding of logic.

Sphere directs Square's gaze to the General Assembly Hall of the States of Flatland, where the highest Circles are meeting, as they do each new millennium. Listening in, Square hears the congregation refer to madmen who swear they have been visited by Spaceland inhabitants in previous millennium. The Circles decide to send word to the districts to watch for such madmen, and to kill any Isosceles, imprison any Triangle, detail any Square or Pentagon in a mental institution, and place any Circle under examination, who speak of such visitations this millennium. When Sphere implies Square now hears his fate, Square notes he believes he understands Spaceland well enough to prove its existence to anyone. Sphere drops into the meeting room, and announces he is from Spaceland. He is attacked, but rises above the slaughter, disappearing from view. The President of the Junior Circles notes such an occurrence has happened in the previous two millenniums, as is stated in the secret documents, and is not concerned, but orders the death of all policemen who witnessed the event. In addition, Square watches as Circle speaks with his perfectly Square brother, the Clerk, and informs him he will have to be imprisoned for life.

Chapter 18, How I Came to Spaceland and What I Saw There Analysis

This chapter returns to the previous themes of social hierarchy and the class struggles of the Victorian era. When Square sees he has, according to his own world's theories, achieved the powers of gods, Sphere is quick to correct him, noting that the emotional components of fairness, mercy, selflessness, and compassion of a solid or shape are far more important than logical understanding. This speaks volumes of Abbott's own period, in that many of the late Victorian era placed emphasis on science and

mathematics, and forgot the powers of humanity. This shows clearly Abbott's belief that man is more than logic.

When the forms reach the assembly, they overhear plans to harm those who claim to have seen Spaceland. In this, it is clear Abbott is symbolizing his view that his society is willing to harm or imprison those whose ideas do not merge with the society in which they live, out of fear of embarrassment. When the assembly is visited by Sphere, the police are killed, and the Clerk imprisoned for even witnessing the event. If those individuals speak of the event outside of the secret government meeting, such information would spread amongst Flatland, threatening the Circles' control over the population. As a result, those witnessing the events who are bystanders must be silenced. Again, this scene symbolizes Abbott's own feelings of his government and their constant, nearly unfeeling pursuit of control over populations at all costs. With the imprisonment of Square's brother, Abbott foreshadows the struggle of Square in the next few chapters.

Chapter 19, How, Though the Sphere Showed Me Other Mysterious of Spaceland, I Still Desired More; and What Came of It

Chapter 19, How, Though the Sphere Showed Me Other Mysterious of Spaceland, I Still Desired More; and What Came of It Summary

Sphere introduces Square to the solid shapes of Spaceland by building a sphere with single plane squares. When Square notes he sees only a plane, Sphere replies he is simply not used to changes in shade and perspective. By allowing Square to feel objects and by allowing him to feel their positions Square becomes used to the solids, and can distinguish them from plane figures. Square realizes now this was the peak of his Spaceland visit, and of his life, and that the next moments precede his unavoidable downfall.

Square begins to ask Sphere to take him to the Fourth dimension, which he is now certain exists. He uses the logic of Sphere himself, noting that if a point becomes a line with two terminal points, and if a line becomes a Square with four terminal points, and if a Square becomes a Cube with eight terminal points, it is logical to assume an unknown object is created in the fourth dimension with sixteen terminal points. He also uses the Sphere's own words which note that a square with four sides in the third dimension becomes a cube with six sides, so the object must become something else with eight sides in a fourth dimension. Sphere replies that while men have claimed visitors from a fourth dimension, no proof of such a dimension exists. Square, still in awe of his great teacher, asks to be taken to the land of Thought that the solid forms assume is responsible for the fourth dimension, and notes his opinion there must be countless dimensions. He continues, excited and thirsty for knowledge, until Sphere throws him from Spaceland. Square comes crashing down into Flatland, knowing this will be his end.

Chapter 19, How, Though the Sphere Showed Me Other Mysterious of Spaceland, I Still Desired More; and What Came of It Analysis

This chapter shows the illogical thoughts of man, even in the face of distinct proof. Square, now realizing the truth of the third dimension, seeks a higher dimension, knowing one must exist. Sphere, however, denies such an existence, just as Square

would have denied such during his visit to the King. Even using Sphere's own logic when proving the existence of Spaceland, the solid is still unwilling to entertain the concept of higher dimensions.

This chapter also foreshadows the eventual downfall of Square, and hints at Abbott's feelings toward the crushing of knowledge by governmental powers. As he has shown throughout the novel, Abbott believes firmly in the pursuit of knowledge for all individuals, regardless of class or condition. In describing his own demise due to his pursuit of higher knowledge, Abbott not only foreshadows upcoming events in the novel but also speaks against the abandonment of knowledge for the pursuit of power. Having seen a higher level of reasoning, thought, and logic, he is thrown back into what is now a meaningless and dull existence, and realizes this situation will lead him to misery. Similar situations have occurred throughout history as knowledge is hidden or destroyed in an effort to create a conformist society.

Chapter 20, How the Sphere Encouraged Me in a Vision

Chapter 20, How the Sphere Encouraged Me in a Vision Summary

Upon returning to Flatland, A. Square tells his wife he has fallen, fearing her reaction to the truth of his adventure. She immediately sends him to retire, where he is able to imagine the shapes in Spaceland, and tries to remember the formation of a Cube. Thus, thinking he falls asleep and dreams of Sphere.

In the dream, Sphere is again mild, and takes him to a dimension call Pointland, or no dimension. In Pointland, there is a single point that believes himself to be the totality of the Universe, the Whole of Everything. He knows no other beings, no dimensions of height or length, nor even a thought of Plurality. As they listen, however, Square hears the complacency in the small creature. Sphere declares the lesson is that self-complacency is ignorance, and that only by striving to achieve can any form find happiness. When Square attempts to convey to the small creature its true place in the world, the figure assumes it hears only its own voice as a rebellion, so in the end, it can revisit its happiness at being the sole creature in the universe. As he floats back to Flatland with Sphere, he knows now he is being taught to teach others to aspire, and Sphere rewards him with doubled-cube images thought to be of the fourth dimension.

Chapter 20, How the Sphere Encouraged Me in a Vision Analysis

This chapter is short, yet profound in meaning. When Square returns to Flatland, he is frightened to tell his wife his experience, not because of fear she will tell others, but in the knowledge she will not understand. During his dream, he visits Pointland, the abyss dimension, the land of no dimension. In it, he sees a small creature, convinced he is the only object in the universe. Sphere's point that self-complacence is a sign of ignorance, and evil, is symbolic of Abbott's own Victorian era, in a number of ways. First, the concept of God appears in this no dimensional land, as the being believes itself to be the center of everything. By noting the ignorance of such a belief, Abbott is declaring not that God is ignorant, but that any society refusing to aspire to further notions, or entertain other conceptual ideas of God, is ignorant. In addition, Abbott seems to be noting the upper classes, or those who see themselves as higher than others and complacent in their own worlds, are ignorant if they refuse to aspire to higher learning.

Abbott uses subtle points to further his image of this small creature that are worth noting. The creature does not use the word I, but instead, it. As Sphere explains, any creature believing itself to be all things would not have a concept of personal reference.

As such, it would use 'it' as reference. This subtle point is an astounding addition to the concept of omnipotence.

On the other hand, Abbott may also be discussing the concept of relativity, not yet known during the writing of this novel. In terms of the relativity of the universe, all things truly are the center of the world, or at least of their own existence. In this, the small creature is not incorrect, but only relatively so in relation to the objects and space around him. Such a concept would have been revolutionary in the Victorian era.

Chapter 21, How I Tried to Teach the Theory of Three Dimensions to My Grandson, and with What Success

Chapter 21, How I Tried to Teach the Theory of Three Dimensions to My Grandson, and with What Success Summary

A. Square wakes from his dream, excited to spread the word of the third dimension. However, shortly afterwards he hears the crier in the streets, declaring the new law regarding those who speak of a third dimension. Square suddenly decides to instead proceed with a demonstration of the third dimension, rather than the proclamation of such, and determines his grandson is the best pupil. He tells his wife a false story of why the Circle earlier appeared, and then sends for his grandson. He repeats the lessons from the previous evening, and then asks the young boy to say again his theory of 'upward, not northward'. The boy begins to cry, having heard the proclamation against such utterances, and assures his grandfather he was merely playing. Square becomes angry and attempts to show the young boy the principle of upward, but realizes he cannot, as he is in the two dimensional world. The boy laughs and runs out the door.

Chapter 21, How I Tried to Teach the Theory of Three Dimensions to My Grandson, and with What Success Analysis

This chapter shows not only the inability to show two dimensional objects the concepts of three dimensional beings, but also the power of the State in Flatland. Square is unable to show his grandson the principle of upward, since no such direction exists in Flatland. Further, his grandson's tearful response to his questioning about his theory shows clearly that even small children understand the power of the State and their laws. This short section reiterates the theme of the power of the aristocracy over the lives of all citizens.

Chapter 22, How I Tried to Diffuse the Theory of Three Dimensions by Other Means, and of the Result

Chapter 22, How I Tried to Diffuse the Theory of Three Dimensions by Other Means, and of the Result Summary

Disheartened by his experience with his grandson, A. Square decides to write about the third dimension instead. Once he begins, however, he finds it nearly impossible to explain such concepts, particularly since he is unable to draw the figures needed to convey the expression of upward. In his writings, he does not speak of the third dimension, but of a dimension of thought in which such concepts may exist.

Square begins to utter phrases such as upward, and the third dimension, and is aware these phrases are endangering him. Still, even in the most aristocratic groups, Square finds himself speaking in such a language. Finally, at a meeting of the Prefect's home, Square finds himself telling of his adventures in Spaceland, and reiterating the entire account. He is arrested, and brought to trial, where he repeats his story. As he reaches the defense stage, the police assigned to guard him are excused, and a cheaper workforce is brought in. Square knows these individuals will be executed following his speech to avoid their possible disclosure of the third dimension.

The court asks Square to indicate the direction of upward, and to draw some diagram to explain his point. Square admits he cannot, but states the Truth will prevail. The president agrees, but notes he will be imprisoned for life, unless such truth is revealed. Seven years later, Square is writing Flatland as a testament. He admits he sees his brother weekly, but knows he is uninterested in the concept of three dimensional spaces.

Square compares himself to Prometheus, who was bound for giving fire to man. Square, however, has given nothing to his people, but is bound for his thoughts. He hopes the book will be read by generations to come, and will begin a race who refuse to believe in only two dimensions. He closes the novel by noting his own doubts of the existence of Spaceland, at times, and finds the concepts of a three dimensional world as the fabric of a dream.

Chapter 22, How I Tried to Diffuse the Theory of Three Dimensions by Other Means, and of the Result Analysis

This chapter closes the novel by portraying A. Square's demise. Unable to convert his grandson, Square attempts to write of the dimensions, but is unable to do so, and thus, reverts to speaking of the topic aloud in conversations. He is aware this places him in danger, since the aristocrats disapprove of such theories. Square signs his fate when he speaks of his journey in the presence of several high officials.

The trial of Square shows clearly the court's unfair practices, as they prepare for the killing of soldiers even before the defense is given, showing the bias of the Victorian court system. Square does not falter, and is sentenced to prison for his beliefs. While he is able to maintain hope that his writings will eventually reveal his truth, he is melancholy, and generally finds himself disbelieving in three dimensions. This self-doubt, a hoped-for result of his imprisonment, assures his silence for the aristocracy while preventing his thoughts from reaching others. Clearly, Abbot is closing his novel with a reference to the repression of ideas in the Victorian society.

Characters

A. Square

The main character of the story, A. Square is a plain figure inhabiting the world of Flatland. A bright mathematician and a concerned citizen, A. Square has numerous opinions of life in Flatland. When he ventures by dream to Lineland, however, A. Square begins to ponder his two dimensional existence. After a visit from a Sphere who takes him to Spaceland, and then to Pointland, A. Square is convinced he has been chosen to lead the revolution proclaiming the existence of the third dimension. His fight, however, is short-lived, and A. Square is imprisoned for his beliefs.

As a representation of the author, Abbott, A. Square makes clear throughout the novel his satiric opinions of the Victorian era in which the novel was written. Taking issue with religion, government, the class system, the treatment of Women and the disabled, and the entire scientific community, A. Square represents a modern thinker in a world where modern thinking is strictly forbidden.

Sphere

As a member of Spaceland, Sphere enters Flatland to show A. Square the errors in his thinking. Believing him to be the perfect pupil after witnessing A. Square attempt to explain to one dimensional beings the true nature of space, Sphere takes Square on a journey to both Spaceland and Pointland to show him that true happiness is only found in the pursuit of knowledge. Sphere teaches Square to discriminate between solids and plane figures, and concepts such as perception and relativity. When asked about another dimension, however, Sphere reacts similarly to anyone told their view is incorrect.

Sphere appears to represent those revolutionary thinkers in the Victorian era who risked nearly everything to attempt to find the truth. His use of examples, analogy, and demonstration allow A. Square and readers alike to comprehend his Spaceland world. However, as with thinkers in the era of Abbott, Sphere is not believed, and inhabitants of Flatland even attempt to kill Sphere in an effort to silence his mutterings. In the end, Sphere returns to his world, safe, while his disciple is imprisoned for his newfound beliefs.

Women

The Women of Flatland are straight lines, and considered the lowest of classes. Dangerous in their single point, and considered too stupid to be useful, Women are subject to the highest regulations regarding movement, behavior, and thought of anyone in Flatland. Forced to continuously hum so their presence is known, uneducated, and regarded as having no rational thought, Women are considered a formidable foe when

angered. When kept in confinement, Women are docile, but when free can destroy many in mere moments with their sharp points. In higher classes, Women remain with their mouths always directed toward their husbands but in lower classes are allowed face away to do household chores. The view of Women in Flatland is a satirical rant on the treatment of Women in the Victorian era.

Isosceles Triangles

Considered only one class higher than Women, the Isosceles Triangles are the soldiers and lowest class of workmen in Flatland, as well as the criminal class. These beings consist of two sides of equal length, with a very short base to form a sharp point. Often disposable, this class is unable to reach a higher class for hundreds of generations, and is thus often the source of revolt. This class symbolizes the working class of the Victorian society.

Equilateral Triangles

Considered to be the middle class, the Equilateral Triangle is the first class of the Flatland system considered worthwhile, though not necessary. This class on occasion, participates in revolts against the aristocratic Circles, but is generally a milder class. Able to be educated, and anxious to please, this class is a solid workforce for Flatland. This class appears to represent the workers of the Victorian era.

Squares and Pentagons

This class of individuals in Flatland represents the professionals of the land. These individuals, including A. Square, make up the professors of science, mathematics, geometry, and other primary subjects. Taught to be respecting of Circles and of the hierarchical system of government and class, squares and pentagons are also Clerks within the government, and able to improve their condition through their sons. As each son is born, he has an additional side so that eventually, the family becomes a member of a higher class.

Hexagons

The Hexagons of Flatland represent the nobility class. These figures are of several degrees, beginning with the six-sided figure, or hexagon. Further up the social chain are the Polygons, or those figures with multiple sides. Representing the noble and high class society of Victorian times, these individuals are well educated in both intellectual and social pursuits, and eventually become Circles. Given the finest positions, the highest pay, and the best lives, these individuals often appear snobbish.

Circles

As the highest class of figures in Flatland, the Priests represent the administration of society. Governing all aspects of life, including business, art, sciences, trade, commerce, generalship, architecture, engineering, education, morality, and theology, these individuals are the policy makers and rulers of Flatland. Abbott describes them accurately as the "causes of everything worth doing that is done by others."

Circles are not truly round in Flatland, but merely possess enough angles as to appear such. Highly educated in all aspects of life, these individuals represent the monarchs of the Victorian era, complete with the inhumane treatment of others, the war-creating politics, and the judgmental morality evidenced by such individuals in Abbott's time.

The King of Lineland

Seen by A. Square as a mere line, the King of Lineland is locked in his position by his one dimensional reality, just as A. Square is locked in his own two dimensional reality. Unable to grasp the concept of directional length, the King of Lineland explains in a dream the fundamental principles of Lineland. Married to two Women at a time, each male of Lineland increases his family through musical notes, at which time one wives bears two daughters and the other bears a son. Due to the inability to move freely, Lineland inhabitants, including the king, are locked into position in a single line, never to see anything but a point in front or behind them. The King becomes enraged at A. Square's egotistical comments as he attempts to explain his land, and threatens Square with his pointed line end, as do his subjects.

The Creature of Pointland

As a single point in existence, the creature of Pointland, or no Dimension, believes himself to be all seeing and all encompassing. Unable to grasp the concept of any other beings, or any other space, this creature is self-content, in that it wants for nothing. Sphere, when showing the creature to Square, notes that the creature is the representation of ignorance, in that to be complacent means to stop searching for knowledge and thus, to become intellectually stagnant. When Square attempts to explain to the creature the reality of existence, the creature hears only his own voice, since he has no comprehension of others.

Objects/Places

Flatland

Flatland is the two dimensional land of A. Square. Within Flatland, only plane figures can exist, and these creatures see one another as lines only. Forced to recognize one another through touch and sight practices, the inhabitants of Flatland have developed a complete social system with classes, laws, regulations, and power struggles. Representative of the Victorian era hierarchy, Flatland authorities pit lower classes against one another and continuously pass laws that benefit only themselves, and their positions of power. Having only single, constant lighting and no ability to move up or down, the inhabitants of Flatland have learned to compensate for the limitations of two dimensional space.

Lineland

Lineland is the land of one dimension. The creatures of Lineland can only move and see in a single direction and thus know nothing of shapes or size, other than that which is judged by sound. Again, however, the inhabitants of Lineland have developed a complete social system filled with relations between men and Women, a monarchy, social statuses, and regulations for behaviors.

Spaceland

Spaceland, the three dimensional home of Sphere, is a complex world of solid objects and a firm belief in the emotional component of life. Unlike Flatland, Spaceland prizes emotional capability even over logic, and the inhabitants of Spaceland witness everything in three dimensions. Able to discern changes in perspective and lighting, the inhabitants of Spaceland see far more than those in Flatland, and as a result, are able to see the failings of those in Flatland, which Sphere attempts to show A. Square.

Pointland

The land of no dimensions, this small world consists of a tiny point of existence. The creature in Pointland sees itself as the totality of everything, since no dimensional space leaves no room for other objects. Unable to grasp even the concept of form, the inhabitant of Pointland is shown to be ignorant, yet content in his no dimensional reality. While he is incapable of seeing others, hearing others, or witnessing anything outside his point, the creature of Pointland is content, simply due to his lack of knowledge of anything else.

Fourth Dimension

The Fourth Dimension, unseen by anyone in the novel, is assumed to exist simply because of mathematical certainty. As A. Square points out, all mathematical truths about Pointland, Lineland, Flatland, and Spaceland lead to the logical conclusion that there must exist dimensions beyond three dimensional Spaceland. Although Sphere seems to doubt its existence, Square, the mathematician, is so certain of his theory he pushes Sphere in his answers long enough that Sphere tires of him, and throws him from Spaceland.

Victorian Aristocracy

The Victorian society is the template for the society of Flatland in the novel. Comprised of similar classes, problems, and concerns, Flatland is a perfect world for Abbott's discourse on the state of society in terms of its treatment of Women, the disabled, the lower classes, war, power, and education. While seemingly not the plot of Flatland, the comparison of the land in the novel to the society of Abbott is clearly a primary aspect of the novel throughout.

Solid

A solid is a three dimensional object existing in Spaceland, such as the sphere. Solids are able to move freely in their world in all directions.

Cube

The cube is a three dimensional representation of a square. Having six sides, eight terminal points, and a complete form, the cube is a higher form of Flatland's square, or two dimensional form.

Color Revolt

The Color Revolt is the only revolt mentioned in the novel, although it is clear there have been many. Originally started by an Irregular Circle, the Color Revolt involved the lower classes painting themselves specific colors to aid in recognition. Once completed, these lower class citizens fought to overtake the Circles in power, noting they now had the same abilities as those higher in the social order, that of sight recognition. However, when an incorrectly painted Triangle accosts a young woman, the Circles convene to bring fear into all lower classes, and eventually cause the lower classes to fight amongst themselves, thus ending the threat to their power.

Irregular

The Irregular is a form whose configuration is not that of a standard shape. Thought to be less than citizens in Flatland, these Irregulars are often killed or manipulated at birth. These figures appear to represent the disabled in the Victorian society.

Themes

Victorian Aristocracy / Class War

Throughout the novel, Abbott continuously discusses the power of the Circle class, or the government, and their methods to suppress, control, and overpower the lower classes. From their destruction of Irregulars, their laws against Women, their abusive use of Isosceles Triangles in schools, their pitting of classes against one another and their constant reassurance that their position deserves respect, the members of this class clearly believe themselves to be of a higher status than those beneath. Each class under the Circles holds a similar belief about their positions in the world.

Abbott is clearly making a statement throughout the novel against such a hierarchical society. He notes on several occasions, with sarcasm, the brutal way in which many are treated in Flatland, and seems to recognize, with great contempt, the methods by which the upper echelon of society holds the lower classes down. These methods, including better education, better employment, more opportunity, better medical care, and regulations that favor their position, are consistently maintained, and thus, those in power are destined to remain in power. Further, Abbott's explanation of the Color Revolt, and the response of the Circles to that revolt, shows a clear resemblance to the upper class reactions to uprising in Victorian societies, and throughout history. By discussing this revolt in particular, Abbott is clearly attempting to show the resemblance between Flatland and his own society, and that the power of government to suppress the lower classes is a dangerous power.

Women as Sub-Classes

Another theme used throughout the novel is that of Women as subservient beings. Abbott uses numerous terms to describe Women in the novel, such as dangerous, frail, devoid of brain power, helpless, and having no wit, sense, or conscience. Such phrasing, when examined, appears to reflect a very negative view of Women on the part of Abbott. However, through his careful wording, Abbott asserts he is merely explaining the view of Women within his own society through the characters of Flatland. He agrees that their particular condition is atrocious, and that the laws against them are discriminatory and inane. Later in the novel, he also recognizes the fear in Flatland of Women able to logically think, speak, and act as men.

The men of Flatland exhibit a deep and profound sense of justifying righteousness in their tratment of Women, and serve as virtual captors of their female partners. Afraid of Women's power, unwilling to allow them access to education, and frightened of their wrath, men in Flatland, as in Victorian society, taught Women to be demure and less-than citizens. This deplorable view of Women painted by Abbott exhibits his feelings about the atrocities committed against Women in his own era.

Dimensional Differences in Relation to Social Order

There can be no question that one of the primary themes throughout the novel is the differences in dimensions in relation to form, movement, and space. As Abbott's character of A. Square journeys through no dimensional, one dimensional, two dimensional, and three dimensional space, he meets a variety of characters representing each dimension, and has the opportunity to speak with, or at least overhear, each character explaining their own view of their own dimension. The creature in Pointland sees nothing but itself, and is therefore content in all things, but ignorant of any pursuit of a higher purpose, or other existences. The King of Lineland, while caring about his subjects, can again see only his world, and cannot comprehend there being any other. His view consists only of a single point in a one directional line, and he is content with his view. A. Square, living in Flatland, also originally sees only his own dimension. Like his neighbors, A. Square understands much of two dimensional geometry, but nothing of three dimensional space. He believes himself to be a higher, more intelligent creature than those in Lineland or Pointland, as does the Sphere of Spaceland. The Sphere sees himself as the Circle of Circles, and the highest being in space.

What Abbott appears to be discussing through this theme is the propensity to be content with any existence seemingly without fault. Rather than aspiring to reach new goals and a higher intellectual plane, societies such as his Victorian hierarchy, or any dimension within the novel, become stagnant in fear of a loss of position and power. In any society that is ruled by nobility and power, the search for knowledge is subdued while the search for power is encouraged. Through this theme, Abbott speaks volumes about his opinions on society, while similarly teaching about the differences in dimension. Through his unique storyline and power of description and example, Abbott teaches geometry, sociology, psychology, and science all in one seemingly innocent novel.

Style

Point of View

The story is told using a first-person point of view through the narrator, A. Square. A. Square, a member of Flatland, is opinionated, but clearly explains himself and his surroundings. This point of view is necessary for the success of the book's main plot, that of Square's journey into the different dimensions of Pointland, Lineland, and Spaceland. The first person point of view allows A. Square to express his opinions, thoughts, fears, and actions naturally throughout his journey. With such a complex storyline consisting of politics, aristocracy, and geometrical concepts, one might expect a narrative style of logic and fact, but Abbott, the author, avoids this through the personal experience of the narrator, conveying a deeper, more insightful meaning. Further, the use of first person narrative allows the reader to consistently view the worlds from a two dimensional perspective, keeping the storyline flowing smoothly.

Setting

The novel alternates between four different settings, those of Pointland, Lineland, Flatland, and Spaceland, and is set during the end of the millennium. This time period dovetails with the plot: as A. Square's view of the world changes, the millennium changes. Additionally, of the existence of time allows a view of Flatland that encompasses both the present, as well as the historical significance of subjects such as legislation, revolt, and evolutionary development. As locations, the different dimensions represented in the story are vital, as the main plotline focuses on the difference between dimensions, their configurations, their inhabitants, and the differences in lighting and perspective. As A. Square travels, his two dimensional thoughts must adapt to the various settings, and in his adaptation, the differences between concepts are made clear.

Language and Meaning

The novel uses common, yet antiquated English telling unfolding the main plotline, but also uses vast amounts of more technical language relating to geometry and mathematics. However, the novel successfully translates these phrases into language non-mathematicians can understand. This gives a feeling of authenticity to the novel without the burden of difficult language. Additionally, Abbott's use of analogy and example throughout the novel explain both his points on geometry and dimensions as well as his commentary on the social ways in various dimensions. This helps readers understand his main themes. Certain areas of the novel rely on context to discern the speaker, but in other areas, the author denotes the speaker by prefacing sentences with italicized names. This method allows the reader to focus on the context of the story, rather than on who is speaking during tight dialogue.

Structure

The 82-page novel is divided first into two sections, and then further subdivided into chapters. The first section includes twelve chapters, while the second section includes ten chapters. These breaks, while varying in length, serve to successfully convey a sense of consecutive time while still allowing for plot changes and changes of setting. Each of the sections, as well as the chapters, is arranged in such a way as to tell the story with a past tense voice, but concluding with the current state of circumstances.

Quotes

"Had the acute-angled rabble been all, without exception, absolutely destitute of hope and of ambition, they might have found leaders in some of their many seditious outbreaks, so able as to render their superior numbers and strength too much even for the wisdom of the Circles. But a wise ordinance of Nature has decreed that, in proportion as the working-classes increase in intelligence, knowledge, and all virtue, in that same proportion their acute angle (which makes them physically terrible) shall increase also and approximate to their comparatively harmless angle of the Equilateral Triangle. Thus, in the most brutal and formidable off the soldier class—creatures almost on a level with Women in their lack of intelligence—it is found that, as they wax in the mental ability necessary to employ their tremendous penetrating power to advantage, so do they wane in the power of penetration itself." A. Square, "Concerning the Inhabitants of Flatland, pp. 8-9.

"Not that it must be for a moment supposed that our Women are destitute of affection. But unfortunately the passion of the moment predominates, in the Frail Sex, over every other consideration. This is, of course, a necessity arising from their unfortunate conformation. For as they have no pretensions to an angle, being inferior in this respect to the very lowest of the Isosceles, they are consequently wholly devoid of brainpower, and have neither reflection, judgment nor forethought, and hardly any memory. Hence, in their fits of fury, they remember no claims and recognize no distinctions. I have actually known a case where a Woman has exterminated her whole household, and half an hour afterwards, when her rage was over and the fragments swept away, has asked what has become of her husband and children." A. Square, "Concerning the Women," p. 12.

"The tact and skill which suffice to avert a Woman's sting are unequal to the task of stopping a Woman's mouth; and as the wife has absolutely nothing to say, and absolutely no constraint of wit, sense, or conscience to prevent her from saying it, not a few cynics have been found to aver that they prefer the danger of the death-dealing but inaudible sting to the safe sonorousness of a Woman's other end." A. Square, "Concerning the Women," p. 13.

"It is from these specimens of the refuse of our Nobility that the great Tumults and Seditions of past ages have generally derived their leaders; and so great is the mischief thence arising that an increasing minority of our more progressive Statesmen are of opinion that true mercy would dictate their entire suppression, by enacting that all who fail to pass the Final Examination of the University should be either imprisoned for life, or extinguished by a painless death." A. Square, "Of Recognition by Sight," p. 22.

"Not that I should be disposed to recommend (at present) the extreme measures adopted by some States, where an infant whose angle deviates by half a degree from the correct angularity is summarily destroyed at birth. Some of our highest and ablest men, men of real genius, have during their earliest days laboured under deviations as great as, or even greater than forty-five minutes: and the loss of their precious lives

would have been an irreparable injury to the State. The art of healing also has achieved some of its most glorious triumphs in the compressions, extensions, trepannings, colligations, and other surgical or diaetetic operations by which Irregularity has been partly or wholly cured. Advocating therefore a *Via Media*, I would lay down no fixed or absolute line of demarcation; but at the period when the frame is just beginning to set, and when the Medical Board has reported that recovery is improbably, I would suggest that the Irregular offspring be painlessly and mercifully consumed." A. Square, "Concerning Irregular Figures," p. 25.

"When I call them Priests, let me not be understood as meaning no more than the term denotes with you. With us, our Priests are Administrators of all Business, Art, and Science; Directors of Trade, Commerce, Generalship, Architecture, Engineering, Education, Statesmanship, Legislature, Morality, Theology; doing nothing themselves, they are the Causes of everything worth doing, that is done by others." A. Square, "Concerning Our Priests," p. 35.

"Art also steps in to help the process of higher Evolution. Our physicians have discovered that the small and tender sides of an infant Polygon of the higher class can be fractured, and his whole frame re-set, with such exactness that a Polygon of two or three hundred sides sometimes—by no means always, for the process is attended with serious risk—but sometimes overleaps two or three hundred generations, and as it were double at a stroke, the number of his progenitors and the nobility of his descent. Many a promising child is sacrificed in this way. Scarcely one out of ten survives. Yet so strong is the parental ambition among those Polygons who are, as it were, on the fringe of the Circular class, that it is very rare to find the Nobleman of that position in society, who has neglected to place his first-born in the Circular Neo-Therapeutic Gymnasium before he has attained the age of a month." A. Square, "Concerning Our Priests," pp. 35-36.

"All faults or defects, from the slightest misconduct to the most flagitious crime, Pantocyclus attributed to some deviation from perfect Regularity in the bodily figure, caused perhaps (if not congenital) by some collision in a crowd; by neglect to take exercise, or by taking too much of it; or even by a sudden change of temperature, resulting in a shrinkage or expansion in some too susceptible part of the frame. Therefore, concluded that illustrious Philosopher, neither good conduct nor bad conduct is a fit subject, in any sober estimation, for either praise or blame. For why should you praise, for example, the integrity of a Square who faithfully defends the interests of his client, when you ought in reality rather to admire the exact precision of his right angles? Or again, why blame a lying, thievish Isosceles, when you ought rather to deplore the incurable inequality of his sides?" A. Square, "Of the Doctrine of our Priests," p. 37.

"His subjects—of whom the small Lines were men and the Points Women—were all alike confined in motion and eyesight to that single Straight Line, which was their World. It need scarcely be added that the whole of their horizon was limited to a Point; nor could any one ever see anything but a Point. Man, woman, child, thing—each as a Point to the eye of a Linelander. Only by the sound of the voice could sex or age be distinguished. Moreover, as each individual occupied the whole of the narrow path, so to speak, which constituted his Universe, and no one could move to the right or left to

make way for passers by, it followed that no Linelander could ever pass another. Once neighbours, always neighbours. Neighbourhood with them was like marriage with us. Neighbours remained neighbours till death did them part." A. Square, "How I Had a Vision of Lineland," pg. 45.

"Awestruck at the sight of the mysteries of the earth, thus unveiled before my unworthy eye, I said to my Companion, "Behold, I am become as a God. For the wise men in our country say that to see all things, or as they express it, *omnividence*, is the attribute of God alone." There was something of scorn in the voice of my Teacher as he made answer: "it is so indeed? Then the very pick-pockets and cut-throats of my country are to be worshipped by your wise men as being Gods: for there is not one of them that does not see as much as you see now. But trust me, your wise men are wrong." Conversation between Sphere and A. Square, "How I Came to Spaceland and What I Saw There, p.66.

"This omnividence, as you call it—it is not a common word in Spaceland—does it make you more just, more merciful, less selfish, more loving? Not in the least. Then how does it make you more divine?" Sphere, "How I Came to Spaceland and What I Saw There, p. 66.

"Behold yon miserable creature. That Point is a Being like ourselves, but confined to the non-dimensional Gulf. He is himself his own World, his own Universe; of any other than himself he can form no conception; he knows not Length, nor Breadth, nor Height, for he has had no experience of them; he has no cognizance even of the number Two; nor has he a thought of Plurality; for he is himself his One and All, being really Nothing. Yet mark his perfect self-contentment, and hence learn his lesson, that to be self-contented is to be vile and ignorant, and that to aspire is better than to be blindly and impotently happy." Sphere, "How the Sphere Encouraged Me in a Vision," p. 74.

"Hence I am absolutely destitute of converts, and, for aught that I can see, the millennial Revelation has been made to me for nothing. Prometheus up in Spaceland was bound for bringing down fire for mortals, but I—poor Flatland Prometheus—lie here in prison for bringing down nothing to my countrymen. Yet I exist in the hope that these memoirs, in some manner, I know not how, may find their way to the minds of humanity in Some Dimension, and may stir up a race of rebels who shall refuse to be confined to limited Dimensionality." A. Square, "How I Tried to Diffuse the Theory of Three Dimensions by Other Means, and the Result," p. 82.

Topics for Discussion

Abbott discusses the Women of Flatland on several occasions during the novel. Do you believe his phrasing in the novel depicts his own feelings about the intelligence of Women, or the feelings of society in 1884? Explain your answer using information from the novel.

In Chapter 19, A. Square is convinced, because of mathematical projection, that a Fourth Dimension must exist. In your own words, explain his reasoning for this belief.

The Circles in Flatland manage nearly every aspect of life in Flatland. Using examples from the novel, discuss whether their way of management is done to protect their power, or is in the best interests of the citizens.

Several times throughout the novel, Abbott references the alteration of inhabitants of Flatland in an effort to make them into a higher social being, or more regular in form. Do you believe such actions are justifiable? Why or why not?

In Chapter 18, the Sphere asks A. Square if being omnividence makes one "more just, more merciful, less selfish, more loving". What do you believe this comment says about modern views of omnipotence in relation to religion?

In Chapter 20, Sphere takes A. Square to Pointland, and states, "Yet mark his perfect self-contentment, and hence learn his lesson, that to be self-contented is to be vile and ignorant, and that to aspire is better than to be blindly and impotently happy." Do you agree with this statement? Why or why not?

Choose two different shapes, or inhabitants, of Flatland, and compare them to modern classes in society. Be sure to use examples from the book to explain why you choose those particular classes.

Using both the geometrical aspects of the novel, as well as the social commentary in the novel, explain what Abbot is trying to say about the relationship between form in society and social status. (For example, you may choose to discuss Abbott's commentary of Irregular figures and their treatment in society.)