

Tulipmania! 1637

A Curious Event in the Dutch Golden Age

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an you imagine a single flower bulb selling for more than the price of a house? As improbable as it may seem, that is exactly what happened on February 5, 1637. The scene of this most unlikely event was the small town of Alkmaar, about 19 miles from Amsterdam, at an auction of the late tavernowner Wouter Winkel's famed tulip collection. Within the span of a few hours, the auction raised 90,000 guilders, nearly 60 times the annual earnings of a mid-level merchant.

The most impressive transaction was the purchase of a bulb and offshoot of a rare variety with the name Violetten Admirael van Enkhuizen, which garnered 5,200 guilders—more than five times the price of a modest urban home at that time.¹ The astronomical prices

paid for these tulips mark this event, arguably, as the first instance of a price bubble, or "market mania," in modern history. The event was soon given the name "tulipmania."

The Tulip's Journey

The tulip is not native to Western Europe; the 120 modern species of tulips can be traced to wildflowers found in central Asia. By the early 16th century, when European travelers first encountered the tulip in Constantinople, it had become the most prized flower in the Ottoman Empire. How the tulip traveled from Asia to Europe is shrouded in mystery and legend. It's likely that the tulip came to Europe through merchants trading in Constantinople and other Asian ports. By the end of the 16th century, tulips were found throughout Western Europe—including modern Austria, Germany, France, and England.

Prior to the 1630s, few people were interested in the trade in tulips, beyond an elite circle of wealthy European flower enthusiasts. In the 1630s, a group of Dutch flower traders known as "florists" (*bloemisten*), began to see the popular appeal and lucrative possibilities of a tulip market. The florists were not interested in planting or propagating their bulbs. They only bought bulbs in hopes of selling them at a future date—for a profit. The price of tulip bulbs began to rise, and market mania began.³

International Trade

The Dutch Republic, also known as the Republic of the United

Netherlands, was arguably the world's first modern state and economy. The republic had a large, relatively well-educated, urban population, and a diversified economy built on agriculture and trade. During the height of its golden age, the late 16th through the 17th century, the Dutch Republic amassed great wealth and power through mercantilist trade.

The strength of Dutch dominance in international trade is rooted in the 1602 founding of the Dutch East India Company (*Vereenigde Oost-Indische Compagnie*, or the VOC), which consolidated Dutch trading interests in spices, porcelain, and other goods from Asia. The VOC was the world's first publicly traded stock, with shares available to any investor who could afford the purchase price. At its height in the Dutch Golden Age, the VOC controlled more than half of all shipping, with established trading ports in East Africa, the Middle East, India, modern Sri Lanka, Indonesia, Vietnam, Cambodia, Thailand, China, and Japan.⁴

The Colonial Dutch

Nearly 20 years after the founding of the VOC, the Dutch West Indian Company (WIC) was founded in 1621. Much like its sister corporation, the WIC was established to consolidate trade; this time in the Atlantic. By the close of the 17th century, the Dutch, through the activities of the WIC, dominated the triangle slave trade route, and had trading posts in North America, Curacao in the Caribbean, and Suriname in northern South America.

A Futures Market

The origins of the modern futures market can be found in the merchant dealings of the Dutch Golden Age. By the mid-16th century, Dutch merchants crafted an early form of futures trading by selling contracts for future shipments of Baltic grain and North Sea herring to the Netherlands. This sale of future deliveries of a fixed quantity for a fixed amount is referred to

as a forward contract. When forward contracts are themselves sold as an asset, a futures market is created.

By writing forward contracts and selling futures, tradesmen are able to reduce the fiscal risk associated with long-distance trade by sharing the outlay of capital with investors. Investors, in turn, benefit through profits made without having to produce a product or risk large expenditures of capital.

Inflated Prices

Originally, the tulip market was a seasonal trade of bulbs. Buyers viewed the flowers in bloom during the spring, receiving the bulbs after growers removed them from the soil in the summer. In other words, the initial tulip trade was completed using forward contracts. However, with increased interest in tulips as a unique and highly prized flower, demand increased, resulting in a change in the tulip market.⁶

Initially, merchants traded tulip bulbs themselves—the most prized being the "broken" bulbs that produced flowers with flame patterns in red and violet (a condition that we now know was caused by viruses). This practice changed when sellers began to lose potential profits from bulbs with flowers that appeared average, but later developed the "broken" colors—and offshoots that might mature into similarly beautiful plants.

To counter this perceived loss of income, the tulip trade moved to the sale of bulbs by weight, measured by the ace, a unit borrowed from the goldsmiths, equivalent to ½0 of a gram. Transactions by weight enabled sellers to unload large batches of less-valuable bulbs, and to profit from an unusual single bulb or its offshoot.

Bloemisten

By 1635, the tulip trade had moved from seasonal transactions of forward contracts to the year-round sale of tulip futures. New traders, known as bloemisten (literally, "florists")⁷ did not know very much about the product they were buying and selling; they just wanted to turn a quick profit. As more investors entered the market, demand for tulip investment continued to climb. Instead of purchasing bulbs through forward contracts, investors began to purchase tulip forward contracts as assets in and of themselves. Market prices rose as investors bought and sold contracts for future sales.

Sellers were selling contracts for bulbs they did not have. Buyers were purchasing scraps of paper representing future crops of dubious quality. As more speculators entered the market, demand outstripped the supply of tulip bulbs and contracts. Consequently, prices began to climb—with no apparent ceiling.

A Bubble Pops

The tulip market moved out of government-run notary offices to bookkeeper-run trading clubs held in inns and taverns throughout the Netherlands. It was in one of these clubs that the tulip market reached its apex.

This page: A modern tulip field in Holland. Cover: Tulips in a flower market (bloemenmarkt) in Amsterdam,



In the months before the auction in Alkmaar, the prices in the tulip market doubled and then doubled again. The pinnacle was the sale of the Winkel collection on February 5, 1637 (described above), which aimed to raise money for an orphanage.

Unlike the sale of futures, which had driven the prices in the tulip market to new heights, the Alkmaar auction was the sale of existing bulbs. The sale of this fine collection resulted in the highest recorded prices paid for the types of tulips on sale. Within days of the Alkmaar auction, the tulip market came to an abrupt and dramatic crash.

The market evidently reached saturation, with speculators no longer willing to pay astronomical prices for tulip futures. A bulb that sold for 5,000 guilders prior to the collapse sold for 50 guilders afterwards; a bed of "pound goods" (common) tulips that sold for 1,000 guilders in February sold for a mere 6 guilders in May.

Tulipmania Satire

Almost immediately after dramatic collapse of the tulip market, critics began to satirize the tulip speculators, denouncing the folly of spending vast fortunes on a flower bulb. These critics—in their written pamphlets, sermons, and paintings—suggested that one would have to be insane to participate in this seemingly irrational market. Thus was born the term "tulipmania," Indeed, modern regulations in the Dutch tulip trade are rooted in the criticisms and satire that immediately followed the tulip market crash.

A Delimited "Disaster"

Some descriptions of Dutch tulipmania (including some websites today) suggest that bankruptcies were commonplace as a consequence of the demise of the tulip market, and that the Dutch economy was drastically affected. The historical evidence does not support this view.

At first, it certainly looked like many *bloemisten* and tulip growers would be ruined, but most courts refused to hear cases that arose from tulipmania, in part because few bloemisten possessed enough money to be worth suing.

As 1637 progressed, most tulip growers' businesses survived, and the industry continued to be a viable path to profit for growers and wise investors. Only one recorded case of tulipmaniarelated bankruptcy has been found: an artist named Jan van Goyen suffered bankruptcy from losses in both the tulip trade and in real estate, and not his tulip losses alone.

Finally, although the Dutch economy did experience a slight downturn immediately following the 1637 crash of the tulip market, there was no general recession. The Dutch Republic expanded its wealth and power until the end of the 17th century, with a vast trade network supporting its economy.

A Lesson for Today

The accompanying lesson plan introduces students to the culture of the Dutch Golden Age and to some of the economic forces

that led to tulipmania. This lesson plan can be included within a larger unit on 16th- and 17th-century European exploration and global trade. Tulipmania can capture student interest and serve as an introduction to this era—as well as to the dangers of unbridled speculation.

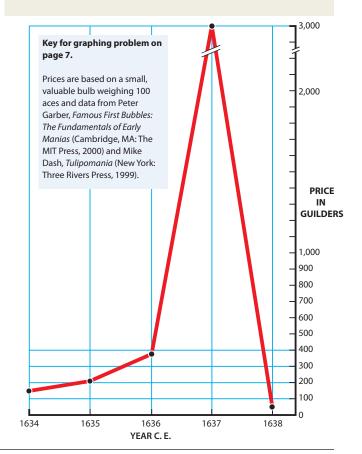
Notes

- Mike Dash, Tulipomania: The Story of the World's Most Coveted Flower & the Extraordinary Passions it Aroused (New York: Three Rivers Press, 1999);
- Anne Goldgar, Tulipmania: Money, Honor, and Knowledge in the Dutch Golden Age (Chicago: the University of Chicago Press, 2007).
- Jan De Vries and Ad Van DerWoude, The First Modern Economy: Success, Failure, and Perseverance of the Dutch Economy, 1500-1815 (New York: Cambridge University Press, 1997).
- Claudia Schnurmann, "'Wherever Profit Leads Us, to Every Sea and Shore...' the VOC, the WIC, and Dutch Methods of Globalization in the Seventeenth Century" Renaissance Studies, 17, no. 3 (2003): 474-493.
- Oscar Gelderblom and Joost Jonker, "Amsterdam as the Cradle of Modern Futures and Options Trading, 1550-1650," in *The Origins of Value: The Financial Innovations* that Created Modern Capital Markets, William N. Goetzmann and K. GeertRouwenhorst, eds. (New York: Oxford University Press, 2005), 189-205.
- Peter M. Garber, "Tulipmania," Journal of Political Economy, 97, no. 3(1989): 535-560.
- 7. "Florist" in Dutch: bloemist (singular)/ bloemisten (plural).
- 8. Jan Brueghel II, *Satire on Tulipmania*, *c. 1640*, Frans Hals Museum in Haarlem. This painting depicts tulip traders as monkeys, indicating the contempt with which the artist held tulip speculators.

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Resources about Tulipmania

GAMES

Tulipmania 1637

This online game is ideal for independent play by students ages 12 and older or facilitated play by younger students. Players are investors speculating in the tulip trade. The 1637 tulip market bubble and subsequent crash are simulated. Created by Scott NicholsonTulipmania 1637 is available to members of JKLM Games (5 British pounds, or about \$8.30). Read more at www.jklminteractive.co.uk/jklm/tulipmania.php.

The Golden Age

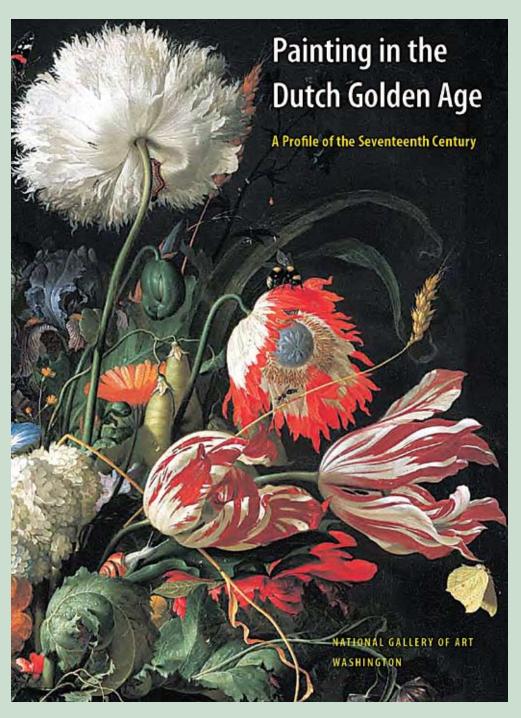
This historically-based board game is set in the golden age of the Dutch republic. Players amass points in four spheres of Dutch influence: trade, culture, art, and the colonies. Created by Giuseppe Baù and Leo Colovini and manufactured by Phalanx Games, the game is designed for 3-4 players, ages 8 and up. Estimated playing time is 60 minutes. Read more at www.phalanxgames. net/cms/pages/international/our games/game.php?id=38. Purchase for \$45 from www.mayfairgames. com.

WEBSITES AND HISTORICAL DOCUMENTS

The U.S. National Gallery of Art provides a link to a 164-page booklet Painting in the Dutch Golden Age: A Profile of the Seventeenth Century. Historical, cultural, and artistic background; teaching materials;

and a list of related resources are in pdf format. A teacher's guide is in preparation. www.nga.gov/education/classroom/dutch

The Wageningen UR Digital Library in the Netherlands displays numerous primary documents from the height of tulipmania, including a flower catalog with watercolors of flame-patterned tulips, and pamphlets published immediately following the collapse. library.wur.nl/tulips

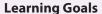


TEACHER ALERT

Satirical paintings from the 1600s about tulipmania can be found on the web, but these are problematic for the classroom because they often include lewd elements. The famous *Satire on Tulipmania* by Jan Brueghel II has monkeys mimicking the various activities of tulip traders. In one corner, a monkey urinates on flowers. In several paintings, the licentious Roman goddess Flora, loosely dressed, symbolizes the unbridled tulip trade.

LESSON PLAN

Teaching about Tulipmania



During this lesson students will:

- Consider tulips as a symbol of the Netherland's golden age of international trade, art, and science.
- Explore the rise and fall of market prices known as Dutch tulipmania, 1637.
- Be aware that there are different accounts of that event, and consider some of the evidence.
- Work with a foreign currency; graph the rise and fall of tulip prices; and read a brief history and timeline.

Time and Materials

The handouts in this article comprise a complete lesson. It may take two 50-minute class periods to work through the reading, chart, graph, and timeline—and hold discussions.

Curriculum Standards

THEME **①**: TIME, CONTINUITY AND CHANGE

- a. Demonstrate an understanding that different scholars may describe the same event of situation in different ways but must provide reasons or evidence for their views.
- e. Develop critical sensitivities such as empathy and skepticism regarding attitudes, values, and behaviors of people in different historical contexts

THEME **(19)**: PRODUCTION, DISTRIBUTION, & CONSUMPTION

- b. Describe the role that supply and demand, prices, incentives, and profits play in determining what is produced and distributed in a competitive market.
- g. Differentiate among various forms of exchange and money.
- Use economic concepts to help explain historical and current developments and issues in local, national, or global contexts.

Bell work

Can you think of an example of an item or product that many people wanted to buy, but there were only a few available? (Ex., popular toys; computer games; items on E-Bay.)

Introduction

Hold up a tulip bulb. Ask students if they would pay more than the price of a house for a single bulb. Once you have their attention, inform them that this is exactly what happened on February 5, 1637, when one tulip bulb sold for 5,200 guilders, five times the price of a modest home in the Dutch city of Haarlem.

Content Presentation

1. Distribute HANDOUT 1: The Worth of One



Tulip Bulb! and ask a student to read aloud this list of goods equivalent to the worth of a single tulip bulb. "Eight fat pigs, 240 guilders ..." It's a funny list. Clearly, during tulip mania, such bulbs were overpriced!

One could also discuss the challenge of thinking about value when a foreign currency is involved. (Today, one U.S. dollar would be roughly equivalent to 0.68 euros (1.75 Dutch guilders). The euro is the official currency of the Netherlands, which is a member of the European Union. Have any of your students traveled abroad and used a foreign currency?

Comparing value is also tricky when we compare things from the past. For example, we don't buy horses for general transportation any more. So comparing the price of horses today and from the past may not be a useful exercise.

- 2. Turn to the activity You Can Graph Tulipmania on the same handout. Instruct students to graph the five points of data, and then discuss the shape of the resulting line. Why do we use words like "bubble" and "crash" to describe this line? Why is there a break on the y-axis of the graph just below the value of 3,000 guilder? (Without a break, the scale would run off the page! Prices rose exponentially in 1637!)
- 3. Distribute HANDOUT 2: Tulipmania in the Dutch Golden Age to the students. During or after their reading, students may complete the Questions. Discuss these questions with the class. There were several reasons why prices for tulip bulbs rose so high, and then suddenly fell. How many reasons can students list? Can they think of examples, from their own lives, of the price of a particular item rising steeply?
- 4. When students come to class the next day, ask them to take turns reading aloud through HANDOUT 3: A Tulip Timeline, one student per line. How does the history of the tulip link to other facts they are learning about this age of exploration, conflict, and intercultural exchange?
- 5. There are several terms that one often comes across when reading about the Netherlands. HANDOUT 4: Dutch Tulips: What's in a Name? presents basic information about the geography and government of the Netherlands.

Assessment

Students may revise their written answers to the questions for homework.

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The Worth of **One Tulip Bulb!**

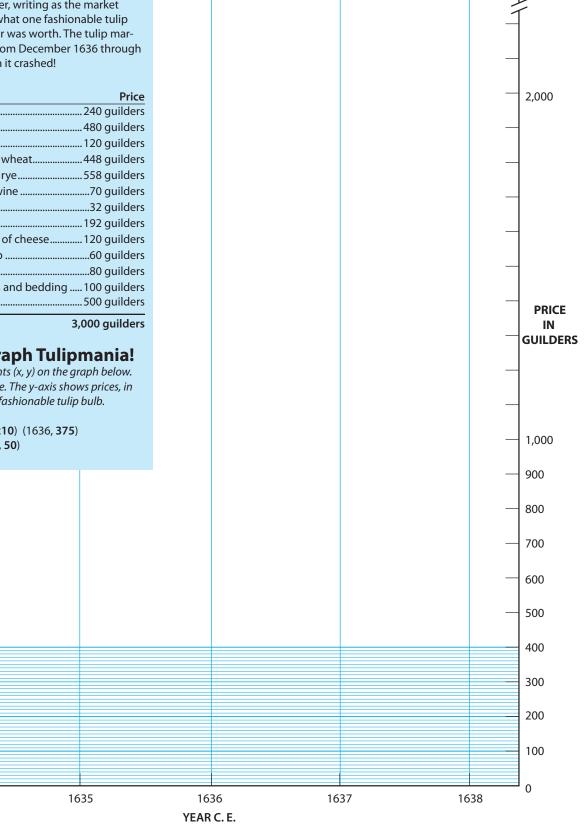
A Dutch pamphleteer, writing as the market peaked, described what one fashionable tulip bulb of 3,000 guilder was worth. The tulip market mania peaked from December 1636 through February 1637. Then it crashed!

Item	Price
Eight fat pigs	240 guilders
Four fat oxen	480 guilders
Twelve fat sheep	120 guilders
Twenty-four tons of wheat	448 guilders
Twenty-four tons of rye	558 guilders
Two hogsheads of wine	70 guilders
Four barrels of beer	32 guilders
Two tons of butter	192 guilders
A thousand pounds of cheese	120 guilders
A silver drinking cup	60 guilders
A pack of clothes	80 guilders
A bed with mattress and bedding	100 guilders
A ship	500 guilders
TOTAL	3,000 guilders

You Can Graph Tulipmania!

Place these data points (x, y) on the graph below. The x-axis shows time. The y-axis shows prices, in guilders, for a small, fashionable tulip bulb.

(1634, 150) (1635, 210) (1636, 375) (1637, 3,000) (1638, 50)



1634

Handout 1

3,000

Handout 2

Tulipmania! 1637 A Market Gone Crazy

A New Flower

The colors were wild and crazy! The hard-working Dutch people of 1600, who lived under grey skies and wore simple white and black clothing, had never seen anything like the tulip. The flowers were brilliant red, sunny yellow, or a deep purple that was almost black. The big, plump pedals sparkled like metal—unlike the small native flowers that were grown mostly as herbs and medicines. Most fantastic of all, a few of these new flowers had multicolored patterns, like flames leaping in a fireplace!

This exotic flower, which was brought to the Netherlands from Turkey (the center of the Ottoman Empire), became a national fad. It was a symbol of prosperity and good taste. Everybody loved the tulip.

New National Wealth

By 1600, Dutch international trade (in commodities like grain, sugar, lumber, fish, and spices—as well as in slaves) was beginning to bring a wave of wealth to the Netherlands. The new Dutch colonies in North America, for example, promised to increase the wealth of the motherland for years to come.

This booming economy supported a blossoming of culture, the Dutch Golden Age, which roughly spanned the seventeenth century. The Dutch of this era created masterpieces in art, made great discoveries in science, and build schools and universities. Paintings of "still life," like a vase of brilliant tulips, were especially popular on the walls of taverns, inns, and country homes of the rich.



New Personal Wealth

The new wealth from international trade began to improve the lives of working people, such as craftsmen, artisans, and owners of small businesses. A new concept took hold—"social mobility"— the belief that a common man could improve his lot. He did not need a decree from any prince or king to become successful. The son of a German immigrant worked his way up to become the wealthiest man in the Netherlands.

What could people do with a bit of extra cash? Certainly, they could purchase better food and nice things for their homes. Maybe they could even build a bigger house. They might also try to make their new wealth generate even more wealth. For example, tradesmen could expand their businesses. A carpenter might be able to hire an apprentice and build more desks and tables. A weaver could buy a second loom and weave more cloth. But what if there were a quicker, easier way to get rich?

A "Get Rich Quick" Scheme

Tulips were all the rage in the Netherlands during the early years of the golden age. Certain varieties were very fashionable, and could bring a high price. A tulip bulb might grow an *offset*, a little bulb that could be carefully separated from the mother bulb. In a couple of years, the offset would grow to a mature plant of the same flower color. Thus, tulip bulbs could create new wealth, and the price of tulip bulbs kept rising.

Maybe a weaver or a carpenter could buy a few tulip bulbs, wait for the price of bulbs to rise, and then sell the bulbs at the new, higher price. He could walk away with a nice profit. That would be a much easier way to make money than weaving a lot of cloth, or building a lot of tables.

By the autumn of 1636, buying and selling tulip bulbs had become a fast and easy way to make money. Stories of sudden wealth had been passed around by word of mouth for several years. Tales of common people becoming suddenly rich appeared in the popular pamphlets of the day. But could everybody get rich from the tulip trade? Could this happy situation continue forever?

Amateur "Florists"

Since 1593, serious tulip growers and collectors in the Netherlands had been trading tulip bulbs among themselves. Growers knew that you could not rush a tulip. A mother bulb might produce only one or two offsets a year. It can do this for only a couple of years before it dies. Another way to propagate tulips, growing a bulb from a seed, takes six or seven years to produce the first flower.

Although the new bulb traders were called *florists*, in fact they did not know very much about the product they were buying and selling. They were not interested in the hard work of propagating tulip bulbs: pulling up plants after they flower, drying bulbs in the sun, carefully separating any new offsets, and finally planting bulbs and offsets to start the cycle again. The florists simply wanted to buy some bulbs and then sell them in a few weeks or months at a higher price—and turn a handy profit.

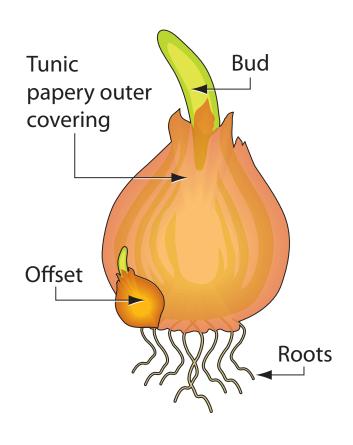
Real growers also knew that tulips could be unpredictable. A

flower might "break" with beautiful flame-like patterns, bringing a high price on the market. The bulbs from such plants, however, never seemed to produce hearty offsets. We now know that these "broken" tulip bulbs were infected by a virus! Being diseased, they were hard to propagate. These expensive "broken" tulip bulbs could suddenly die!

Inexperienced Investors

Many of the new florists who flocked to tulip trading in autumn of 1636 were also new to the whole concept of investing. They were not wealthy merchants who had invested over the years in foreign trade (in shipping ventures to Asia, Africa, or America) or in new businesses (like printing, shipbuilding, or colonial plantations). No, the florists came from the working class--bricklayers and carpenters, woodcutters and plumbers, glass blowers and farmers, peddlers and confectioners, cobblers and coffee grinders, guards and vintners, tanners and clergymen, printers and layers, schoolmasters and millers, and even demolition men. These men may have gambled in games of cards or dice, but they had little or no experience in investment. They just wanted to gamble on the tulip bulb.

TULIP BULB Actual Size



Unregulated Markets

The new florists did not do their trading in the official stock market in Amsterdam, where buying and selling was carefully regulated. This stock market, which was open only between the hours of noon and two on weekdays, operated under strict rules and traditions.

By 1636, much tulip trading was done in the back rooms of taverns in various cities and towns, where the buyers and sellers made their own rules. After drinking a few beers in a candle-lit room thick with pipe tobacco smoke, a florist might make a decision based on wishful thinking: "These little tulip bulbs will make me rich man in a couple of weeks! I'll bet all of my money on it!"

One aspect of the tulip trade was especially risky: the exchange often happened with a piece of paper. The buyer did not actually see the bulbs he was buying, much less the flowers that they might produce. In many cases, the bulbs being sold were still in the ground, their blossoms yet to come! Only a scrap of paper changed hands.

Market Mania and Crash

During 1636, prices in the tulip market doubled, and then doubled again. The tulip market reached its peak at an auction on February 5, 1637 in the town of Alkmaar, 19 miles from Amsterdam. A bulb and offset of a rare variety named Admirael van Enkhuizen sold for 5,200 guilders--more than five times the price of a modest urban house at that time. The auction, held to raise money for an orphanage, marked the high point of tulipmania.

News of the Alkmaar auction spread, and people began to realize how absurd it was to pay so much money for a flower bulb. Within days of the auction, the whole tulip market crashed. A bulb that sold for 5,000 guilders prior to the collapse sold for 50 guilders afterwards. As quickly as fortunes were made during the rise of the tulip market, they were lost during the fall. Florists holding notes for future tulip crops found that these pieces of paper, recently worth a fortune, were now mostly worthless.

A Cartoon View

Almost immediately after the crash of the tulip market, critics began to ridicule the tulip traders. A famous painting from that time depicts the florists as monkeys engaged in mischief. Popular pamphlets made fun of the inexperienced florists. Ministers gave sermons about the evils of greed. From this ridicule came the term "tulipmania."

Some websites today will tell you that the 1637 crash of the tulip market was a big disaster for the whole nation. But is this an accurate portrayal of what happened? Financial and legal records from this period do not support this view. Although the Dutch economy did experience a slight downturn in 1637, the Dutch Republic continued to thrive until the end of the 17th century.

Many courts refused to hear lawsuits about tulip sales because the florists were usually not wealthy. It would have been a waste of time and money to take such men to court. Only one case of bankruptcy related to tulipmania has been found. An artist named



Jan van Goyen went bankrupt as a result of losses he experienced both in the tulip trade and in real estate.

Market Reform

The experience of tulipmania sparked reform. Some investors and tulip growers asked the Dutch government to regulate the buying and selling of tulip bulbs. The rules and practices that were created helped stabilize the tulip market. These rules form the basis of regulations that govern the large tulip market in the Netherlands today.

Today, the flower industry in the Netherlands has become mechanized to a great degree. But there are stil seasonal workers who help during the summer, autumn, and winter months. They harvest and pack cut flowers. They "lift" the plants from the ground once the flowers have finished flowering, dry the bulbs, and replant them. This is the best way to grow and propagate healthy tulip plants in the Netherlands and in your own garden.

Tulips are a major industry in the Netherlands and are a symbol of that country. But nobody today expects to become a millionaire from a handful of tulip bulbs. That would be crazy!

Questions about Tulipmania

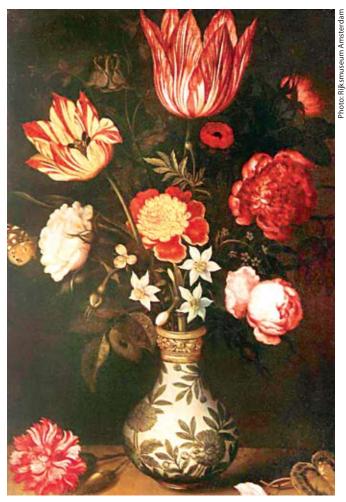
Now that you have read about the history of tulipmania and graphed tulip prices from the 1600s, answer the questions below.

- In what year did tulipmania end?
- In what nation did tulipmania happen?
- Who was involved in tulipmania? 3.
- What is one reason that the prices of tulip bulbs rose to such heights?
- What is one reason that the prices eventually collapsed?
- What evidence shows that tulipmania was not a disaster for the whole nation?
- 7. How did government get involved in the aftermath of tulipmania?

Above: "Still Life with Flowers in a Wan-li Vase." Ambrosius Bosschaert, I. Oil on copper (1619).

Below: Farm worker's hands with tulips in Holland.

Opposite: "The Game of Cards" by Flemish artists David Teniers, the Younger (1610-1690).





Handout 3

A Tulip Timeline



Before 1000 C.E.	Tulips probably originated in central Asia: specifically in Armenia, Persia and the Caucasus
1000 C.E.	Written records show that tulips were in cultivation in Turkey.
1100	An image of tulips decorate the initials of an Italian Bible.
12th century	The Persian mathematician Omar Khayyam writes a poem about tulips.
13th century	The Persian poet and mystic Rumi sings in praise of tulips.
1520–1566	The Ottoman Empire's "Tulip Age" takes place in Turkey under Suleiman II, who loved elaborate gardens.
1568	First portrayal of a tulip in a Dutch book.
1578	First tulip is brought to England.
1593	A famous, elderly botanist, Carolus Clusius, plants a handful of tulip bulbs in a small garden at the University of Leiden. The Dutch consider this act to be the birth of their famous flower business. The new flower catches the nation's fancy. Within seven years, just a few Dutch tulip growers dominate the market—and do so for about 150 years.
1600s	Rembrandt and other Dutch masters feature tulips in their paintings. The development of a lively trade in tulip bulbs results in wild speculation: tulipmania! After prices fall, cartoonists make fun of tulip traders, called <i>bloemisten</i> , which means "florists" in Dutch.
1700–1730	Mohammed Lalizari, a great tulip enthusiast, imports thousands of bulbs to Turkey from the Netherlands—and fuels a new tulipmania in Turkey!
18th century	The hyacinth rises in popularity in Europe. Around 1730 there is some speculation in hyacinths.
1928-1943	Scientists identify the viruses that create bloembreking ("broken bulbs"), but also begin replicating the breaking of solid color in healthy, virus-free tulips, by crossbreeding. (See the painting above.)
1943	D.W. Lefeber crosses tulip varieties to create enormous red tulips, known as Darwin Hybrids. The most famous one is Apeldoorn (meaning "thornapple"), named for a city in the Netherlands.
1960	A trip by carriage from Turkey to the Netherlands commemorates the existence of tulips in Western Europe for 400 years.
1977	Introduction of "ice tulips": sustained coolness forces off-season flowering.

Source: Bulbs Online. www.prod.bulbsonline.org, and The Bulb Project (IBC), www.thebulbproject.com

Dutch Tulips: What's in a Name?

North-Holland and South-Holland are two provinces in the western part of the country called **the Netherlands.** The name "Holland" is sometimes used to refer to the whole of the Netherlands, although this is not formally correct.

Most tulip bulbs sold by the Dutch are propagated and grown in Holland, which has the sandy, well-dranined soil that tuplips need. Holland also contains the Netherlands' three largest cities: the nation's capital, **Amsterdam**; the largest port, **Rotterdam**; and the nation's seat of government, **The Hague**.

The Dutch constitution of 1815 states that the **capital** shall be Amsterdam, where coronations and other ceremonies occur. **Parliament** and most government offices, however, are located in The Hague, the actual center of the nation's **representative democracy.**

The word **Dutch** is a noun (the people and language of the Netherlands) and an adjective (for example, Dutch literature and art).

Flemish refers to the people and the Dutch dialect spoken in Flanders—a historic region that includes the southwestern Netherlands, northwest Belgium, and parts of northern France. The word is also an adjective describing things from this region.





Jane Jacobs: A Citizen Fights for the Neighborhood

Genius of Common Sense: Jane Jacobs and the Story of "The Death and Life of American Cities" by Glenna Lang and Marjory Wunsch. Boston, MA: David R. Godine, 2009. 128 pages. Hardcover. \$17.95.

Reviewed by Wendy Ewbank

The name Jane Jacobs was not "on my radar," despite the fact that I teach seventh grade in an all girls' middle school with a mission to inspire our students to be agents of social change. This alone makes reading Glenna Lang and Marjory Wunsch's *Genius of Common Sense: Jane Jacobs and the Story of "The Death and Life of American Cities"* a valuable endeavor. Jacobs' activism and focus on preserving a vital community in American cities make her perhaps even more relevant in the 21st century than in her lifetime (1916–2006).

In the November 2009 issue of *Harper's Magazine*, journalist Richard Rodriguez discusses the twilight of American newspapers in our time as a signal of the larger loss of a sense of place in many of our cities. Today's conforming influences are chain stores and cyber technology; in the 1940s and '50s, it was suburbanization and public housing (high-rise apartment projects). Traditional neighborhoods were also being destroyed to accommodate expressways and other massive constructions. Jane Jacobs confronted these forces with tenacity and skill in male-dominated political and professional environments.

Jacobs' most well known achievement is her book *The Death and Life of Great American Cities* (published in 1961), a precedent-setting text for architects and city planners, which advocates mixed-use neighborhoods, where small businesses, entertainment venues, and housing coexist. *Genius of Common Sense*—as its title suggests—explores Jacobs' unconventional schooling and career, which was truly interdisciplinary. Jacobs was a model of self-motivated, lifelong learning (she did not attend college) and working motherhood. So how might *Genius of Common*

Sense be used in the classroom? One way would be to apply Jacobs's insights and recommendations to land use policies in our own communities. Classes could research issues facing their school neighborhood, based on interviews with local residents, community organizations, business owners, and urban planning staff or city councilors. Students could record their own observations in a neighborhood mapping activity. Issues might include the impacts (positive and negative) of immigration or development projects (proposed or implemented), or the problems of re-segregation, crime, discrimination, isolation, or economic decline. A service project initiated by the class would be an ideal way to move this study from the "what?" and "so what?" to the now what?"

A discussion of a controversial issue would be an especially effective way to draw out a major theme in the book: that demolition and "urban renewal" projects in struggling urban neighborhoods (a favored policy in the post-World War II period) were misguided, and actually diminished safety and vibrancy in cities.

Another classroom application would, of course, focus on Jacobs' biography. A project I've had success with at Seattle Girls' School is a "living" portrayal of a female activist, in which students read a biography of a well-known change agent and summarize her life and accomplishments in an oral presentation in character. Students prepare a timeline (like the one in this book) of major events in the subject's life alongside a timeline of major events in U.S., world, or regional history.

Genius of Common Sense has illustrations on almost every page, with black and white historical photos and pencil drawings by each of the authors. The book is clearly a source of much food for thought. There are, however, a few weaknesses in the book. The most notable absence is Jacobs' own voice. Despite numerous references to the power of her oratory and persuasive writing, this book includes only a few quotes or excerpts (even from her seminal book). Readers aren't given the words that we are told were transformative enough to inspire a revolution in city planning. Instead, several of Jacobs' quoted lines relate to *feelings* (about her surroundings, or when first in love)

It would be useful to have more facts illustrating the problems faced by inner cities in the years of Jacobs' life (ie: statistics on poverty, large-scale immigration, white flight to the suburbs, and crime). Firsthand accounts of city residents—maybe some as recorded by Jacobs herself—would also help put a human face on these issues.

Finally, while the authors do mention youth involvement in two of Jacobs' campaigns (to save Washington Square in 1958 and the West Village in 1961), it would be great to expand on young people's contributions at that time, which might be of interest to young activists today.

Indeed, a powerful facet of this book is its identification of so many tactics of effective grassroots organizing: surveys, pamphlets, petitions, peaceful demonstrations, door-to-door canvassing, testifying at hearings, and writing letters and editorials. Students can see that concerted actions and coalition building among a variety of stakeholders are required to achieve change. As Jane Jacobs' life evidences, perseverance and conviction are crucial.

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A Crossword Puzzle for Higher-Order Thinking

James Monack

ne of the educational websites I find very useful, EdHelper.com, offers a free crossword puzzle generator. A teacher plugs in clues and answers to the generator, which instantly creates a custom crossword puzzle.¹ You can make a puzzle which simply tests students' memory of events, places, and historical persons, or you can challenges students to use higher-order thinking skills as they attack the puzzle.² The trick to creating a puzzle that calls for students to think more deeply is to write clues that are, well, cryptic.

For instance, a simple clue would be, "The first president of the United States." While this is a perfectly legitimate clue for testing memory, it would not make students pause to think, as would this clue: "Yorktown hero and then two terms." The latter question requires students to bring more knowledge to the problem and to resolve some ambiguity: Yorktown hero? There was probably more than one hero. Two terms? For which office? And for whom is this sequence of events true?

Another option is to create a clue that is a famous quote. Or you could create a statement that the famous figure conceivably could have said. Some examples might be, "Outnumbered by lobsterbacks, I knew we could still win." Or, "Our only chance for survival was to cross that freezing river." Or, "I knew I could have been King, but I chose the republic." (I make it clear to students that these are not actual quotes.)

The answer to all five clues above is "George Washington," but the last four require a student to put his or her base of knowledge to work and analyze meaning.

Out of the ten or so clues I might create for a puzzle, half may require simple memory. These are for the student who may be new to analytical thinking, or whose homework was "eaten by the pooch." He or she can nail a few of the clues and feel encouraged to go on. The other five clues will be more challenging, even cryptic.

Occasionally I will list a tougher clue, and then offer an easier clue for the same item. For example, the first clue could state, "6 Down: He wrote 'All men are created equal,' yet he enslaved people." Further on in the list of clues, a student would find: "6 Down: Main author of the Declaration of Independence." The answer to both questions is "Thomas Jefferson," but the first clue is more difficult. I usually create higher-order clues for the bulk of the assignment, but the clues can be adjusted for the level of each class.

As a final twist, you can create a "leap-frog" puzzle by finding letters, among the various answers, that spell the name of a notable figure or event. Students can use the leapfrog to verify that their other answers are all correct. (See the leapfrog "Franklin" on the sample crossword puzzle on the back page.)

As students begin working on a crossword puzzle, I make my way around the room, checking each student's progress. I might drop a hint to help a struggling student with a particularly troublesome clue. Students who simply attempt to plug in the letters of familiar words will never finish the puzzle. Thinking about the content of the reading or previous lessons is the only approach that works. Thus, students have been challenged to think critically, and are put on notice that mere memorization is no longer a safe way to get a good mark on the upcoming unit test.

Occasionally a student will protest that some of the clues are nonsense, which

serves as an opportunity for discussion. I will help a student connect what he or she does know with the meaning of the words in the clue.

Towards the end of the period, we review the answers. Students never leave the class without a completed crossword, which then serves as a study guide.

The puzzle is an assignment that takes 15 minutes to create and can keep students focused for 45 minutes. You can create one as a summary activity for any unit of study or as part of a semester review. Of all the tricks I have in my teaching bag, this one has been the most consistent for engaging students. All it requires is teacher creativity and a willingness to be bit, well, cryptic.

Notes

- EdHelper.com, "created by a team of teachers," aims to provide teachers with a wide array of educational resources. The crossword puzzle engine is free, but there is a fee to subscribe to the full website.
- Benjamin S Bloom, ed., Taxonomy of Educational Objectives, Handbook 1: Cognitive Domain (New York: Addison Wesley, 1956).

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TEACHER'S ANSWER KEY

- 1. Lexington
- 2. BostonMassacre
- 3. BostonTeaParty
- 4. BunkerHill
- 5. Representation
- 6. Townhall
- 7. Jefferson
- 8. Intolerable
- 9. Revere
- 10. Minutemen (or Minuteman)

Leapfrog: Franklin (who was rather athletic in his youth, swimming with frog-like fins that he invented, and lifting weights. "Ribbit!")



A Revolutionary Puzzle

A challenging crossword puzzle by James Monack and the online crossword generator at EdHelper.com.

CLUES

Leave no space between multiple words, such as VALLEYFORGE

PUZZLE GRID

Do	own			6				1		2		
1.	The shot heard round the world.	-	 									5
2.	It was just a snowball fight, but											
	the Redcoats had guns. (Two words)						3					
3.	Ha! We will dress like Indians! (Three words)	7							4			
		ľ		$ (\)$								
4.	The whites of their Eyes (Two words)											
5.	If you are going to tax us, we want!											
						8						
Across												
6.	Democracy took root in meetings. (two words)		9									
7.	Main author of the Declaration of Independence. (last name)											
8.	Quartering British troops in our homes is											
9.	He yelled, "The British are coming!" (last name)											
10	. Ready to fight in 60 seconds.			10								
Ci	rap Frog rcled letters, reading left-to-right,											
	ell the last name of an elderly unding father.	W	B	-		(D)=(-	New York	- 1	17	量 1



Middle Level Learning
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