

1 01:00:17:24 01:00:20:25 AMERICA EXPERIENCES A GREAT
SURGE OF COMMERCIAL DEVELOPMENT

2 01:00:20:27 01:00:23:12 TECHNOLOGICAL INNOVATION
AND INDUSTRIAL GROWTH

3 01:00:23:14 01:00:26:01 AT THE BEGINNING
OF THE 19th CENTURY.

4 01:00:26:03 01:00:27:11 Man:
YOU CAN'T JUST DECLARE IT

5 01:00:27:13 01:00:30:20 AND SAY WE HAVE THIS
FASCINATION WITH GADGETRY

6 01:00:30:22 01:00:32:08 TECHNOLOGY HAS DONE
SO MUCH FOR US

7 01:00:32:10 01:00:33:25 AND WE BECOME WORLD LEADERS.

8 01:00:33:27 01:00:35:09 WELL, HOW DID THAT HAPPEN?

9 01:00:35:11 01:00:37:27 THE LEGAL SYSTEM
CHANGES DRAMATICALLY

10 01:00:37:29 01:00:39:09 IN ORDER TO ENCOURAGE

11 01:00:39:11 01:00:40:26 INDIVIDUALISTIC
ECONOMIC COMPETITION

12 01:00:40:28 01:00:42:08 PRECISELY IN THIS PERIOD.

13 01:00:42:10 01:00:44:25 THIS IS ALSO A STORY
ABOUT WINNERS AND LOSERS.

14 01:00:44:27 01:00:46:12 I MEAN,
SOMEBODY'S PAYING

15 01:00:46:14 01:00:49:12 FOR THE ECONOMIC TECHNOLOGICAL
DEVELOPMENT OF THE NATION

16 01:00:49:14 01:00:51:28 SO, YES, THE QUESTION,
"HOW DO I DO THAT..."

17 01:00:52:00 01:00:53:28 THE ENERGY, EXCITEMENT
AND PERILS

18 01:00:54:00 01:00:56:10 OF "THE RISE OF CAPITALISM"

19 01:00:56:12 01:00:59:03 TODAY ON
A BIOGRAPHY OF AMERICA.

20 01:01:07:10 01:01:10:03 [Captioning sponsored
by ANNENBERG/CPB]

21 01:01:32:18 01:01:37:29 IN 1800, AMERICA WAS UNDERGOING
NOT ONE, BUT TWO REVOLUTIONS--

22 01:01:38:01 01:01:40:27 ONE POLITICAL,
THE OTHER ECONOMIC.

23 01:01:40:29 01:01:43:08 THE FORCES UNLEASHED
BY THESE TWIN REVOLUTIONS

24 01:01:43:10 01:01:46:09 DEMOCRACY, INDUSTRIALIZATION
AND CAPITALISM

25 01:01:46:11 01:01:47:24 DEVELOPED IN TANDEM

26 01:01:47:26 01:01:50:09 AND TRANSFORMED THE LOOK AND
CHARACTER OF THE COUNTRY.

27 01:01:50:11 01:01:51:17 THERE'S A WORLD OF DIFFERENCE

28 01:01:51:19 01:01:53:06 BETWEEN THE AMERICA
OF THOMAS JEFFERSON

29 01:01:53:08 01:01:54:16 AND THAT OF THEODORE ROOSEVELT.

30 01:01:55:23 01:01:57:29 IN 1801, WHEN JEFFERSON
WAS INAUGURATED

31 01:01:58:01 01:02:01:23 THE UNITED STATES WAS
A NEW, UNDERDEVELOPED COUNTRY

32 01:02:01:25 01:02:04:05 OF JUST OVER
FIVE MILLION PEOPLE.

33 01:02:04:07 01:02:06:25 ALTHOUGH IT WAS A COUNTRY
SHAPED BY IMMIGRATION

34 01:02:06:27 01:02:08:25 IMMIGRANTS FROM ONE
COUNTRY, ENGLAND

35 01:02:08:27 01:02:10:14 MADE UP HALF THE POPULATION.

36 01:02:10:16 01:02:11:28 SOME ADVENTUROUS PIONEERS

37 01:02:12:00 01:02:14:09 HAD MOVED WEST
OF THE APPALACHIAN MOUNTAINS

38 01:02:14:11 01:02:16:22 BUT AMERICA WAS STILL
A SEACOAST SETTLEMENT

39 01:02:16:24 01:02:18:14 HUGGING THE ATLANTIC SHORELINE.

40 01:02:18:16 01:02:21:26 IT WAS A PROSPEROUS NATION,
BUT IT LAGGED FAR BEHIND ENGLAND

41 01:02:21:28 01:02:23:25 WHICH WAS
INDUSTRIALIZING FURIOUSLY

42 01:02:23:27 01:02:26:08 AND WITH ONLY TEN PERCENT
OF ITS POPULATION

43 01:02:26:10 01:02:27:23 LIVING IN CITIES AND TOWNS

44 01:02:27:25 01:02:29:27 IT WAS STILL
OVERWHELMINGLY AGRARIAN.

45 01:02:29:29 01:02:32:09 IN 1801, ALL THIS
WAS ABOUT TO CHANGE

46 01:02:32:11 01:02:35:02 AND THE CHANGE WOULD BE
SUDDEN, EXPLOSIVE

47 01:02:35:04 01:02:36:20 AND DEEPLY DISORIENTING.

48 01:02:36:22 01:02:37:28 IN THE NEXT CENTURY

49 01:02:38:00 01:02:41:02 THE NATION'S BOUNDARIES
WOULD EXPAND ENORMOUSLY

50 01:02:41:04 01:02:43:23 THE RESULT OF A RELENTLESS
WESTWARD PUSH

51 01:02:43:25 01:02:45:09 AND AS AMERICA EXPANDED

52 01:02:45:11 01:02:47:24 IMMIGRATION, CAPITALISM
AND TECHNOLOGY

53 01:02:47:26 01:02:51:15 WOULD RESHAPE THE LAND,
OLD PLACES AS WELL AS NEW ONES.

54 01:02:52:26 01:02:55:17 IN 1901, WHEN THEODORE ROOSEVELT
BECAME PRESIDENT

55 01:02:55:19 01:02:58:23 WHEN 77 MILLION AMERICANS
LIVED IN A CONTINENTAL EMPIRE

56 01:02:58:25 01:03:00:23 THAT STRETCHED FROM SEA TO SEA

57 01:03:00:25 01:03:03:26 AND ROOSEVELT'S AMERICA WAS
A VERITABLE NATION OF NATIONS

58 01:03:03:28 01:03:08:22 A MELTING POT FOR OVER
30 NATIONALITIES.

59 01:03:08:24 01:03:12:02 40% OF AMERICANS STILL
WORKED IN FARMS IN 1900

60 01:03:12:04 01:03:14:17 BUT AN EQUAL NUMBER
LIVED IN CITIES

61 01:03:14:19 01:03:17:28 AND BY THIS TIME,
AMERICA HAD SURPASSED ENGLAND

62 01:03:18:00 01:03:20:29 AS A LEADING INDUSTRIAL
NATION ON EARTH.

63 01:03:21:01 01:03:25:02 THE FORCES RESPONSIBLE FOR
THESE SWEEPING TRANSFORMATIONS

64 01:03:25:04 01:03:28:04 WERE GATHERING
AS THE 19th CENTURY BEGAN.

65 01:03:28:06 01:03:30:07 THE AMERICAN REVOLUTION
BROKE THE BACK

66 01:03:30:09 01:03:32:16 OF STATE-REGULATED
MERCANTILE CAPITALISM

67 01:03:32:18 01:03:34:20 AND OPENED THE WAY
FOR A MARKET REVOLUTION

68 01:03:34:22 01:03:37:15 THAT PRODUCED THE WORLD'S
MOST DYNAMIC ECONOMIC SYSTEM.

69 01:03:37:17 01:03:39:06 THIS WAS THE KIND OF CAPITALISM

70 01:03:39:08 01:03:41:05 THAT ADAM SMITH,
THE SCOTTISH ECONOMIST

71 01:03:41:07 01:03:44:04 HAD CALLED FOR IN HIS MASTER
WORK, *THE WEALTH OF NATIONS*

72 01:03:44:06 01:03:46:28 WHICH WAS PUBLISHED,
INTERESTINGLY, IN 1776.

73 01:03:48:07 01:03:49:29 SMITH ARGUED THAT
THE PRODUCTION OF WEALTH

74 01:03:50:01 01:03:51:15 WOULD INCREASE DRAMATICALLY

75 01:03:51:17 01:03:54:01 IF INDIVIDUALS WERE ALLOWED
TO PURSUE THEIR SELF-INTERESTS

76 01:03:54:03 01:03:55:25 WITH LITTLE INTERFERENCE
FROM GOVERNMENT

77 01:03:55:27 01:03:57:22 AND IN SERVING
THEIR OWN INTERESTS

78 01:03:57:24 01:03:59:27 INDIVIDUALS WOULD SERVE
THE PUBLIC INTEREST

79 01:03:59:29 01:04:04:17 UNCONSCIOUSLY, AS IF GUIDED
AS HE SAID, BY AN UNSEEN HAND.

80 01:04:04:19 01:04:07:18 BETTER THE UNSEEN HAND,
THAN THE HAND OF THE STATE.

81 01:04:07:20 01:04:10:23 HERE WERE RADICALLY NEW IDEAS,
BUT NOT TO AMERICANS.

82 01:04:10:25 01:04:12:08 SMITH'S THEORY COINCIDED

83 01:04:12:10 01:04:15:23 WITH A LONG DEVELOPING AMERICAN
TRADITION OF INDIVIDUALISM

84 01:04:15:25 01:04:18:09 AND OPPOSITION
TO GOVERNMENT INTERFERENCE.

85 01:04:18:11 01:04:20:04 AMERICA, NOT BRITAIN, WOULD BE

86 01:04:20:06 01:04:22:28 THE GREAT TESTING GROUND
OF ADAM SMITH'S IDEAS.

87 01:04:23:00 01:04:24:28 ALMOST EVERYONE RECOGNIZES SMITH

88 01:04:25:00 01:04:27:16 AS THE FOUNDER
OF LAISSEZ-FAIRE ECONOMICS.

89 01:04:27:18 01:04:31:01 LESS WELL-KNOWN ARE HIS IDEAS
ABOUT THE DIVISION OF LABOR.

90 01:04:31:03 01:04:33:02 THE DIVISION OF LABOR,
HE INSISTED

91 01:04:33:04 01:04:36:00 WOULD GREATLY IMPROVE
THE EFFICIENCY OF WORKERS.

92 01:04:36:02 01:04:37:10 TO MAKE HIS POINT

93 01:04:37:12 01:04:40:01 SMITH DESCRIBED
THE WORKINGS OF A PIN FACTORY.

94 01:04:40:03 01:04:43:22 ONE PERSON MAKING A PIN,
COULD MAKE PERHAPS, ONE IN A DAY

95 01:04:43:24 01:04:45:00 MAYBE A FEW MORE

96 01:04:45:02 01:04:47:14 BUT IF THE JOB WERE DIVIDED

INTO TEN PARTS
 97 01:04:47:16 01:04:49:01 AND GIVEN TO TEN WORKERS
 98 01:04:49:03 01:04:51:15 EACH PERFORMING
 A SPECIALIZED FUNCTION
 99 01:04:51:17 01:04:54:20 A SMALL FACTORY COULD TURN
 OUT 48,000 PINS A DAY.
 100 01:04:54:22 01:04:56:03 THIS WAS THE ASSEMBLY LINE
 101 01:04:56:05 01:04:58:05 A CENTURY AND A HALF
 BEFORE HENRY FORD
 102 01:04:58:07 01:04:59:29 WAS CREDITED WITH INVENTING IT.
 103 01:05:00:03 01:05:01:23 AT THE TURN OF THE 18th CENTURY
 104 01:05:01:25 01:05:04:04 AMERICA BEGAN TO CHANGE
 ALMOST IN ACCORDANCE
 105 01:05:04:06 01:05:05:07 WITH SMITH'S IDEAS.
 106 01:05:05:09 01:05:06:11 WHAT WE COMMONLY CALL
 107 01:05:06:13 01:05:08:07 THE AMERICAN
 INDUSTRIAL REVOLUTION
 108 01:05:08:09 01:05:10:12 WAS ACTUALLY TWO
 CONVERGING REVOLUTIONS
 109 01:05:10:14 01:05:14:03 A TECHNOLOGICAL REVOLUTION,
 BASED ON THE DIVISION OF LABOR
 110 01:05:14:05 01:05:15:25 AND A COMMERCIAL REVOLUTION
 111 01:05:15:27 01:05:19:00 POWERED BY A DEEP FAITH
 IN ECONOMIC INDIVIDUALISM
 112 01:05:19:02 01:05:20:26 AND UNRESTRAINED COMPETITION.
 113 01:05:20:28 01:05:23:13 THE AMERICAN INDUSTRIAL
 REVOLUTION BEGAN
 114 01:05:23:15 01:05:25:17 WITH AN ACT
 OF ECONOMIC ESPIONAGE.
 115 01:05:25:19 01:05:28:18 IN 1789, AN ENGLISH MECHANIC
 NAMED SAMUEL SLATER
 116 01:05:28:20 01:05:31:25 LEFT HIS COUNTRY FOR AMERICA,
 DISGUISED AS A FARMER.
 117 01:05:31:27 01:05:34:18 IN HIS HEAD WERE
 THE CLOSELY GUARDED SECRETS
 118 01:05:34:20 01:05:36:21 OF BRITISH TEXTILE
 MANUFACTURING.
 119 01:05:36:23 01:05:39:28 THE FOLLOWING YEAR, SLATER
 BUILT A MILL FROM MEMORY
 120 01:05:40:00 01:05:41:17 AT PAWTUCKET, RHODE ISLAND
 121 01:05:41:19 01:05:44:05 WITH THE BACKING
 OF TWO LOCAL CAPITALISTS.
 122 01:05:44:07 01:05:46:04 IT WAS AMERICA'S FIRST FACTORY.
 123 01:05:46:06 01:05:48:28 SLATER'S MILL WAS A PLACE
 FOR MAKING TEXTILES
 124 01:05:49:00 01:05:51:02 THE WOVEN FABRICS
 USED FOR CLOTHING
 125 01:05:51:04 01:05:53:02 AND HUNDREDS OF OTHER PRODUCTS.
 126 01:05:53:04 01:05:55:00 THE COTTON CLOTH
 WAS MANUFACTURED
 127 01:05:55:02 01:05:57:08 BY SPINNING MACHINES
 POWERED BY WATER.
 128 01:05:57:10 01:05:59:12 SINCE AMERICA HAD
 NOT YET DISCOVERED
 129 01:05:59:14 01:06:00:24 GREAT DEPOSITS OF COAL
 130 01:06:00:26 01:06:02:28 ITS EMBRYONIC

INDUSTRIAL REVOLUTION

131 01:06:03:00 01:06:04:08 WOULD BE A REVOLUTION

132 01:06:04:10 01:06:06:28 PRIMARILY IN WATER-POWERED
TEXTILE PRODUCTION.

133 01:06:07:00 01:06:09:11 SLATER'S BIGGEST PROBLEM
WAS FINDING LABORERS.

134 01:06:09:13 01:06:11:22 UNABLE TO INDUCE FARMERS
TO WORK IN HIS MILL

135 01:06:11:24 01:06:13:15 HE HIRED ORPHANS
AND POOR CHILDREN

136 01:06:13:17 01:06:15:14 WHO WERE WARDS
OF THE TOWN GOVERNMENT

137 01:06:15:16 01:06:17:22 PAYING THEM 25 CENTS A WEEK.

138 01:06:17:24 01:06:20:25 THIS WAS AMERICA'S FIRST
INDUSTRIAL WORKFORCE.

139 01:06:20:27 01:06:26:09 A NEW AGE HAD BEGUN AND IT WAS
THE CAUSE OF CONCERN AND DEBATE.

140 01:06:27:22 01:06:30:03 WHEN ALEXANDER HAMILTON
HEARD ABOUT SLATER'S MILL

141 01:06:30:05 01:06:31:29 HE CELEBRATED ITS BIRTH
A YEAR LATER

142 01:06:32:01 01:06:33:28 IN HIS FAMOUS
REPORT OF MANUFACTURERS

143 01:06:34:00 01:06:36:26 WHICH LAID OUT THE ADVANTAGES
OF INDUSTRIAL DEVELOPMENT

144 01:06:36:28 01:06:38:11 FOR THE UNITED STATES.

145 01:06:38:13 01:06:41:01 THOMAS JEFFERSON WAS LESS
SANGUINE ABOUT SLATER'S MILL.

146 01:06:41:03 01:06:43:01 JEFFERSON LOVED SCIENCE
AND TECHNOLOGY.

147 01:06:43:03 01:06:46:15 HE EXPERIMENTED WITH MECHANICAL
GADGETS AND LABOR-SAVING DEVICES

148 01:06:46:17 01:06:48:21 AND TURNED MONTICELLO
INTO A WONDER PLACE

149 01:06:48:23 01:06:50:08 OF TECHNOLOGICAL CONTRIVANCES.

150 01:06:50:10 01:06:52:28 BUT JEFFERSON WORRIED
ABOUT THE NEW FACTORY SYSTEM

151 01:06:53:00 01:06:54:17 THAT HAD SPRUNG UP IN ENGLAND

152 01:06:54:19 01:06:57:20 AND WAS NOW THREATENING TO MAKE
ITS APPEARANCE IN AMERICA.

153 01:06:59:18 01:07:01:11 JEFFERSON ASSOCIATED
INDUSTRIALIZATION

154 01:07:01:13 01:07:02:27 WITH MANCHESTER

155 01:07:02:29 01:07:05:14 THE RECKLESSLY EXPANDING CITY
THAT HAD BECOME THE CENTER

156 01:07:05:16 01:07:07:08 OF THE BRITISH COTTON INDUSTRY.

157 01:07:07:10 01:07:10:28 IT WAS A CITY OF FABULOUS WEALTH
AND UNIMAGINABLE WRETCHEDNESS

158 01:07:11:00 01:07:14:00 A PLACE WHERE RIVERS HAD BEEN
TURNED INTO BLACK SEWERS

159 01:07:14:02 01:07:15:29 AND WORKERS INTO
INDUSTRIAL SLAVES.

160 01:07:16:01 01:07:19:09 ON A VISIT THERE, THE FRENCH
WRITER, ALEXIS DE TOCQUEVILLE

161 01:07:19:11 01:07:21:27 CAPTURED MANCHESTER'S
PARADOXICAL COMBINATION

162 01:07:21:29 01:07:24:16 OF ECONOMIC INGENUITY
 AND SOCIAL BACKWARDNESS.
 163 01:07:45:17 01:07:46:26 JEFFERSON KNEW
 164 01:07:46:28 01:07:49:05 THAT AMERICA COULDN'T ESCAPE
 INDUSTRIALIZATION
 165 01:07:49:07 01:07:51:25 BUT HE HOPED THAT AMERICAN
 FACTORIES COULD BE PLACED
 166 01:07:51:27 01:07:53:12 IN THE COUNTRYSIDE
 167 01:07:53:14 01:07:55:15 AND WORKED BY FARM FAMILIES
 WITH STRONG DEMOCRATIC VALUES.
 168 01:07:55:17 01:07:57:01 THAT WAY, WE COULD INDUSTRIALIZE
 169 01:07:57:03 01:07:59:08 WITHOUT ENDANGERING
 OUR REPUBLICAN INSTITUTIONS
 170 01:07:59:10 01:08:02:06 AND CREATING AN ENTRENCHED
 URBAN PROLETARIAT.
 171 01:08:02:08 01:08:05:07 SAMUEL SLATER TRIED THIS
 FAMILY SYSTEM OF PRODUCTION
 172 01:08:05:09 01:08:08:16 IN NEW ENGLAND, AFTER HIS
 EXPANDING SYSTEM OF FACTORIES
 173 01:08:08:18 01:08:10:09 RAN OUT OF CHILDREN TO EMPLOY.
 174 01:08:10:11 01:08:13:05 ALONG WITH HUNDREDS
 OF OTHER EARLY INDUSTRIALISTS
 175 01:08:13:07 01:08:16:06 SLATER BUILT AGRICULTURAL
 VILLAGES AROUND HIS MILLS
 176 01:08:16:08 01:08:18:07 TO ATTRACT DISPLACED
 FARM FAMILIES.
 177 01:08:18:09 01:08:21:19 THE FATHERS WORKED IN
 SUPERVISORY AND ANCILLARY JOBS
 178 01:08:21:21 01:08:24:11 AND THE WOMEN AND KIDS
 IN THE MILL ITSELF.
 179 01:08:24:13 01:08:27:02 SO AMERICAN INDUSTRY
 BEGAN IN THE COUNTRY
 180 01:08:27:04 01:08:28:04 NOT IN THE CITY
 181 01:08:28:06 01:08:30:08 AND REMAINED THERE
 FOR A LONG TIME
 182 01:08:30:10 01:08:32:25 FOR THAT'S WHERE
 THERE WAS FALLING WATER
 183 01:08:32:27 01:08:34:17 TO POWER THE NEW MACHINES.
 184 01:08:34:19 01:08:37:13 THE MOST PROMISING EXPERIMENT
 IN RURAL INDUSTRY
 185 01:08:37:15 01:08:40:18 WAS THE MODEL TOWN THAT
 HAD BEEN BUILT FROM SCRATCH
 186 01:08:40:20 01:08:42:17 IN THE 1820s,
 ON A BEAUTIFUL SPOT
 187 01:08:42:19 01:08:44:22 ON THE FALLS
 OF THE MERRIMACK RIVER
 188 01:08:44:24 01:08:46:00 NORTH OF BOSTON.
 189 01:08:46:02 01:08:48:18 IT WAS NAMED AFTER
 ANOTHER INDUSTRIAL SPY
 190 01:08:48:20 01:08:50:01 FRANCIS CABOT LOWELL.
 191 01:08:50:03 01:08:53:04 LOWELL, A BOSTON MERCHANT
 HAD GONE ON A TOUR
 192 01:08:53:06 01:08:54:26 OF BRITISH TEXTILE MILLS
 193 01:08:54:28 01:08:57:15 MEMORIZED THEIR
 TECHNOLOGICAL SECRETS
 194 01:08:57:17 01:09:01:28 AND ON HIS RETURN TO AMERICA,

195 01:09:02:00 01:09:03:16 BEGAN BUILDING A TEXTILE EMPIRE.
 196 01:09:04:25 01:09:07:00 LOWELL BECAME ITS QUEEN CITY.
 197 01:09:07:02 01:09:10:28 WHAT MADE LOWELL UNIQUE
 01:09:10:28 WAS ITS WORKFORCE.
 198 01:09:11:00 01:09:12:27 IT WAS MADE UP ALMOST ENTIRELY
 199 01:09:12:29 01:09:16:20 OF YOUNG, UNMARRIED WOMEN
 01:09:16:20 RECRUITED FROM LOCAL FARMS.
 200 01:09:16:22 01:09:17:25 TO ATTRACT THEM, A WHOLESOME,
 201 01:09:17:27 01:09:19:22 HANDSOMELY LANDSCAPED COMMUNITY
 01:09:19:22 WAS CONSTRUCTED
 202 01:09:19:24 01:09:21:04 THE AMERICAN ANSWER
 203 01:09:21:06 01:09:24:08 TO MANCHESTER.
 01:09:24:08 FOR A PROMISING MOMENT
 204 01:09:24:10 01:09:26:08 AMERICA LOOKED LIKE IT
 01:09:26:08 WOULD BE THE GREAT EXCEPTION
 205 01:09:26:10 01:09:29:26 THE ONLY COUNTRY
 01:09:29:26 TO INDUSTRIALIZE
 01:09:29:26 WITHOUT SAVAGING THE ENVIRONMENT
 206 01:09:29:28 01:09:33:04 OR DEBASING THE WORKERS.
 01:09:33:04 THE WOMEN OF LOWELL LIVED IN
 207 01:09:33:06 01:09:34:12 CLEAN, ORDERLY BOARDING HOUSES
 208 01:09:34:14 01:09:37:02 SUPERVISED BY MATRONS.
 01:09:37:02 THEY WORKED LONG HOURS,
 209 01:09:37:04 01:09:39:05 BUT THEY WERE FARM GIRLS
 01:09:39:05 WHO WERE USED TO
 210 01:09:39:07 01:09:42:17 A 70-HOUR WORK WEEK.
 01:09:42:17 WHAT WAS NEW, AND HARD TO ADJUST
 211 01:09:42:19 01:09:44:04 TO, WAS THE TIGHT DISCIPLINE
 212 01:09:44:06 01:09:47:11 IN THE NEW WORK ROUTINE.
 01:09:47:11 THE WOMEN WORKED TO THE PACE
 213 01:09:47:13 01:09:49:01 OF THEIR POWER-DRIVEN MACHINERY
 01:09:49:01 AND TO THE RHYTHMS
 214 01:09:49:03 01:09:51:26 OF THE CLOCK.
 01:09:51:26 THE BELLS IN THE CUPOLAS
 215 01:09:51:28 01:09:53:16 OVER THE MILLS AWOKE THEM
 216 01:09:53:18 01:09:55:13 AND CALLED THEM TO THEIR JOBS
 01:09:55:13 TO MEALS AND TO BED
 217 01:09:55:15 01:09:57:02 IN THE EVENING
 218 01:09:57:04 01:09:58:27 AND THE WORK WAS DIVIDED
 01:09:58:27 INTO BORING, HIGHLY
 219 01:09:58:29 01:10:00:16 SPECIALIZED TASKS.
 01:10:00:16 BUT THERE WERE COMPENSATIONS.
 220 01:10:00:18 01:10:03:21 IN THEIR OFF HOURS, THE WOMEN
 01:10:03:21 ATTENDED UPLIFTING LECTURES
 221 01:10:03:23 01:10:06:25 FORMED IMPROVEMENT GROUPS
 01:10:06:25 AND EDITED THEIR OWN MAGAZINE
 222 01:10:06:27 01:10:09:09 *THE LOWELL OFFERING.*
 223 01:10:13:29 01:10:15:08 FOR THE MILL OWNERS
 224 01:10:15:10 01:10:18:04 THE SECRET TO THE SYSTEM
 01:10:18:04 WAS THE ROTATING WORK FORCE.
 225 01:10:18:06 01:10:19:24 WHEN WORKERS BUILT UP A DOWRY
 226 01:10:19:26 01:10:22:20 OR HELPED SEND A BROTHER
 01:10:22:20 THROUGH COLLEGE, THEY LEFT.
 227 01:10:22:22 01:10:25:16 THIS MADE IT EASIER TO HANDLE
 01:10:25:16 INCREASING COMPLAINTS
 228 01:10:25:18 01:10:27:18 ABOUT PAY OR THE SPEED UP

OF THE WORK.
 229 01:10:27:20 01:10:29:23 THERE WERE SEVERAL STRIKES
 IN THE 1830s
 230 01:10:29:25 01:10:32:02 BUT THE AGITATORS
 WEREN'T THERE FOR LONG.
 231 01:10:32:04 01:10:35:14 THE LOWELL EXPERIMENT WAS
 KILLED, NOT BY LABOR DISCONTENT
 232 01:10:35:16 01:10:37:06 BUT BY TECHNOLOGICAL CHANGE.
 233 01:10:37:08 01:10:40:14 IN THE 1830s, STEAM POWER
 BEGAN TO REPLACE WATER POWER
 234 01:10:40:16 01:10:42:07 IN THE MILLS
 235 01:10:42:09 01:10:45:20 STEAM GENERATED BY NEWLY
 EXPLOITED PENNSYLVANIA HARD COAL
 236 01:10:45:22 01:10:47:07 OR ANTHRACITE.
 237 01:10:47:09 01:10:50:02 SLATER WAS THE FIRST TO BUILD
 LARGE, STEAM-DRIVEN FACTORIES
 238 01:10:50:04 01:10:51:21 BUT SOON OTHER COTTON MILLS
 239 01:10:51:23 01:10:53:27 MADE THE CONVERSION
 TO COAL AND STEAM.
 240 01:10:53:29 01:10:57:02 STEAM POWER MEANT BIGGER MILLS,
 FASTER PRODUCTION RUNS
 241 01:10:57:04 01:10:59:00 CLOSER SUPERVISION
 OF THE WORKERS
 242 01:10:59:02 01:11:02:22 AND A GREATER DIVISION OF LABOR,
 IN THE INTEREST OF EFFICIENCY
 243 01:11:02:24 01:11:04:01 AND WHEN THIS HAPPENED
 244 01:11:04:03 01:11:06:07 THE YOUNG YANKEE WOMEN
 BEGAN TO LEAVE.
 245 01:11:06:09 01:11:08:09 THEY WERE REPLACED
 BY IRISH WORKERS
 246 01:11:08:11 01:11:10:26 FLEEING THE POTATO FAMINE
 OF THE 1840s.
 247 01:11:10:28 01:11:13:19 THE DIFFERENCE WAS
 THE IRISH WOMEN STAYED;
 248 01:11:13:21 01:11:15:17 THEY WERE TOO POOR TO LEAVE.
 249 01:11:18:12 01:11:21:07 BY 1850, LOWELL WAS
 A SQUALID MILL TOWN
 250 01:11:21:09 01:11:22:27 A MINIATURE MANCHESTER
 251 01:11:22:29 01:11:25:19 WITH THE INDUSTRIAL SLAVERY
 JEFFERSON HAD WARNED ABOUT.
 252 01:11:25:21 01:11:27:15 MOST HISTORIANS HAVE IT WRONG.
 253 01:11:27:17 01:11:29:14 IT WAS THE END
 OF THE LOWELL EXPERIMENT
 254 01:11:29:16 01:11:31:21 NOT ITS BEGINNING,
 THAT MARKED THE ADVENT
 255 01:11:31:23 01:11:34:00 OF FULL-SCALE
 INDUSTRIAL CHANGE IN AMERICA
 256 01:11:34:02 01:11:36:13 IN THE AGE OF COAL, STEAM
 AND IMMIGRANT LABOR.
 257 01:11:39:23 01:11:42:03 WHILE THE FACTORY SYSTEM WAS
 EVOLVING IN THE NORTHEAST
 258 01:11:42:05 01:11:44:18 THE ENTIRE COUNTRY EXPERIENCED
 THE MARKET REVOLUTION
 259 01:11:44:20 01:11:47:00 THAT TIED THE EXPANDING
 NATION TOGETHER
 260 01:11:47:02 01:11:50:25 WITH ROADS, CANALS AND RAILROADS

AND CREATED MODERN CAPITALISM.
 261 01:11:50:27 01:11:53:28 THIS COMMERCIAL REVOLUTION
 REVOLVED AROUND AN AXIS
 262 01:11:54:00 01:11:56:23 THAT RAN FROM NEW YORK
 TO CHICAGO.
 263 01:11:56:25 01:12:00:21 TAKE A MAP, DRAW A LINE
 FROM NEW YORK UP TO BOSTON
 264 01:12:00:23 01:12:02:15 AND THEN SOUTH TO BALTIMORE.
 265 01:12:02:17 01:12:05:17 PUT YOUR HAND ON THE MAP AND
 MOVE IT ACROSS THE COUNTRY
 266 01:12:05:19 01:12:08:18 ALL THE WAY TO THE SOUTHERN TIP
 OF LAKE MICHIGAN
 267 01:12:08:20 01:12:11:09 STOP, YOU'RE IN CHICAGO.
 268 01:12:11:11 01:12:13:02 IT'S IN THIS GEOGRAPHIC CORRIDOR
 269 01:12:13:04 01:12:15:13 AND THE MISSISSIPPI VALLEY
 THAT SERVICED IT
 270 01:12:15:15 01:12:17:29 THAT THE COMMERCIAL REVOLUTION
 OF THE EARLY 19th CENTURY
 271 01:12:18:01 01:12:19:18 WAS CONCENTRATED.
 272 01:12:19:20 01:12:23:02 IN 1830, WHEN THEY BEGAN TO MAKE
 CONTACT WITH ONE ANOTHER
 273 01:12:23:04 01:12:25:26 NEW YORK AND CHICAGO WERE
 VASTLY DIFFERENT PLACES.
 274 01:12:25:28 01:12:27:24 NEW YORK WAS A THRIVING
 COMMERCIAL CENTER
 275 01:12:27:26 01:12:29:22 OF ALMOST A QUARTER
 OF A MILLION PEOPLE.
 276 01:12:29:24 01:12:32:04 IT HAD A SPECTACULAR GIFT
 FROM NATURE
 277 01:12:32:06 01:12:34:17 A SPACIOUS, SHELTERED,
 DEEP-WATER PORT
 278 01:12:34:19 01:12:37:04 THAT WAS CONNECTED
 TO THE INTERIOR OF THE COUNTRY
 279 01:12:37:06 01:12:38:08 BY THE HUDSON RIVER.
 280 01:12:38:10 01:12:39:21 AND ITS AGGRESSIVE MERCHANTS
 281 01:12:39:23 01:12:42:12 EXPLOITED THIS LOCATION
 TO MAXIMUM ADVANTAGE
 282 01:12:42:14 01:12:46:00 MAKING NEW YORK THE COUNTRY'S
 LEADING EXPORT AND IMPORT CENTER
 283 01:12:46:02 01:12:47:23 AMERICA'S CAPITAL OF COMMERCE.
 284 01:12:47:25 01:12:49:18 NEW YORK WAS A CITY OF THE SEA
 285 01:12:49:20 01:12:52:27 WITH AN ECONOMIC EMPIRE THAT
 WAS ABOUT TO GET FAR LARGER.
 286 01:12:55:12 01:12:58:07 IN 1825, THE ERIE CANAL
 OPENED FOR BUSINESS
 287 01:12:58:09 01:13:00:02 FROM BUFFALO, ON LAKE ERIE
 288 01:13:00:04 01:13:02:24 TO ALBANY AT THE HEAD
 OF THE HUDSON RIVER.
 289 01:13:02:26 01:13:05:14 THIS MADE NEW YORK THE ONLY PORT
 ON THE ATLANTIC COAST
 290 01:13:05:16 01:13:08:19 LINKED BY WATER TO WHAT
 WAS THEN THE AMERICAN WEST
 291 01:13:08:21 01:13:11:11 A THINLY SETTLED AREA
 EXTENDING OUT TO CHICAGO.
 292 01:13:13:28 01:13:16:22 THE ERIE CANAL LOWERED
 SHIPPING COSTS TREMENDOUSLY.

293 01:13:16:24 01:13:18:19 NOW PIONEERING FARMERS
 IN THE WEST
 294 01:13:18:21 01:13:21:00 COULD SHIP THEIR GRAIN,
 LUMBER AND SALTED PORK
 295 01:13:21:02 01:13:23:03 THROUGH FRONTIER LAKE PORTS
 LIKE DETROIT
 296 01:13:23:05 01:13:24:11 ALL THE WAY TO NEW YORK.
 297 01:13:27:14 01:13:29:04 AND NEW YORK COULD
 TRANSSHIP THEM
 298 01:13:29:06 01:13:30:23 ALMOST ANYWHERE IN THE WORLD
 299 01:13:30:25 01:13:32:21 WITH ITS MAGNIFICENT
 MERCHANT FLEET.
 300 01:13:32:23 01:13:34:18 THE CANAL THAT HELPED MAKE
 NEW YORK
 301 01:13:34:20 01:13:36:17 THE COUNTRY'S
 BUSIEST SALTWATER PORT
 302 01:13:36:19 01:13:37:27 WOULD SOON MAKE CHICAGO
 303 01:13:37:29 01:13:39:29 THE COUNTRY'S BUSIEST
 FRESHWATER PORT.
 304 01:13:42:00 01:13:44:24 BUT IN 1830,
 THERE WAS NO TOWN OF CHICAGO.
 305 01:13:44:26 01:13:47:25 CHICAGO THEN WAS
 AN ISOLATED FUR TRADING POST
 306 01:13:47:27 01:13:50:20 ON THE FAR EDGE
 OF THE AMERICAN SETTLEMENT
 307 01:13:50:22 01:13:54:02 A DISMAL PRAIRIE SWAMP
 LOCATED ON A SMALL RIVER
 308 01:13:54:04 01:13:56:00 THAT FED INTO LAKE MICHIGAN.
 309 01:13:56:02 01:13:58:22 THE RICHEST MAN IN NEW YORK,
 JACOB ASTOR
 310 01:13:58:24 01:14:02:06 HAD EXTENDED HIS FUR-TRADING
 EMPIRE OUT TO CHICAGO
 311 01:14:02:08 01:14:05:10 BUT THE DESTINIES
 OF THESE TWO PLACES WOULD BE
 312 01:14:05:12 01:14:07:29 MORE TIGHTLY CONNECTED
 IN FUTURE YEARS.
 313 01:14:08:01 01:14:09:22 NATURE HAD PAVED THE WAY
 314 01:14:09:24 01:14:11:17 AEONS AGO DURING
 THE LAST ICE AGE.
 315 01:14:11:19 01:14:13:07 WHEN THE GLACIERS
 THAT COVERED
 316 01:14:13:09 01:14:15:28 THE NORTHERN PART
 OF THE CONTINENT BEGAN TO MELT
 317 01:14:16:00 01:14:17:14 THEY CREATED A RUSHING RIVER
 318 01:14:17:16 01:14:19:21 THAT SWEEPED SOUTH
 FROM THE GREAT LAKES
 319 01:14:19:23 01:14:22:11 AND CUT A GAP THROUGH
 THE APPALACHIAN MOUNTAINS
 320 01:14:22:13 01:14:23:16 THE MOHAWK PASS.
 321 01:14:23:18 01:14:25:12 THE ERIE CANAL,
 AND LATER, RAILROADS
 322 01:14:25:14 01:14:28:26 RUNNING BETWEEN NEW YORK AND
 CHICAGO PASSED THROUGH THIS GAP.
 323 01:14:28:28 01:14:30:13 BECAUSE OF THE MOHAWK PASS
 324 01:14:30:15 01:14:33:18 THERE'S NO MOUNTAIN BARRIER
 BETWEEN NEW YORK AND CHICAGO

325 01:14:33:20 01:14:36:26 AS THERE IS BETWEEN OTHER
 EASTERN PORTS AND CHICAGO.
 326 01:14:36:28 01:14:38:29 THIS GAVE NEW YORK
 A HUGE ADVANTAGE
 327 01:14:39:01 01:14:40:24 OVER ITS RIVAL EASTERN CITIES
 328 01:14:40:26 01:14:42:23 AND UNITED
 THE ECONOMIC DESTINIES
 329 01:14:42:25 01:14:44:08 OF NEW YORK AND CHICAGO.
 330 01:14:44:10 01:14:46:13 THE COMPLETION OF THE ERIE CANAL
 331 01:14:46:15 01:14:49:11 ENCOURAGED THE NEWLY FORMED
 STATE OF ILLINOIS
 332 01:14:49:13 01:14:51:20 TO BEGIN A CANAL PROJECT
 OF ITS OWN.
 333 01:14:51:22 01:14:54:11 IT WOULD DRIVE THE CANAL
 FROM THE CHICAGO RIVER
 334 01:14:54:13 01:14:55:27 DOWN TO THE ILLINOIS RIVER
 335 01:14:55:29 01:14:57:24 WHICH FLOWS
 INTO THE MISSISSIPPI.
 336 01:14:57:26 01:15:01:01 THIS CANAL WOULD CREATE
 AN ALL-WATER HIGHWAY
 337 01:15:01:03 01:15:03:11 FROM NEW YORK
 DOWN TO NEW ORLEANS
 338 01:15:03:13 01:15:06:29 WITH CHICAGO SITUATED
 AS ONE OF ITS KEY JUNCTURES.
 339 01:15:07:01 01:15:08:14 IT WAS RUMORS OF THIS CANAL
 340 01:15:08:16 01:15:11:07 THAT FIRST BROUGHT NEW YORK
 SPECULATORS TO CHICAGO
 341 01:15:11:09 01:15:13:03 TO ASSESS
 ITS ECONOMIC POTENTIAL.
 342 01:15:13:05 01:15:16:05 WHAT THEY SAW
 DIDN'T IMPRESS THEM.
 343 01:15:16:07 01:15:17:27 BECAUSE OF THE DRAINAGE PROBLEMS
 344 01:15:17:29 01:15:21:04 MOST OF THE PLACE WAS UNDERWATER
 FOR A GOOD PART OF THE YEAR
 345 01:15:21:06 01:15:22:21 AND MOST OF THE INHABITANTS
 346 01:15:22:23 01:15:24:28 WERE WILD, HARD-DRINKING
 FRENCH CANADIANS
 347 01:15:25:00 01:15:26:27 WHO HAD MARRIED
 INTO INDIAN TRIBES.
 348 01:15:29:13 01:15:31:04 THE PLACE HAD
 THREE RAUCOUS TAVERNS
 349 01:15:31:06 01:15:32:25 WITH NO CHURCH OR SCHOOLHOUSE.
 350 01:15:32:27 01:15:36:11 THE ONLY THING CHICAGO HAD
 GOING FOR IT WAS ITS LOCATION.
 351 01:15:36:13 01:15:39:12 BUT THAT WAS ENOUGH
 TO INTEREST NEW YORK MONEY.
 352 01:15:39:14 01:15:41:23 CHICAGO'S RIVER GAVE IT
 A PROTECTED HARBOR
 353 01:15:41:25 01:15:43:07 AND THE RIVER WOUND SOUTH
 354 01:15:43:09 01:15:45:26 AND WOULD, WITH THE BUILDING
 OF THE NEW CANAL
 355 01:15:45:28 01:15:48:25 BECOME AN OPEN DOOR
 INTO THE TALL GRASS PRAIRIE
 356 01:15:48:27 01:15:51:23 THE MOST SPLENDIDLY ENDOWED
 AGRICULTURAL REGION
 357 01:15:51:25 01:15:53:08 IN THE WORLD.

358 01:15:53:10 01:15:56:00 WITH A CANAL, CHICAGO WOULD
 BECOME A JUMPING-OFF POINT
 359 01:15:56:02 01:15:59:27 FOR THE SETTLEMENT OF A GREAT
 PART OF THE LOUISIANA PURCHASE.
 360 01:15:59:29 01:16:02:19 THE BUILDING OF CHICAGO IS
 A GREAT AMERICAN STORY.
 361 01:16:02:21 01:16:04:02 CHICAGO'S EARLY HISTORY IS
 362 01:16:04:04 01:16:05:29 A HISTORY OF
 THE EARLY AMERICAN WEST
 363 01:16:06:01 01:16:08:16 A PLACE THAT WAS OPENED UP,
 LIKE THE REST OF THE WEST
 364 01:16:08:18 01:16:11:07 BY CITIES,
 NOT BY PIONEERING FARMERS
 365 01:16:11:09 01:16:16:15 AS THE HISTORIAN
 FREDERICK JACKSON TURNER ARGUED.
 366 01:16:16:17 01:16:18:01 THE SETTLING
 OF THE FRONTIER WAS
 367 01:16:18:03 01:16:20:23 ONE OF THE MOST AMBITIOUS CITY-
 BUILDING EFFORTS IN HISTORY.
 368 01:16:20:25 01:16:23:06 AND NO CITY IN THE WEST--
 IN THE WORLD, IN FACT--
 369 01:16:23:08 01:16:24:18 GREW FASTER THAN CHICAGO.
 370 01:16:26:25 01:16:28:08 BY THE TIME OF THE CIVIL WAR
 371 01:16:28:10 01:16:31:05 CHICAGO WAS THE MASTER
 METROPOLIS OF THE MID-CONTINENT
 372 01:16:31:07 01:16:34:06 A GATEWAY CITY CONNECTING NEW
 FARMS AND TOWNS OF THE WEST
 373 01:16:34:08 01:16:37:26 WITH THE EXPANDING
 INDUSTRIAL ECONOMY OF THE EAST.
 374 01:16:37:28 01:16:39:18 SO WHAT EXPLAINS THIS PLACE?
 375 01:16:39:20 01:16:42:02 HOW DID IT GROW
 SO SPECTACULARLY?
 376 01:16:42:04 01:16:43:23 IT WASN'T ALL LOCATION.
 377 01:16:43:25 01:16:45:03 NATURE HAD BLESSED CHICAGO
 378 01:16:45:05 01:16:47:09 BUT CITIES ARE NOT ORDAINED
 BY GEOGRAPHY.
 379 01:16:47:11 01:16:50:11 THEY'RE EXISTENTIAL--
 PRODUCTS OF HUMAN INITIATIVE.
 380 01:16:50:13 01:16:52:13 THE SOURCE OF CHICAGO'S
 EARLY SUCCESS
 381 01:16:52:15 01:16:54:03 WAS ITS VISIONARY CAPITALISTS
 382 01:16:54:05 01:16:56:14 MONEY-MAKERS
 AS WELL AS CITY BUILDERS.
 383 01:16:56:16 01:16:58:16 MOST OF THEM WERE YOUNG MEN
 OF MODEST MEANS
 384 01:16:58:18 01:17:00:17 FROM NEW YORK AND NEW ENGLAND.
 385 01:17:00:19 01:17:02:03 MEN LIKE WILLIAM BUTLER OGDEN
 386 01:17:02:05 01:17:04:11 THE TOWN'S FIRST MAYOR
 AND MASTER BUILDER.
 387 01:17:04:13 01:17:06:13 AND GURDEN SALTENSTALL HUBBARD
 388 01:17:06:15 01:17:08:20 WHO TURNED IN
 HIS INDIAN BUCKSKINS
 389 01:17:08:22 01:17:10:09 FOR A FROCK COAT AND TIE
 390 01:17:10:11 01:17:13:02 AND BECAME
 ONE OF THE TOWN'S RICHEST MEN.
 391 01:17:13:04 01:17:16:03 THEY WERE GAMBLERS WHO RISKED

392 01:17:16:05 01:17:18:13 EVERYTHING THEY HAD ON CHICAGO
 INVESTING IN SWAMPLAND
 IN HOPE THAT THE CANAL
 393 01:17:18:15 01:17:20:23 WOULD TURN A MUD HOLE
 INTO A METROPOLIS.
 394 01:17:20:25 01:17:22:06 THEIR ECONOMIC PROSPECTS
 395 01:17:22:08 01:17:24:21 WERE TIED TO THE TOWN'S
 ECONOMIC PROSPECTS.
 396 01:17:24:23 01:17:27:11 HAVING INVESTED HEAVILY
 IN CHICAGO REAL ESTATE
 397 01:17:27:13 01:17:30:18 EVERY IMPROVEMENT THEY MADE,
 BE IT A ROAD OR A BUILDING
 398 01:17:30:20 01:17:33:23 ADDED TO THE TOWN'S WEALTH
 AND THEIR OWN.
 399 01:17:33:25 01:17:36:05 IT WAS THE WORKING OUT
 OF ADAM SMITH'S NOTION
 400 01:17:36:07 01:17:39:00 THAT SELF-INTEREST
 PROMOTES THE PUBLIC INTEREST.
 401 01:17:39:02 01:17:41:15 IN CHASING WEALTH,
 THEY BUILT A GREAT CITY.
 402 01:17:41:17 01:17:42:24 CHICAGO WAS THE CREATION
 403 01:17:42:26 01:17:45:06 OF WHAT THE ECONOMIST
 JOHN MAYNARD KEYNES
 404 01:17:45:08 01:17:47:10 CALLS
 "THOSE BEASTS OF CAPITALISM"
 405 01:17:47:12 01:17:49:03 "RISK-TAKING IN INNOVATION"
 406 01:17:49:05 01:17:51:17 AND IT EMBODIED BETTER
 THAN ANY OTHER PLACE
 407 01:17:51:19 01:17:54:22 THE BRUTAL AND INVENTIVE
 VITALITY OF THE 19th CENTURY.
 408 01:17:54:24 01:17:57:08 YOU COULD UNDERSCORE
 THAT WORD BRUTAL.
 409 01:17:57:10 01:17:59:23 WHEN CITY LOTS WENT UP FOR SALE
 TO HELP PAY FOR THE CANAL
 410 01:17:59:25 01:18:03:09 SPECULATORS Poured INTO CHICAGO
 AND THIS CREATED PRESSURE
 411 01:18:03:11 01:18:05:13 TO REMOVE THE
 PEACEFUL POTTOWATOMIE INDIANS.
 412 01:18:07:20 01:18:10:09 THE POTTOWATOMIE CLAIMED
 MOST OF THE LAND AROUND CHICAGO
 413 01:18:10:11 01:18:12:04 BUT THIS LAND
 HAD BECOME TOO VALUABLE
 414 01:18:12:06 01:18:14:28 IT WAS ARGUED, TO BE LEFT
 IN THE POSSESSION OF SAVAGES.
 415 01:18:15:00 01:18:16:13 SO THE INDIANS WERE DISPLACED
 416 01:18:16:15 01:18:19:29 IN A LAND SWINDLE MASQUERADING
 AS A TREATY NEGOTIATION
 417 01:18:20:01 01:18:22:26 AND WITH THEM WENT THE
 FRENCH-CANADIAN FOREST TRADERS
 418 01:18:22:28 01:18:25:19 WALKING SILENTLY WITH WIVES
 AND HALF-BREED CHILDREN
 419 01:18:25:21 01:18:27:19 TO GOVERNMENT RESERVATIONS
 FURTHER WEST.
 420 01:18:29:27 01:18:33:05 THIS IS HOW CHICAGO WAS TURNED,
 AT THE VERY MOMENT OF ITS BIRTH
 421 01:18:33:07 01:18:36:09 FROM A PRE-CAPITALIST

422 01:18:36:11 FRENCH AND INDIAN TRADING POST
 01:18:38:13 TO A CAPITALIST
 423 01:18:41:00 ANGLO-AMERICAN TOWN.
 01:18:44:23 THE SYMBOL OF THIS CULTURAL
 424 01:18:44:25 TRANSFORMATION WAS THE GRID.
 01:18:47:13 WHEN CHICAGO WAS DESIGNATED
 425 01:18:47:15 AS A FUTURE CANAL TOWN
 01:18:49:24 IT WAS LAID OUT
 426 01:18:49:26 BY STATE SURVEYORS IN A GRID
 01:18:51:05 OR CHECKERBOARD PATTERN.
 427 01:18:51:07 01:18:53:02 THE GRID TURNED LAND
 INTO REAL ESTATE
 428 01:18:53:04 01:18:55:05 A COMMODITY
 TO BE BOUGHT AND SOLD.
 429 01:18:58:17 01:19:00:11 LAND WENT TO THE HIGHEST BIDDER
 430 01:19:00:13 01:19:02:24 AND TO REMOVE LAND
 FROM THE MARKET FOR PUBLIC USE
 431 01:19:02:26 01:19:04:27 SUCH AS PARKS OR PUBLIC SQUARES
 432 01:19:04:29 01:19:08:17 WAS CONSIDERED A WASTE OF
 A PROFIT-GENERATING RESOURCE.
 433 01:19:08:19 01:19:12:08 SO EARLY CHICAGO HAD NO PUBLIC
 SQUARES AND ONLY ONE SMALL PARK.
 434 01:19:12:10 01:19:13:26 WHEN THE CITY WAS BUILT UP
 435 01:19:13:28 01:19:16:03 PEOPLE WERE FORCED
 TO GO TO CEMETERIES
 436 01:19:16:05 01:19:17:28 AND USE THEM AS PICNIC GROUNDS.
 437 01:19:18:00 01:19:20:19 CHICAGO'S FOUNDERS ENVISIONED
 A GREAT FUTURE
 438 01:19:20:21 01:19:22:03 FOR THEIR ADOPTED TOWN.
 439 01:19:22:05 01:19:23:29 THERE WAS ONLY ONE PROBLEM:
 440 01:19:24:01 01:19:25:12 CHICAGO HAD NO MONEY.
 441 01:19:25:14 01:19:28:06 ENTER WILLIAM OGDEN;
 PROBLEM SOLVED.
 442 01:19:30:02 01:19:31:28 OGDEN,
 A NEW YORK STATE LEGISLATOR
 443 01:19:32:00 01:19:34:04 WAS SENT TO CHICAGO
 BY NEW YORK CAPITALISTS
 444 01:19:34:06 01:19:36:23 WHO HAD BOUGHT LAND THERE
 ON SPECULATION.
 445 01:19:36:25 01:19:39:17 HE HATED THE PLACE AT FIRST,
 BUT SAW ITS POTENTIAL
 446 01:19:39:19 01:19:41:13 AND SET HIMSELF UP AS A CONDUIT
 447 01:19:41:15 01:19:45:05 FOR NEW YORK MONEY THAT
 BEGAN STREAMING INTO CHICAGO.
 448 01:19:45:07 01:19:47:19 OGDEN AND HIS BUSINESS
 ASSOCIATES THEN SET ABOUT
 449 01:19:47:21 01:19:50:24 BUILDING A TOWN AND CONNECTING
 IT TO THE REST OF THE COUNTRY.
 450 01:19:50:26 01:19:53:24 THEY BUILT PLANK ROADS TO
 GRAIN FARMS OUT ON THE PRAIRIE
 451 01:19:53:26 01:19:56:23 ESTABLISHED LAKE TRADE
 WITH THE EAST VIA THE ERIE CANAL
 452 01:19:56:25 01:19:58:09 AND TAPPED NEW YORK CAPITAL
 453 01:19:58:11 01:20:01:15 TO COMPLETE THE BUILDING OF
 THE ILLINOIS AND MICHIGAN CANAL.
 454 01:20:03:02 01:20:05:01 AND THEY BUILT

455 01:20:05:03 AN URBAN INFRASTRUCTURE
 01:20:07:10 WITH BANKS AND BUSINESSES,
 ROADS AND BRIDGES
 456 01:20:07:12 01:20:09:06 PACKING PLANTS
 AND GRAIN ELEVATORS
 457 01:20:09:08 01:20:10:23 LIBRARIES AND SCHOOLS.
 458 01:20:13:01 01:20:15:28 THESE PRAIRIE CAPITALISTS
 WERE CEASELESS INNOVATORS.
 459 01:20:16:00 01:20:18:03 IN 1848,
 THE YEAR THE CANAL WAS OPENED
 460 01:20:18:05 01:20:21:12 OGDEN WAS ALREADY INVESTING
 IN A TRANSPORTATION TECHNOLOGY
 461 01:20:21:14 01:20:23:05 THAT WOULD REPLACE THE CANAL--
 462 01:20:23:07 01:20:24:09 IT WAS THE RAILROAD.
 463 01:20:28:15 01:20:33:00 IN 1847, CHICAGO DIDN'T HAVE
 A SINGLE MILE OF RAILROAD.
 464 01:20:33:02 01:20:36:09 TEN YEARS LATER, IT WAS
 THE RAIL CENTER OF AMERICA
 465 01:20:36:11 01:20:39:04 AND OGDEN WAS
 THE RAILROAD KING OF THE WEST.
 466 01:20:39:06 01:20:40:23 BY THE OPENING OF THE CIVIL WAR
 467 01:20:40:25 01:20:44:00 MORE RAILROADS MET AT CHICAGO
 THAN AT ANY OTHER SPOT ON EARTH.
 468 01:20:44:02 01:20:46:16 ST. LOUIS,
 CHICAGO'S CHIEF URBAN RIVAL
 469 01:20:46:18 01:20:48:22 HAD BUILT A THRIVING COMMERCE
 WITH NEW ORLEANS
 470 01:20:48:24 01:20:50:23 USING STEAM-POWERED RIVERBOATS.
 471 01:20:52:28 01:20:55:29 BY THE TIME OF THE CIVIL WAR,
 CHICAGO HAD DISPLACED ST. LOUIS
 472 01:20:56:01 01:20:57:23 WHICH REMAINED TIED TO THE RIVER
 473 01:20:57:25 01:21:00:02 AS THE REGION'S
 MAJOR TRADE CENTER.
 474 01:21:03:09 01:21:06:00 THE RAILROAD TIED THE LOWER
 MIDWEST TO THE NORTHEAST
 475 01:21:06:02 01:21:08:29 AND ENSURED THAT
 THIS SECTION DIDN'T SPLIT OFF
 476 01:21:09:01 01:21:11:20 AND BECAME PART OF
 THE CONFEDERACY IN 1861
 477 01:21:11:22 01:21:14:25 WHEN THE LOWER MISSISSIPPI
 BECAME A REBEL RIVER.
 478 01:21:14:27 01:21:17:00 CHICAGO ROSE
 TO REGIONAL PROMINENCE
 479 01:21:17:02 01:21:20:00 BY BECOMING NOT
 A MANUFACTURING CENTER AT FIRST
 480 01:21:20:02 01:21:23:24 BUT A TRADE CENTER,
 A GIGANTIC EXCHANGE ENGINE.
 481 01:21:23:26 01:21:26:00 HERE'S HOW THE SYSTEM WORKED
 FOR TWO COMMODITIES
 482 01:21:26:02 01:21:28:04 LUMBER AND WHEAT:
 483 01:21:28:06 01:21:30:24 CHICAGO SAT BETWEEN TWO
 DIFFERENT ECOSYSTEMS
 484 01:21:30:26 01:21:33:24 THE TIMBER-RICH LANDS
 OF UPPER WISCONSIN AND MICHIGAN
 485 01:21:33:26 01:21:35:26 AND THE TREELESS PRAIRIE.
 486 01:21:35:28 01:21:37:15 AND IT WAS BUILT

487 01:21:37:17 ON LAKE MICHIGAN
 01:21:40:29 THE WATER CORRIDOR
 THAT CONNECTED IT.
 488 01:21:41:01 01:21:42:23 OGDEN
 AND OTHER CHICAGO CAPITALISTS
 489 01:21:42:25 01:21:44:26 PURCHASED ENTIRE FORESTS
 IN THE NORTH
 490 01:21:44:28 01:21:48:05 AND SENT LUMBER BY LAKE BOATS
 DOWN TO CHICAGO
 491 01:21:48:07 01:21:49:21 WHERE IT WAS PROCESSED
 492 01:21:49:23 01:21:52:16 AND THEN SENT OUT BY CANAL
 AND RAIL TO PRAIRIE FARMERS.
 493 01:21:54:16 01:21:57:16 CHICAGO'S LUMBER MILLS
 MADE COTTAGES, SCHOOLHOUSES
 494 01:21:57:18 01:21:59:11 STORES, TAVERNS AND CHURCHES.
 495 01:21:59:13 01:22:01:14 OUT ON THE PRAIRIE
 IT WASN'T UNCOMMON
 496 01:22:01:16 01:22:04:11 FOR ENTIRE GROUPS OF
 HOMESTEADERS TO GATHER TOGETHER
 497 01:22:04:13 01:22:07:10 AT A DESOLATED DEPOT TO AWAIT
 THE ARRIVAL FROM CHICAGO
 498 01:22:07:12 01:22:09:05 OF THEIR ENTIRE READY-MADE TOWN.
 499 01:22:11:19 01:22:14:28 THE WHEAT TRADE WAS
 A MORE SYMBIOTIC RELATIONSHIP
 500 01:22:15:00 01:22:17:00 AND THE LAND WASN'T THE LOSER.
 501 01:22:17:02 01:22:18:12 REAPERS MADE
 502 01:22:18:14 01:22:20:19 AT CYRUS McCORMICK'S
 STEAM-DRIVEN CHICAGO FACTORY
 503 01:22:20:21 01:22:22:17 ALLOWED FARMERS TO CUT THE WHEAT
 504 01:22:22:19 01:22:25:09 THAT CHICAGO SHIPPED
 TO THE REST OF THE WORLD.
 505 01:22:25:11 01:22:28:03 FARMERS MADE MONEY,
 CHICAGO MERCHANTS MADE MONEY
 506 01:22:28:05 01:22:31:04 AND THE KEY TO IT ALL
 WAS THE RAILROAD.
 507 01:22:34:03 01:22:35:11 RAILROADS WERE PROHIBITED
 508 01:22:35:13 01:22:37:11 FROM ENTERING
 THE CONGESTED HEART OF MANHATTAN
 509 01:22:37:13 01:22:38:24 BUT IN FREE-WHEELING CHICAGO
 510 01:22:38:26 01:22:41:19 WHERE MONEY-MAKING WAS UNIMPEDED
 BY GOVERNMENT RESTRAINTS
 511 01:22:41:21 01:22:44:10 THE RAILROADS STEAMED
 RIGHT INTO THE CENTER OF TOWN
 512 01:22:44:12 01:22:46:14 CREATING TREMENDOUS NOISE
 AND CONGESTION
 513 01:22:46:16 01:22:48:18 AND KILLING OR MANGLING
 TWO PERSONS A DAY
 514 01:22:48:20 01:22:50:18 AT UNPROTECTED RAIL CROSSINGS.
 515 01:22:50:20 01:22:52:10 AS ONE FOREIGN VISITOR SAID:
 516 01:23:00:18 01:23:03:01 CHICAGO WAS
 THE AMERICAN MANCHESTER
 517 01:23:03:03 01:23:06:02 THE PLACE PEOPLE VISITED
 TO SEE THE NEW ECONOMIC ORDER.
 518 01:23:06:04 01:23:09:09 WHILE NOT YET AS RICH OR
 WRETCHEDLY POOR AS MANCHESTER
 519 01:23:09:11 01:23:12:29 IT WAS A PLACE OF EVEN GREATER

ECONOMIC CREATIVITY AND CHAOS.

520 01:23:13:01 01:23:14:06 A COMMERCIAL POWERHOUSE

521 01:23:14:08 01:23:16:03 IT WAS ONE
OF THE UGLIEST CITIES IN AMERICA

522 01:23:16:05 01:23:18:16 AND THE UNHEALTHIEST AS WELL.

523 01:23:18:18 01:23:21:20 IN THE 1850s,
CHOLERA, A WATERBORNE DISEASE

524 01:23:21:22 01:23:23:21 HIT THE CITY
WITH DEVASTATING FORCE

525 01:23:23:23 01:23:26:25 KILLING IN ONE YEAR ALMOST
SIX PERCENT OF ITS POPULATION.

526 01:23:26:27 01:23:29:12 IN THAT DECADE, CHICAGO
HAD THE HIGHEST DEATH RATE

527 01:23:29:14 01:23:31:03 OF ANY AMERICAN CITY.

528 01:23:31:05 01:23:35:15 THE PROBLEM WAS THAT CHICAGOANS
WERE DRINKING THEIR OWN SEWAGE.

529 01:23:35:17 01:23:38:29 BOTH GARBAGE AND RAW SEWAGE WERE
DUMPED INTO THE CHICAGO RIVER

530 01:23:39:01 01:23:40:24 ALONG WITH THE BLOOD AND REMAINS

531 01:23:40:26 01:23:44:02 OF ANIMALS SLAUGHTERED AT
THE CITY'S MEAT-PACKING PLANTS.

532 01:23:44:04 01:23:45:28 ON SOME DAYS,
THE RIVER WAS BLOOD RED.

533 01:23:46:00 01:23:48:16 THIS RIVER WATER IN TURN FLOWED
INTO LAKE MICHIGAN

534 01:23:48:18 01:23:50:14 THE SOURCE
OF THE CITY'S WATER SUPPLY.

535 01:23:50:16 01:23:52:17 EVEN SMALL FISH
GOT INTO THE WATER SUPPLY

536 01:23:52:19 01:23:55:04 AND WOULD COME SHOOTING OUT
OF SPIGOTS AND SINKS.

537 01:23:55:06 01:23:57:21 "WHEN YOU TURNED ON THE HOT
WATER," AS ONE CHICAGOAN JOKED

538 01:23:57:23 01:23:59:11 "YOU GOT CHOWDER."

539 01:23:59:13 01:24:00:28 THERE WAS NO JOKING THOUGH

540 01:24:01:00 01:24:03:29 ABOUT CHOLERA, WHICH STRUCK
PEOPLE WITH TERRIBLE SUDDENNESS

541 01:24:04:01 01:24:05:11 AND KILLED THEM IN A DAY.

542 01:24:05:13 01:24:07:17 FINALLY, PUBLIC FEAR AND OUTRAGE

543 01:24:07:19 01:24:10:04 FORCED THE CITY
TO ACT TO SAVE ITSELF.

544 01:24:10:06 01:24:11:29 OGDEN AND OTHER CITY OFFICIALS

545 01:24:12:01 01:24:14:13 HIRED A BOSTON ENGINEER
ELLIS CHESBROUGH

546 01:24:14:15 01:24:17:09 TO BUILD A MODERN WATER SUPPLY
AND SEWAGE SYSTEM.

547 01:24:17:11 01:24:20:18 INTAKE TUNNELS WERE DRIVEN
FAR OUT INTO LAKE MICHIGAN

548 01:24:20:20 01:24:22:19 AND THE CHICAGO RIVER
WAS REVERSED

549 01:24:22:21 01:24:24:28 BY A PROCESS
OF DREDGING AND PUMPING.

550 01:24:25:00 01:24:27:27 NOW IT CARRIED CHICAGO'S WASTE
AWAY FROM THE CITY

551 01:24:27:29 01:24:29:21 INTO THE ILLINOIS
AND MICHIGAN CANAL

552 01:24:29:23 01:24:32:21 PAST COMPLAINING BUT
 LESS POWERFUL CANAL TOWNS.
 553 01:24:35:06 01:24:38:11 CHESBROUGH ALSO LIFTED CHICAGO
 OUT OF THE MUD AND SWAMPY SOIL
 554 01:24:38:13 01:24:40:20 THAT WERE BREEDING PLACES
 FOR CHOLERA.
 555 01:24:40:22 01:24:43:14 HE RAISED UP THE ENTIRE TOWN
 BY AS MUCH AS TEN FEET
 556 01:24:43:16 01:24:45:09 JACKING UP
 ENTIRE ROWS OF BUILDINGS
 557 01:24:45:11 01:24:46:29 WITH THE PEOPLE RIGHT IN THEM
 558 01:24:47:01 01:24:50:04 AND PLACING DREDGED SOIL FROM
 THE RIVER BOTTOM UNDER THEM.
 559 01:24:53:08 01:24:55:16 THE RAISING OF THE CITY
 AND THE REVERSAL OF THE RIVER
 560 01:24:55:18 01:24:58:07 WERE TWO OF THE MOST STUPENDOUS
 ENGINEERING PROJECTS OF THE AGE
 561 01:24:58:09 01:25:00:18 AND THEY GAVE CHICAGO
 A REPUTATION AS A CITY
 562 01:25:00:20 01:25:02:20 THAT COULD ACCOMPLISH
 ALMOST ANYTHING.
 563 01:25:02:22 01:25:04:08 RAW, WILDLY GROWING CHICAGO
 564 01:25:04:10 01:25:06:16 ILLUSTRATED BETTER
 THAN ANY OTHER PLACE
 565 01:25:06:18 01:25:09:26 AMERICA'S FAITH IN TECHNOLOGY
 AND UNFETTERED CAPITALISM--
 566 01:25:09:28 01:25:12:05 FORCES THAT WERE
 CONQUERING THE FRONTIER
 567 01:25:12:07 01:25:14:12 AND RAISING AMERICA
 TO GREATNESS.
 568 01:25:14:14 01:25:17:02 THE CHICAGO STORY IS
 A CAUTIONARY TALE;
 569 01:25:17:04 01:25:20:02 SELF-INTEREST DOESN'T ALWAYS
 LEAD IN THE BENIGN DIRECTION
 570 01:25:20:04 01:25:22:00 ADAM SMITH HOPED IT WOULD.
 571 01:25:22:02 01:25:24:16 THESE SAME FORCES
 OF CAPITALISM AND TECHNOLOGY
 572 01:25:24:18 01:25:26:27 WOULD SHAPE THE COUNTRY
 EVEN MORE EMPHATICALLY
 573 01:25:26:29 01:25:28:11 AFTER THE CIVIL WAR.
 574 01:25:28:13 01:25:32:02 MAKING AMERICA AND CHICAGO
 GREAT OPPORTUNITY CENTERS
 575 01:25:32:04 01:25:32:04 BUT ALSO SCENES OF ECONOMIC
 EXCESS, INJUSTICE AND UNREST.