

1 01:00:16:00 01:00:19:16 AMERICA, IN THE LATE
19th CENTURY--

2 01:00:19:18 01:00:21:05 EVERYWHERE, EAST AND WEST

3 01:00:21:07 01:00:24:11 THE SENSE OF POSSIBILITY,
OPPORTUNITY, EXCITEMENT.

4 01:00:24:13 01:00:25:29 THE CIVIL WAR IS OVER

5 01:00:26:01 01:00:28:15 RECONSTRUCTION'S FAILURE
DENIED.

6 01:00:28:17 01:00:31:14 SO THERE'S THIS ENORMOUS
SWIRLING CHANGE THAT GOES ON

7 01:00:31:16 01:00:33:24 AND THE CREATION
OF AN INDUSTRIAL MACHINE

8 01:00:33:26 01:00:36:20 AND WHAT IT DOES TO HUMAN LIFE
AND THE CULTURE.

9 01:00:36:22 01:00:40:00 TOLSTOY CALLED IT
"THE PERMANENT REVOLUTION."

10 01:00:40:02 01:00:41:17 THE INDUSTRIAL REVOLUTION--

11 01:00:41:19 01:00:45:01 YOU COULD HEAR ITS ROAR
AROUND THE WORLD.

12 01:00:45:03 01:00:47:11 I MEAN, WHEN I LOOK
AT THE 19th CENTURY

13 01:00:47:13 01:00:49:07 THROUGH THE EYES OF EUROPEANS

14 01:00:49:09 01:00:52:27 WHAT THEY'RE IMPRESSED BY IN
THE WEST, AS WELL AS IN THE EAST

15 01:00:52:29 01:00:55:00 IS THEY'RE IMPRESSED
BY BUSINESSMEN

16 01:00:55:02 01:00:56:18 THAT'S WHO
IMPRESSES THEM

17 01:00:56:20 01:00:58:25 THEY CAPTURE THE EYE
OF THESE PEOPLE.

18 01:00:58:27 01:01:03:24 ONE FOREIGNER, UH, CALLS
THEM "CAPITALIST CONQUISTADORS."

19 01:01:03:26 01:01:05:23 HE SAYS, HE'S NEVER SEEN
ANYTHING LIKE THIS.

20 01:01:05:25 01:01:08:14 MEN LIKE GUSTAVUS SWIFT
AND ANDREW CARNEGIE.

21 01:01:08:16 01:01:10:24 IN NEW YORK AND CHICAGO
AND ACROSS THE NATION

22 01:01:10:26 01:01:12:20 AMERICANS ARE MAKING
THINGS AND MONEY

23 01:01:12:22 01:01:16:03 ON A SPECTACULAR SCALE,
BUT THERE IS ALWAYS A PRICE.

24 01:01:16:05 01:01:18:26 A NEW AMERICA--
"INDUSTRIAL SUPREMACY"

25 01:01:18:28 01:01:21:25 TODAY ON
A BIOGRAPHY OF AMERICA.

26 01:01:27:15 01:01:30:20 [Captioning sponsored
by ANNENBERG/CPB]

27 01:01:56:20 01:02:00:08 IN THE SUMMER OF 1877,
FORMER PRESIDENT ULYSSES GRANT

28 01:02:00:10 01:02:02:00 WAS VACATIONING IN EUROPE

29 01:02:02:02 01:02:04:19 WHEN HE HEARD ALARMING NEWS
FROM HOME.

30 01:02:04:21 01:02:07:26 A RAILROAD STRIKE,
THE GREAT UPRISING OF 1877

31 01:02:07:28 01:02:10:29 WAS SWEEPING ACROSS THE COUNTRY,

FROM PITTSBURGH TO CHICAGO.
 32 01:02:13:03 01:02:14:08 STRIKING WORKERS WERE BURNING
 33 01:02:14:10 01:02:15:22 AND PILLAGING
 INDUSTRIAL PROPERTY
 34 01:02:15:24 01:02:17:21 AND FIGHTING PITCHED BATTLES
 WITH FEDERAL TROOPS
 35 01:02:17:23 01:02:22:19 SENT TO CRUSH THE STRIKE BY
 PRESIDENT RUTHERFORD B. HAYES.
 36 01:02:22:21 01:02:24:28 HAYES WAS ACTING
 AT THE INSISTENCE
 37 01:02:25:00 01:02:27:20 OF SOME OF AMERICA'S
 LEADING CAPITALISTS
 38 01:02:27:22 01:02:29:24 AND GRANT WAS PUZZLED BY THIS.
 39 01:02:29:26 01:02:31:05 DURING RECONSTRUCTION
 40 01:02:31:07 01:02:33:11 GRANT HAD BEEN ATTACKED
 BY THESE SAME CAPITALISTS
 41 01:02:33:13 01:02:36:01 FOR USING FEDERAL TROOPS
 UNDER GENERAL PHIL SHERIDAN
 42 01:02:36:03 01:02:37:29 TO PROTECT BLACK PEOPLE
 IN NEW ORLEANS
 43 01:02:38:01 01:02:39:26 AGAINST KU KLUX KLAN-STYLE
 VIOLENCE.
 44 01:02:51:16 01:02:54:15 GRANT WASN'T THE ONLY ONE
 TO NOTE THE IRONY.
 45 01:02:54:17 01:02:56:12 "I WISH SHERIDAN WAS
 AT PITTSBURGH"
 46 01:02:56:14 01:02:57:25 A NEIGHBOR DECLARED
 47 01:02:57:27 01:03:00:18 TO THE SON OF ABOLITIONIST
 WILLIAM LLOYD GARRISON.
 48 01:03:00:20 01:03:02:09 "INDEED," GARRISON SHOT BACK
 49 01:03:02:11 01:03:05:13 "BUT REMEMBER HOW YOU DENOUNCED
 THEM AT NEW ORLEANS."
 50 01:03:05:15 01:03:08:24 THIS LITTLE EXCHANGE SHOWED
 HOW THE COUNTRY HAD CHANGED.
 51 01:03:08:26 01:03:11:28 "THE NEGRO ISSUE," AS ONE
 PAPER CALLED IT, "WAS DEAD."
 52 01:03:12:00 01:03:14:18 THE STRIKE OF 1877 HAD
 PUSHED TO THE FOREFRONT
 53 01:03:14:20 01:03:16:12 THE ISSUE OF CAPITAL AND LABOR.
 54 01:03:17:29 01:03:19:14 THE STRIKE WAS OVER
 IN A FEW WEEKS
 55 01:03:19:16 01:03:21:08 CRUSHED BY TROOPS
 AND CANISTER SHOT.
 56 01:03:21:10 01:03:23:05 BUT IT HAD AWAKENED AMERICANS
 TO THE FACT
 57 01:03:23:07 01:03:25:00 THAT THEY WERE LIVING
 IN A NEW COUNTRY
 58 01:03:25:02 01:03:27:15 WHERE INDUSTRY WAS
 A DOMINANT FORCE
 59 01:03:27:17 01:03:30:13 INDUSTRIALISTS, THE NEW
 AMERICAN MEDICI
 60 01:03:30:15 01:03:33:11 AND CONTINUING LABOR STRIKE
 A CERTAINTY.
 61 01:03:35:22 01:03:37:08 FOLLOWING THE STRIKE
 62 01:03:37:10 01:03:40:00 THE CHICAGO DEPARTMENT STORE
 MAGNATE MARSHALL FIELD

63 01:03:40:02 01:03:43:15 DONATED MONEY TO THE CITY'S
POLICE FORCE TO BUY AN ARSENAL

64 01:03:43:17 01:03:46:07 THAT INCLUDED FOUR 12-POUND
NAPOLEON CANNONS.

65 01:03:46:09 01:03:49:11 CHICAGO AND OTHER CITIES
BEGAN CONSTRUCTING ARMORIES

66 01:03:49:13 01:03:51:23 TO HOUSE BEEFED-UP
NATIONAL GUARD UNITS

67 01:03:51:25 01:03:54:17 AND GENERAL SHERIDAN, NOW
STATIONED IN THE CHICAGO AREA

68 01:03:54:19 01:03:57:00 BEGAN ISSUING THREATS
AGAINST LABOR AGITATORS.

69 01:04:07:04 01:04:09:11 THIS WAS INDISPUTABLY
A NEW AMERICA

70 01:04:09:13 01:04:11:20 AND THE REVOLUTION THAT
WAS CREATING IT--

71 01:04:11:22 01:04:13:04 THE INDUSTRIAL REVOLUTION

72 01:04:13:06 01:04:15:01 WAS, FOR THE NEXT CENTURY
AND MORE

73 01:04:15:03 01:04:18:11 THE GREATEST AGENCY OF CHANGE
IN THE HISTORY OF HUMANKIND.

74 01:04:18:13 01:04:21:20 THE CIVIL WAR HAD SPAWNED
A NEW GENERATION OF CAPITALISTS

75 01:04:21:22 01:04:24:27 ANDREW CARNEGIE IN STEEL,
JOHN D. ROCKEFELLER IN OIL

76 01:04:24:29 01:04:26:27 J. PIERPONT MORGAN IN BANKING

77 01:04:26:29 01:04:28:26 AND PHILIP ARMOUR
AND GUSTAVUS SWIFT

78 01:04:28:28 01:04:30:01 IN MEAT-PACKING.

79 01:04:30:03 01:04:31:23 WORKING CLOSELY
WITH INVENTORS LIKE

80 01:04:31:25 01:04:33:21 THOMAS EDISON,
ALEXANDER GRAHAM BELL

81 01:04:33:23 01:04:35:00 AND GEORGE WESTINGHOUSE

82 01:04:35:02 01:04:37:11 THEY WOULD RADICALLY TRANSFORM
THIS COUNTRY

83 01:04:37:13 01:04:38:17 AND MUCH OF THE WORLD.

84 01:04:41:22 01:04:44:26 IN THESE YEARS, AMERICA CAME
TO BE KNOWN TO THE WORLD

85 01:04:44:28 01:04:46:12 AS A TECHNOLOGICAL NATION

86 01:04:46:14 01:04:48:07 A NATION OF BUILDERS
AND INVENTORS

87 01:04:48:09 01:04:52:06 MAKERS OF ROARING STEEL MILLS,
LONG-REACHING RAILROADS

88 01:04:52:08 01:04:56:21 AND WONDROUS SUSPENSION BRIDGES.

89 01:04:56:23 01:04:58:18 AS THE WRITER
WILLIAM DEAN HOWELLS DECLARED:

90 01:05:06:18 01:05:08:05 AMERICA'S MOST CHARACTERISTIC

91 01:05:08:07 01:05:09:24 AND CHARACTER-
SHAPING ACHIEVEMENT

92 01:05:09:26 01:05:12:15 HAS BEEN ITS TALENT FOR
INVENTING AND MAKING THINGS

93 01:05:12:17 01:05:15:08 AND IN NO PERIOD WAS THIS MORE
DECISIVELY IN EVIDENCE

94 01:05:15:10 01:05:18:00 THAN IN THE FINAL THREE DECADES
OF THE 19th CENTURY.

95 01:05:18:02 01:05:20:03 IN THIS GOLDEN AGE
 OF AMERICAN INVENTION
 96 01:05:20:05 01:05:23:13 INDEPENDENT INVENTORS INTRODUCED
 THE LIGHT BULB, THE TELEPHONE
 97 01:05:23:15 01:05:25:06 THE TYPEWRITER,
 THE FOUNTAIN PEN
 98 01:05:25:08 01:05:27:16 THE RAILROAD REFRIGERATOR CAR,
 THE AIR BRAKE
 99 01:05:27:18 01:05:29:17 THE ELECTRIC TROLLEY,
 THE KODAK CAMERA
 100 01:05:29:19 01:05:32:11 THE MOVIE PROJECTOR,
 THE PHONOGRAPH AND THE ZIPPER.
 101 01:05:32:13 01:05:34:12 TO SEE THIS
 NEW AMERICA UNFOLDING
 102 01:05:34:14 01:05:37:08 THERE WAS NO BETTER PLACE
 TO GO THAN CHICAGO
 103 01:05:37:10 01:05:39:20 A SCENE OF BOILING
 INDUSTRIAL ACTIVITY
 104 01:05:39:22 01:05:41:15 AND TECHNOLOGICAL INGENUITY.
 105 01:05:41:17 01:05:44:15 WITH ITS FAR-SPREADING
 FACTORY-LIKE ENVIRONMENT
 106 01:05:44:17 01:05:46:28 DOMINATED BY GIANT
 INDUSTRIAL CONCERNS
 107 01:05:47:00 01:05:50:03 IT WAS THE PROTOTYPICAL
 AMERICAN INDUSTRIAL CITY.
 108 01:05:53:11 01:05:55:11 CHICAGO HOSTED A MYRIAD
 OF INDUSTRIES
 109 01:05:55:13 01:05:57:22 PRODUCING EVERYTHING
 FROM STRAW HATS TO PIANOS.
 110 01:06:01:18 01:06:03:14 NEW YORK'S SMALL SHOPS
 AND FACTORIES
 111 01:06:03:16 01:06:06:23 PRODUCED MORE MANUFACTURED GOODS
 THAN ANY OTHER AMERICAN CITY.
 112 01:06:06:25 01:06:09:07 BUT THE LONG, THIN, CROWDED
 ISLAND OF MANHATTAN
 113 01:06:09:09 01:06:11:25 WASN'T ABLE TO SUPPORT
 THE GIGANTIC NEW FACTORIES
 114 01:06:11:27 01:06:13:16 THAT WERE THE MARK OF THE AGE.
 115 01:06:13:18 01:06:15:26 THE SPRAWLING PRAIRIE CITY
 OF CHICAGO WAS
 116 01:06:15:28 01:06:18:17 AND IT WAS THE PLACE THAT
 MOST FOREIGN VISITORS
 117 01:06:18:19 01:06:20:14 WENT TO SEE
 THE INDUSTRIAL FUTURE
 118 01:06:20:16 01:06:23:02 THAT AMERICA, THE WONDER COUNTRY
 OF THE WORLD
 119 01:06:23:04 01:06:24:20 WAS HAMMERING INTO SHAPE.
 120 01:06:24:22 01:06:27:22 CHICAGO WAS THE INTERNATIONAL
 CENTER OF MEAT-PACKING
 121 01:06:27:24 01:06:29:20 AND IN ITS VAST
 STOCKYARD DISTRICT
 122 01:06:29:22 01:06:31:20 IT WAS INVENTING A NEW WAY
 OF MAKING THINGS
 123 01:06:31:22 01:06:34:21 THAT WOULD TRANSFORM THE WORLD.
 124 01:06:34:23 01:06:37:22 THE CHICAGO STOCKYARDS ARE
 THE CONCENTRATED ILLUSTRATION

125 01:06:37:24 01:06:41:11 OF THE INDUSTRIALIZING PROCESS
THAT WOULD SWEEP THE WORLD.

126 01:06:41:13 01:06:43:10 IF YOU UNDERSTAND
THEIR OPERATION

127 01:06:43:12 01:06:46:12 YOU BEGIN TO UNDERSTAND
THE MAGNITUDE AND COMPLEXITY

128 01:06:46:14 01:06:48:08 THE HEROISM, THE HUMAN SUFFERING

129 01:06:48:10 01:06:49:28 OF THE AMERICAN
INDUSTRIAL REVOLUTION.

130 01:06:53:25 01:06:56:14 ...WROTE THE VISITING
ENGLISHMAN, RUDYARD KIPLING.

131 01:07:01:28 01:07:03:10 THE FIRST IMPRESSION
WAS THE SCENT

132 01:07:03:12 01:07:05:17 WHICH COULD BE PICKED UP
SIX MILES AWAY

133 01:07:05:19 01:07:10:07 A COMBINATION OF MANGLED MEAT,
ANIMAL BLOOD, DUNG AND URINE.

134 01:07:10:09 01:07:12:14 THEN THERE WAS THE SCALE
OF THE PLACE.

135 01:07:12:16 01:07:14:20 IN 1890, THE CHICAGO
MEAT-PACKING INDUSTRY

136 01:07:14:22 01:07:16:01 WAS THE GREATEST CONCENTRATION

137 01:07:16:03 01:07:18:25 OF LABOR AND CAPITAL
IN THE WORLD.

138 01:07:18:27 01:07:21:12 MORE THAN 25,000 MEN,
WOMEN AND CHILDREN

139 01:07:21:14 01:07:24:16 WORKED IN THIS EMPIRE
OF BLOOD AND ORDER

140 01:07:24:18 01:07:28:07 PROCESSING 14 MILLION
ANIMALS A YEAR.

141 01:07:28:09 01:07:29:28 THE TWO LARGEST PACKINGHOUSES

142 01:07:30:00 01:07:33:12 RUN BY PHILIP ARMOUR
AND GUSTAVUS SWIFT

143 01:07:33:14 01:07:36:23 DID A BUSINESS WORTH
\$200 MILLION A YEAR.

144 01:07:36:25 01:07:40:01 THE BUSINESS WAS BASED-- AS ALL
AMERICAN BIG BUSINESSES WERE--

145 01:07:40:03 01:07:41:26 ON THE RAILROAD.

146 01:07:41:28 01:07:45:14 EACH DAY, ACRES UPON ACRES
OF PENS WOULD FILL WITH ANIMALS

147 01:07:45:16 01:07:49:28 ARRIVING BY RAIL, FROM PLACES AS
FAR AWAY AS WYOMING AND TEXAS.

148 01:07:50:00 01:07:51:16 ONCE IN THE YARDS

149 01:07:51:18 01:07:54:09 THE ANIMALS WERE BOUGHT AND
SOLD BY TRADERS ON HORSEBACK

150 01:07:54:11 01:07:57:21 AND THEN SENT TO THE KILLING
FLOORS OF THE PACKINGHOUSES.

151 01:07:57:23 01:08:00:11 BY THE END OF THE DAY,
ALMOST ALL THE PENS WERE EMPTY

152 01:08:00:13 01:08:02:26 AND THE RITUAL OF COLLECTING,
SELLING AND KILLING

153 01:08:02:28 01:08:05:17 BEGAN ALL OVER AGAIN.

154 01:08:05:19 01:08:08:07 THE STOCKYARDS WERE NOT ONLY
CHICAGO'S BIGGEST INDUSTRY

155 01:08:08:09 01:08:09:25 THEY WERE ALSO,
BELIEVE IT OR NOT

156 01:08:09:27 01:08:11:17 ITS BIGGEST TOURIST ATTRACTION.
157 01:08:11:19 01:08:13:03 ON A TOUR OF NORTH AMERICA
158 01:08:13:05 01:08:14:25 THE ACTRESS
SARAH BERNHARDT SAID
159 01:08:14:27 01:08:17:27 THAT THE THING THAT MOST
IMPRESSED HER ABOUT CHICAGO WAS
160 01:08:17:29 01:08:21:12 "THE BUTCHERING OF THE HOGS, A
TERRIBLE AND MAGNIFICENT SIGHT."
161 01:08:21:14 01:08:24:21 INSIDE THE HOUSE OF BLOOD WAS
AMERICA'S FIRST ASSEMBLY LINE
162 01:08:24:23 01:08:27:05 OR MORE ACCURATELY,
DISASSEMBLY LINE
163 01:08:27:07 01:08:30:24 FOR THE PRODUCT WAS PULLED
APART, RATHER THAN PUT TOGETHER.
164 01:08:30:26 01:08:33:19 HERE'S HOW THE PROCEDURE WORKED.
165 01:08:33:21 01:08:36:00 A LIVE HOG WAS ATTACHED
TO A GIANT WHEEL
166 01:08:36:02 01:08:38:14 BY A CHAIN AROUND
ONE OF ITS HIND LEGS.
167 01:08:38:16 01:08:41:19 WHEN THE WHEEL BEGAN TO ROTATE,
THE HOG WAS JERKED INTO THE AIR
168 01:08:41:21 01:08:44:26 UPSIDE DOWN,
SQUEALING AND KICKING
169 01:08:44:28 01:08:47:18 AND WAS CARRIED BY
THE MOVEMENT OF THE WHEEL
170 01:08:47:20 01:08:48:25 TO AN OVERHEAD RAIL
171 01:08:48:27 01:08:51:00 THAT RAN THE LENGTH
OF THE BUILDING
172 01:08:51:02 01:08:52:10 ON A DESCENDING ANGLE
173 01:08:52:12 01:08:54:13 FROM THE TOP
TO THE BOTTOM FLOOR.
174 01:08:54:15 01:08:56:21 THEN THE PIG'S THROAT WAS CUT
175 01:08:56:23 01:09:00:06 AND THE CARCASS WAS CLEANED,
WASHED AND BUTCHERED
176 01:09:00:08 01:09:01:22 BY HUNDREDS OF HANDS
177 01:09:01:24 01:09:06:01 AS IT PASSED ALONG THE OVERHEAD
WIRE TO THE COLD STORAGE AREA.
178 01:09:06:03 01:09:07:13 THE ENTIRE OPERATION
179 01:09:07:15 01:09:09:08 FROM THE KILLING WHEEL
TO THE DEATH LOCKER
180 01:09:09:10 01:09:12:08 TOOK LESS THAN TEN MINUTES.
181 01:09:12:10 01:09:15:12 THE KILLING AND CUTTING PROCESS
FOR CATTLE WAS DIFFERENT
182 01:09:15:14 01:09:17:19 BUT WAS PERFORMED
WITH EQUAL EFFICIENCY.
183 01:09:17:21 01:09:20:03 FOREIGN WRITERS AND BUSINESSMEN
CAME TO CHICAGO
184 01:09:20:05 01:09:22:15 TO OBSERVE THE OPERATIONS
AT THE STOCKYARDS.
185 01:09:22:17 01:09:24:04 ONE OF THE MOST ASTUTE VISITORS
186 01:09:24:06 01:09:26:02 WAS THE FRENCH NOVELIST
PAUL BOURGET.
187 01:09:26:04 01:09:28:22 WHEN BOURGET WENT
TO THE UNION STOCKYARDS IN 1893
188 01:09:28:24 01:09:30:11 WITH A GROUP OF HIS COUNTRYMEN
189 01:09:30:13 01:09:31:20 HE WENT WITH THE IDEA

190 01:09:31:22 01:09:33:28 OF LEARNING MORE ABOUT THE IDEAS
 AND INGENUITY
 191 01:09:34:00 01:09:35:21 THAT WOULD MAKE THE NEXT CENTURY
 192 01:09:35:23 01:09:37:23 HE WAS CONVINCED,
 THE AMERICAN CENTURY
 193 01:09:37:25 01:09:41:07 WITH CHICAGO AS
 ITS VANGUARD CITY.
 194 01:09:41:09 01:09:43:22 AFTER TOURING ARMOUR AND
 COMPANY'S HOUSES OF BLOOD
 195 01:09:43:24 01:09:45:27 BOURGET AND HIS COMPANIONS
 STEPPED INTO A CARRIAGE
 196 01:09:45:29 01:09:47:19 AND HEADED BACK TO THEIR HOTEL
 197 01:09:47:21 01:09:49:05 EXCITEDLY DISCUSSING
 THE SIGNIFICANCE
 198 01:09:49:07 01:09:51:11 OF WHAT THEY'D SEEN.
 199 01:09:51:13 01:09:53:10 AS BOURGET WROTE
 IN HIS NOTEBOOK:
 200 01:10:01:17 01:10:04:09 BUT BEHIND IT ALL
 WAS A PASSION FOR ORDER.
 201 01:10:04:11 01:10:07:06 BOURGET SAW THE UNION
 OF ORDER AND VISION
 202 01:10:07:08 01:10:09:13 AS THE KEY TO AMERICAN
 INDUSTRIAL SUPREMACY.
 203 01:10:09:15 01:10:11:16 BUT HE AND HIS COLLEAGUES
 WERE SURPRISED
 204 01:10:11:18 01:10:13:16 AT HOW LITTLE ARMOUR'S
 PRODUCTION SYSTEM
 205 01:10:13:18 01:10:15:03 DEPENDED ON MODERN MACHINERY.
 206 01:10:15:05 01:10:18:25 ORGANIZATION, NOT INVENTION,
 EXPLAINED THE AMAZING EFFICIENCY
 207 01:10:18:27 01:10:21:07 OF CHICAGO'S PACKING PLANTS.
 208 01:10:21:09 01:10:24:03 MEAT-PACKING WAS NOT SUSCEPTIBLE
 TO MECHANIZATION
 209 01:10:24:05 01:10:27:09 BECAUSE THE RAW MATERIALS,
 THE HOGS AND SHEEP AND CATTLE
 210 01:10:27:11 01:10:29:26 VARIED GREATLY
 IN SIZE AND SHAPE AND WEIGHT.
 211 01:10:31:21 01:10:35:05 MEAT-PACKING, IRONICALLY, BECAME
 THE FIRST ASSEMBLY LINE INDUSTRY
 212 01:10:35:07 01:10:38:12 BECAUSE PACKERS *WEREN'T* ABLE
 TO MECHANIZE THEIR OPERATIONS.
 213 01:10:38:14 01:10:40:21 THIS FORCED THEM TO TURN
 FROM TECHNOLOGY
 214 01:10:40:23 01:10:43:10 TO ADAM SMITH'S CONCEPT
 OF DIVISION OF LABOR
 215 01:10:43:12 01:10:46:02 AS A WAY OF REDUCING
 PRODUCTION TIME AND COST.
 216 01:10:48:05 01:10:50:15 CHICAGO'S SLAUGHTERHOUSES
 WERE MACHINES, HOWEVER
 217 01:10:50:17 01:10:52:08 BUT MACHINES OF A NEW TYPE
 218 01:10:52:10 01:10:54:28 MACHINES MADE UP ALMOST
 ENTIRELY OF HUMAN PARTS.
 219 01:10:55:00 01:10:58:03 BOURGET WAS FASCINATED BY
 THE BUSINESSMEN WHO BUILT THIS
 220 01:10:58:05 01:11:00:18 AND OTHER AMERICAN
 MASS-PRODUCTION MACHINES.

221 01:11:00:20 01:11:03:02 TO HIM, THEY WERE
 THE REAL MAKERS OF AMERICA
 222 01:11:03:04 01:11:06:04 "CAPITALIST CONQUISTADORS,"
 WHO HAD TAMED THE CONTINENT
 223 01:11:06:06 01:11:09:17 AND BUILT NEW WESTERN CITIES
 LIKE CHICAGO IN ONE GENERATION.
 224 01:11:09:19 01:11:12:23 "A FEAT," HE SAID, "THAT WOULD
 NEVER AGAIN BE REPEATED."
 225 01:11:12:25 01:11:14:19 WHAT BOURGET FOUND
 MOST ARRESTING
 226 01:11:14:21 01:11:17:28 ABOUT THESE CAPITALISTS,
 WAS THEIR WAR-LIKE COMBATIVENESS
 227 01:11:18:00 01:11:19:28 THAT AND THEIR TASTE
 FOR RISK-TAKING.
 228 01:11:20:00 01:11:22:16 NO TWO CAPITALISTS BETTER
 EMBODIED THESE TRAITS
 229 01:11:22:18 01:11:24:10 THAN THE MEAT KINGS OF CHICAGO
 230 01:11:24:12 01:11:26:14 PHILIP ARMOUR
 AND GUSTAVUS SWIFT.
 231 01:11:28:18 01:11:32:19 ARMOUR AND SWIFT ARRIVED IN
 CHICAGO IN THE SAME YEAR, 1875
 232 01:11:32:21 01:11:35:11 AND THEIR CAREERS AS MEAT BARONS
 WERE CLOSELY LINKED.
 233 01:11:35:13 01:11:37:08 LIKE THE STEEL KING,
 ANDREW CARNEGIE
 234 01:11:37:10 01:11:40:24 A FORMER BOBBIN BOY AND MACHINE
 TENDER, THEY WERE SELF-MADE MEN.
 235 01:11:40:26 01:11:43:28 ARMOUR HAD BEEN A DITCH DIGGER,
 SWIFT, A COUNTRY BUTCHER
 236 01:11:44:00 01:11:46:05 AND THEIR ASCENT WAS
 GREATLY ATTRIBUTABLE
 237 01:11:46:07 01:11:48:18 LIKE CARNEGIE'S,
 TO ORGANIZATIONAL ABILITY.
 238 01:11:48:20 01:11:51:20 SWIFT, THE TIGHT-LIPPED SON
 OF A MASSACHUSETTS FARMER
 239 01:11:51:22 01:11:53:27 STARTED LIFE AS
 A BUTCHER'S APPRENTICE
 240 01:11:53:29 01:11:56:20 AND THEN SHIFTED TO
 CATTLE DEALING, MOVING WEST
 241 01:11:56:22 01:11:59:00 WITH A GEOGRAPHICALLY
 EXPANDING BUSINESS
 242 01:11:59:02 01:12:01:12 UNTIL HE ARRIVED IN CHICAGO
 AT THE AGE OF 36.
 243 01:12:03:15 01:12:04:26 THE CITY'S MEAT BUSINESS
 244 01:12:04:28 01:12:07:17 WAS THEN DOMINATED BY
 PACKERS OF PORK, NOT BEEF.
 245 01:12:07:19 01:12:09:28 IN THE ABSENCE
 OF REFRIGERATION TECHNOLOGY
 246 01:12:10:00 01:12:11:26 TO PRESERVE THE PRODUCT
 IN TRANSIT
 247 01:12:11:28 01:12:14:23 MEAT HAD TO BE PRESERVED
 BY SALTING OR SMOKING.
 248 01:12:14:25 01:12:16:13 THIS WAS OKAY FOR PORK
 249 01:12:16:15 01:12:18:10 AND FOR AMERICANS HAD
 DEVELOPED A TASTE
 250 01:12:18:12 01:12:21:05 FOR BACON AND SAUSAGE

AND SMOKED HAM
251 01:12:21:07 01:12:23:04 BUT THEY PREFERRED
THEIR BEEF FRESH
252 01:12:23:06 01:12:25:14 SO MOST OF THE CATTLE ARRIVING
IN CHICAGO
253 01:12:25:16 01:12:27:18 WEREN'T BUTCHERED THERE,
AS PORK WAS.
254 01:12:27:20 01:12:29:20 STEERS WERE SOLD
AND THEN SHIPPED LIVE
255 01:12:29:22 01:12:31:28 AND BUTCHERED LOCALLY
IN EASTERN CITIES.
256 01:12:32:00 01:12:34:14 SWIFT MADE A LOT OF MONEY
SHIPPING CATTLE EAST
257 01:12:34:16 01:12:36:05 BUT HE HAD
THE FORESIGHT TO SEE
258 01:12:36:07 01:12:38:07 THAT THE BUSINESS
HE WAS PROSPERING IN
259 01:12:38:09 01:12:41:26 WAS ABOUT TO CHANGE, AND HE MADE
HIMSELF AN AGENT OF THAT CHANGE.
260 01:12:43:05 01:12:45:29 IT WAS ALL ABOUT SUPPLY
AND DEMAND.
261 01:12:46:01 01:12:47:29 POPULATION OF THE GROWING CITIES
OF THE EAST
262 01:12:48:01 01:12:51:06 BEGAN TO OUTSTRIP
THE LOCAL MEAT SUPPLY.
263 01:12:51:08 01:12:53:00 AT EXACTLY THE SAME TIME
264 01:12:53:02 01:12:56:26 THERE WAS A TREMENDOUS EXPANSION
OF CATTLE PRODUCTION
265 01:12:56:28 01:12:59:13 ON THE UNFENCED PLAINS
OF THE WEST.
266 01:12:59:15 01:13:01:11 THUNDERING HERDS
OF TEXAS LONGHORNS
267 01:13:01:13 01:13:03:01 A QUARTER OF A MILLION IN A HERD
268 01:13:03:03 01:13:06:10 WERE DRIVEN TO NEW RAILROAD
TOWNS LIKE ABILENE, KANSAS.
269 01:13:06:12 01:13:10:00 THE PRIMARY INDUSTRY IN ABILENE
HAD BEEN RAISING PRAIRIE DOGS
270 01:13:10:02 01:13:12:26 BEFORE A CHICAGO LIVESTOCK
DEALER NAMED JOSEPH McCOY
271 01:13:12:28 01:13:15:27 BUILT CATTLE PENS NEAR
THE NEW RAIL DEPOT THERE
272 01:13:15:29 01:13:18:22 A PLACE ON THE MAP
WHERE OLD SPANISH TRADING TRAILS
273 01:13:18:24 01:13:21:16 INTERSECTED WITH WESTWARD-
PUSHING RAILROADS.
274 01:13:23:16 01:13:26:05 FROM THE HOLDING PENS
OF THIS SPRAWLING COWTOWN
275 01:13:26:07 01:13:28:27 AND OTHER TOWNS THAT
GREW UP AS FAST AS IT DID--
276 01:13:28:29 01:13:30:28 PLACES LIKE DODGE CITY
AND CHEYENNE--
277 01:13:31:00 01:13:32:14 CATTLE WAS SENT TO CHICAGO
278 01:13:32:16 01:13:35:15 AND SHIPPED FROM THERE TO
SLAUGHTERHOUSES EVERYWHERE.
279 01:13:35:17 01:13:38:12 THE ANIMALS, HOWEVER,
WERE BADLY BEATEN UP IN TRANSIT

280 01:13:38:14 01:13:40:07 LOWERING THE PRICE
AND EDIBILITY.

281 01:13:40:09 01:13:43:12 AND SWIFT, WHO HAD WHAT HIS SON
CALLED "AN EYE FOR WASTE"

282 01:13:43:14 01:13:44:26 OBJECTED TO PAYING FREIGHT

283 01:13:44:28 01:13:46:26 ON THE INEDIBLE PARTS
OF THE ANIMAL

284 01:13:46:28 01:13:48:28 WHICH AMOUNTED
TO 60% OF THE WEIGHT.

285 01:13:49:00 01:13:52:18 THE ANSWER, OF COURSE, WAS TO
SLAUGHTER THE STEERS IN CHICAGO

286 01:13:52:20 01:13:54:24 AND SEND ONLY
THE EDIBLE PARTS EAST.

287 01:13:54:26 01:13:57:24 THE TRICK WAS FINDING A WAY
TO KEEP THE BEEF COOL

288 01:13:57:26 01:13:59:26 AND WELL-PRESERVED
ALONG THE WAY.

289 01:13:59:28 01:14:03:20 HERE'S WHERE TECHNOLOGY
AND ENTERPRISE JOINED HANDS.

290 01:14:03:22 01:14:05:06 SWIFT BEGAN SHIPPING BEEF

291 01:14:05:08 01:14:07:12 IN WINTER
WITH THE BOXCAR DOORS OPEN

292 01:14:07:14 01:14:09:03 BUT THAT DIDN'T WORK WELL.

293 01:14:09:05 01:14:11:05 THEN, ONE OF HIS ENGINEERS

294 01:14:11:07 01:14:14:25 DEVELOPED A STATE-OF-THE-ART
REFRIGERATOR CAR.

295 01:14:14:27 01:14:17:11 THIS WAS AN ENORMOUS
TECHNOLOGICAL BREAKTHROUGH.

296 01:14:17:13 01:14:20:08 IT MADE CHICAGO THE CENTER
OF AMERICAN BEEF-BUTCHERING

297 01:14:20:10 01:14:24:25 AND THE MEAT INDUSTRY BECAME
THE CITY'S MAJOR INDUSTRY.

298 01:14:24:27 01:14:26:29 AFTER HE DEVELOPED
HIS REFRIGERATOR CAR

299 01:14:27:01 01:14:28:27 SWIFT, WITH ARMOUR
RIGHT BEHIND HIM

300 01:14:28:29 01:14:31:14 BUILT THE MOST HIGHLY
COORDINATED PRODUCTION

301 01:14:31:16 01:14:33:16 AND DISTRIBUTION NETWORK
IN THE WORLD.

302 01:14:33:18 01:14:35:21 A SIDE OF BEEF
LEAVING A CHICAGO PLANT

303 01:14:35:23 01:14:38:27 WAS STORED IN A FREEZER IN
NEW YORK ON THE VERY SAME HOOK

304 01:14:38:29 01:14:41:22 ON WHICH IT WAS HUNG
WHEN IT WAS KILLED IN CHICAGO.

305 01:14:41:24 01:14:45:12 SWIFT CREATED AMERICA'S FIRST
VERTICALLY INTEGRATED COMPANY.

306 01:14:45:14 01:14:47:29 THIS IS A FIRM
THAT REACHES OUT TO CONTROL

307 01:14:48:01 01:14:51:12 THE SUPPLY, PRODUCTION AND
DISTRIBUTION OF ITS PRODUCTS.

308 01:14:51:14 01:14:53:16 IN MEAT-PACKING,
THAT MEANT CONTROLLING

309 01:14:53:18 01:14:56:05 EVERYTHING FROM
THE PURCHASE OF WESTERN STEERS

310 01:14:56:07 01:14:59:08 TO THEIR DELIVERY AS STEAKS
 TO THE LOCAL BUTCHER SHOP.
 311 01:14:59:10 01:15:01:24 VERTICAL INTEGRATION
 WAS THE HALLMARK OF BIG INDUSTRY
 312 01:15:01:26 01:15:04:02 THAT WOULD COME TO DOMINATE
 THE AMERICAN ECONOMY.
 313 01:15:07:24 01:15:09:29 ANDREW CARNEGIE
 WAS ALREADY A MILLIONAIRE
 314 01:15:10:01 01:15:11:24 WHEN HE WENT INTO
 STEEL PRODUCTION
 315 01:15:11:26 01:15:14:01 TWO YEARS AFTER
 THE GREAT STRIKE OF 1877.
 316 01:15:14:03 01:15:16:25 VISITING A BRITISH STEEL MILL,
 HE WAS SO IMPRESSED
 317 01:15:16:27 01:15:19:23 BY THE AWE-INSPIRING DISPLAY
 OF A BESSEMER CONVERTER
 318 01:15:19:25 01:15:22:07 THAT HE DECLARED,
 "THE DAY OF IRON HAS PASSED"
 319 01:15:22:09 01:15:24:26 AND HE DECIDED THEN AND THERE
 TO BE A STEEL MAN.
 320 01:15:26:17 01:15:29:13 CARNEGIE'S STEEL BUSINESS,
 LIKE ARMOUR'S MEAT BUSINESS
 321 01:15:29:15 01:15:30:28 HAD AN IMPERIAL REACH.
 322 01:15:31:00 01:15:33:28 HERE CARNEGIE DESCRIBES IT
 IN DECEPTIVELY SIMPLE LANGUAGE.
 323 01:15:34:00 01:15:35:13 "TWO POUNDS OF IRON STONE
 324 01:15:35:15 01:15:37:27 "PURCHASED ON THE SHORES
 OF LAKE SUPERIOR
 325 01:15:37:29 01:15:39:24 "AND TRANSPORTED TO PITTSBURGH.
 326 01:15:39:26 01:15:42:14 "TWO POUNDS OF COAL
 MINED IN CONNELLSVILLE
 327 01:15:42:16 01:15:45:22 "AND MANUFACTURED INTO COKE
 AND BROUGHT TO PITTSBURGH.
 328 01:15:45:24 01:15:49:07 "ONE-HALF POUND OF LIMESTONE
 MINED EAST OF THE ALLEGHENIES
 329 01:15:49:09 01:15:50:27 "AND BROUGHT TO PITTSBURGH.
 330 01:15:50:29 01:15:53:11 "A LITTLE MANGANESE ORE
 MINED IN VIRGINIA
 331 01:15:53:13 01:15:55:01 "AND BROUGHT TO PITTSBURGH.
 332 01:15:55:03 01:15:58:21 "AND THESE 4½ POUNDS
 OF MATERIAL MANUFACTURED
 333 01:15:58:23 01:16:02:00 "INTO ONE POUND OF SOLID STEEL
 AND SOLD FOR ONE CENT.
 334 01:16:02:02 01:16:04:03 "THAT'S ALL THAT NEED BE SAID
 335 01:16:04:05 01:16:07:04 ABOUT THE STEEL BUSINESS,"
 SAID CARNEGIE.
 336 01:16:07:06 01:16:10:17 BY 1900, CARNEGIE'S ENORMOUS
 PITTSBURGH MILLS WERE PRODUCING
 337 01:16:10:19 01:16:13:12 MORE STEEL THAN THE ENTIRE
 OUTPUT OF GREAT BRITAIN
 338 01:16:13:14 01:16:16:07 FORMERLY THE WORLD'S
 GREATEST STEEL-MAKING POWER.
 339 01:16:16:09 01:16:18:21 STEEL WAS
 THE WONDER MATERIAL OF THE AGE:
 340 01:16:18:23 01:16:22:15 STEEL FOR RAILS, STEAM ENGINES,
 TROLLEY CARS, STEEL FOR BRIDGES

341 01:16:22:17 01:16:24:12 FACTORIES
 AND LATER, AUTOMOBILES
 342 01:16:24:14 01:16:27:25 AND STEEL FRAMES FOR THE NEW
 SYMBOL OF CORPORATE AMERICA:
 343 01:16:27:27 01:16:29:04 THE URBAN SKYSCRAPER.
 344 01:16:29:06 01:16:30:28 STEEL WOULD BECOME
 AN EVEN BIGGER INDUSTRY
 345 01:16:31:00 01:16:33:28 THAN MEAT-PACKING BUT BOTH
 INDUSTRIES WERE BASED
 346 01:16:34:00 01:16:37:12 ON EFFICIENCY AND COST-CUTTING,
 HIGH VOLUME AND FULL PRODUCTION
 347 01:16:37:14 01:16:39:19 AND MEN WORKING FAST, FAST, FAST
 348 01:16:39:21 01:16:42:26 FOR THE MILLS HAD TO RUN
 FLAT OUT ALL THE TIME.
 349 01:16:42:28 01:16:44:17 PHILIP ARMOUR, LIKE CARNEGIE
 350 01:16:44:19 01:16:47:19 WAGED INCESSANT WARFARE
 ON WASTE AND INEFFICIENCY.
 351 01:16:47:21 01:16:50:27 HE USED "EVERY PART OF THE
 SLAUGHTERED HOG," HE SAID
 352 01:16:50:29 01:16:53:08 "EXCEPT THE SQUEAL."
 353 01:16:53:10 01:16:56:22 ARMOUR CREATED AN ENTIRE
 BUSINESS FROM ANIMAL PARTS
 354 01:16:56:24 01:16:59:19 AMONG THEM GLUE,
 FERTILIZER, LARD, GELATIN
 355 01:16:59:21 01:17:03:20 AND MARGARINE PRODUCTION,
 MAKING A FORTUNE ON ANIMAL PARTS
 356 01:17:03:22 01:17:07:11 THAT OTHER PACKERS JUST DUMPED
 INTO THE CHICAGO RIVER.
 357 01:17:07:13 01:17:10:06 BUT THE SIZE
 AND SPEED OF HIS OPERATIONS
 358 01:17:10:08 01:17:13:04 LED TO SCANDALOUSLY LAX
 HEALTH STANDARDS
 359 01:17:13:06 01:17:16:04 AS UPTON SINCLAIR
 VIVIDLY DOCUMENTED
 360 01:17:16:06 01:17:18:10 IN HIS NOVEL, *THE JUNGLE*.
 361 01:17:18:12 01:17:20:25 CARCASSES INFECTED
 WITH PARASITIC WORMS
 362 01:17:20:27 01:17:24:08 OR CONTAMINATED BY SAWDUST
 WERE TURNED INTO SAUSAGE.
 363 01:17:24:10 01:17:27:20 AND CANNED MEAT WAS SOLD
 WITH THE DROPPINGS OF RATS
 364 01:17:27:22 01:17:29:17 AND EVEN PARTS OF RATS IN IT.
 365 01:17:29:19 01:17:31:24 BUT ARMOUR IGNORED
 THESE PRACTICES
 366 01:17:31:26 01:17:35:10 UNTIL THE GOVERNMENT,
 UNDER PRESIDENT TEDDY ROOSEVELT
 367 01:17:35:12 01:17:37:25 FORCED HIM TO DO SOMETHING
 ABOUT THEM.
 368 01:17:37:27 01:17:40:18 ARMOUR WAS A TYPICAL AMERICAN
 CAPITALIST OF HIS TIME;
 369 01:17:40:20 01:17:43:13 WORK WAS HIS LIFE AND HE
 COULDN'T WAIT TO GET TO IT.
 370 01:17:43:15 01:17:46:07 HE WALKED TO HIS OFFICE AND WAS
 THERE BY 6:00 IN THE MORNING.
 371 01:17:46:09 01:17:48:16 "THE BIG DEALS WERE
 USUALLY MADE EARLY," HE SAID

372 01:17:48:18 01:17:50:26 "BEFORE THE BOYS WITH
 POLISHED NAILS SHOW UP."
 373 01:17:50:28 01:17:53:06 WORKERS ARRIVING AT THE OFFICE
 A LITTLE AFTER 7:00
 374 01:17:53:08 01:17:56:01 WERE GREETED WITH BY ARMOUR
 WITH A BOOMING "GOOD AFTERNOON!"
 375 01:17:56:03 01:17:59:06 HIS ONLY RELIEF FROM WORK,
 ASIDE FROM TIME WITH HIS FAMILY
 376 01:17:59:08 01:18:01:22 WAS HIS REGULAR VISITS
 TO THE ARMOUR INSTITUTE
 377 01:18:01:24 01:18:03:09 AN EXCELLENT TECHNICAL SCHOOL
 378 01:18:03:11 01:18:05:16 HE ESTABLISHED FOR BOYS,
 WHITE AND BLACK.
 379 01:18:05:18 01:18:07:05 ARMOUR HAD COME UP THE HARD WAY
 380 01:18:07:07 01:18:09:17 LEAVING HIS HOME
 IN ONEONTA, NEW YORK, AT AGE 19
 381 01:18:09:19 01:18:11:06 FOR THE GOLD FIELDS
 OF CALIFORNIA
 382 01:18:11:08 01:18:13:01 WHERE HE DUG SLUICEWAYS
 FOR MINERS.
 383 01:18:13:03 01:18:15:24 AND HE WANTED TO GIVE THE
 SCRUBBED AND BRUSHED CHILDREN
 384 01:18:15:26 01:18:19:00 WHO EAGERLY GREETED HIM AT THE
 INSTITUTE A GOOD START IN LIFE.
 385 01:18:20:19 01:18:23:05 ARMOUR LIVED UNPRETENTIOUSLY
 FOR A MAN WORTH \$25 MILLION
 386 01:18:23:07 01:18:26:04 PREFERRING TO SPEND HIS EVENINGS
 AT HOME WITH HIS WIFE.
 387 01:18:26:06 01:18:28:26 "I'M JUST A POOR BUTCHER
 TRYING TO GET TO HEAVEN"
 388 01:18:28:28 01:18:30:02 HE DESCRIBED HIMSELF.
 389 01:18:39:10 01:18:41:26 BY STAYING IN BUSINESS THROUGH
 RUTHLESS COST-CUTTING
 390 01:18:41:28 01:18:43:10 ARMOUR CLAIMED HE WAS DOING
 391 01:18:43:12 01:18:45:25 THE ONLY TWO THINGS HE COULD DO
 FOR AMERICAN WORKERS:
 392 01:18:45:27 01:18:47:09 PROVIDING THEM JOBS
 393 01:18:47:11 01:18:49:16 AND AFFORDABLE MASS-PRODUCED
 MEAT FOR THEIR FAMILIES.
 394 01:18:49:18 01:18:53:04 WHAT ARMOUR IGNORED,
 OR CHOSE TO PUT OUT OF HIS MIND
 395 01:18:53:06 01:18:54:19 WAS HE RAN A BUSINESS
 396 01:18:54:21 01:18:58:00 THAT TREATED HIS WORKERS
 LIKE INDUSTRIAL SLAVES.
 397 01:18:58:02 01:19:00:26 IN WINTER, THE UNHEATED
 PACKINGHOUSES WERE SO COLD
 398 01:19:00:28 01:19:04:04 THAT WORKERS WOULD STICK THEIR
 FEET INSIDE THE HOT CARCASSES
 399 01:19:04:06 01:19:05:25 OF FRESHLY SLAUGHTERED CATTLE.
 400 01:19:05:27 01:19:09:02 FOREMEN BARKED AT THE WORKERS
 AS IF THEY WERE GALLEY SLAVES
 401 01:19:09:04 01:19:12:18 TO KEEP THEM MOVING, FOR IN THIS
 BUSINESS, SPEED WAS EVERYTHING.
 402 01:19:12:20 01:19:14:07 AND TO KEEP DOWN LABOR COSTS
 403 01:19:14:09 01:19:16:04 PACKERS HIRED
 HUNDREDS OF WORKERS

404 01:19:16:06 01:19:18:07 FOR ONLY AS LONG
 AS THEY WERE NEEDED--
 405 01:19:18:09 01:19:20:17 FOR A WEEK OR A DAY
 OR EVEN A FEW HOURS.
 406 01:19:22:03 01:19:24:11 THE UNEMPLOYED SHOWED UP
 AT THE PLANT GATES
 407 01:19:24:13 01:19:25:17 EVERY MORNING AT DAWN
 408 01:19:25:19 01:19:27:09 AND THE STRONGEST-LOOKING ONES
 409 01:19:27:11 01:19:30:12 OR THE ONES WITH A LITTLE MONEY
 TO SHELL OUT FOR BRIBES
 410 01:19:30:14 01:19:32:06 WERE PICKED OUT
 BY COMPANY GUARDS
 411 01:19:32:08 01:19:33:23 AND USHERED INTO THE PLANT.
 412 01:19:33:25 01:19:35:19 THEN A POLICEMAN
 WOULD WAVE HIS CLUB
 413 01:19:35:21 01:19:38:09 AND THE REST OF THE MEN
 WOULD GO DEJECTEDLY HOME.
 414 01:19:40:28 01:19:44:01 WITH THIS SYSTEM, IT WAS EASIER
 TO KEEP DOWN COMPLAINTS.
 415 01:19:44:03 01:19:45:22 THERE WAS ALWAYS A HUNGRY MAN
 416 01:19:45:24 01:19:47:23 WAITING AT THE GATE
 TO TAKE YOUR JOB
 417 01:19:47:25 01:19:49:25 AND BECAUSE YOUR JOB
 WAS SO SIMPLE--
 418 01:19:49:27 01:19:52:24 BECAUSE MOST OF THE SKILL
 HAD BEEN TAKEN OUT OF IT--
 419 01:19:52:26 01:19:55:18 THE GUY AT THE GATE
 COULD LEARN IT IN A FEW HOURS.
 420 01:19:55:20 01:19:57:01 AT ARMOUR AND COMPANY
 421 01:19:57:03 01:19:59:13 ALMOST EVERY WORKER
 WAS A DISPOSABLE PRODUCT.
 422 01:19:59:15 01:20:01:07 PAUL BOURGET WAS TOO CAUGHT UP
 423 01:20:01:09 01:20:03:27 IN THE SPLENDID EFFICIENCY
 OF THE OPERATIONS
 424 01:20:03:29 01:20:07:13 TO TAKE NOTICE OF THE WORKERS,
 BUT ANOTHER FOREIGN OBSERVER
 425 01:20:07:15 01:20:09:24 THE ITALIAN JOURNALIST
 GIUSEPPE GIACOSA
 426 01:20:09:26 01:20:13:24 GAVE A HAIR-RAISING REPORT
 OF PACKINGHOUSE WORK.
 427 01:20:13:26 01:20:16:13 "THE WORKERS ON
 THE CUTTING-LINE," HE WROTE
 428 01:20:16:15 01:20:19:06 "HAVE NEITHER THE BODY
 NOR THE FACE OF HUMANS.
 429 01:20:19:08 01:20:22:20 "A MIXTURE OF ANIMAL GREASE
 AND BLOOD STAINED THEIR FACES
 430 01:20:22:22 01:20:25:10 "AND BLOOD HARDENED
 IN THEIR HAIR AND BEARDS
 431 01:20:25:12 01:20:28:19 AND ON THEIR OVERALLS,
 FORCING THEM TO WALK," HE SAID
 432 01:20:28:21 01:20:30:23 "WITH LONG, STIFF STRIDES."
 433 01:20:32:09 01:20:33:21 BUT IT WAS NOT THAT CLEAR-CUT
 434 01:20:33:23 01:20:35:11 AS GIACOSA LEARNED
 TO HIS AMAZEMENT
 435 01:20:35:13 01:20:37:11 WHEN HE WALKED PAST
 THE PACKINGHOUSE GATE

436 01:20:37:13 01:20:38:22 AT CLOSING TIME.
 437 01:20:38:24 01:20:41:24 OUT THROUGH THE PORTALS
 CAME THE BLOOD-SOAKED MEN
 438 01:20:41:26 01:20:43:17 HE HAD SEEN AN HOUR EARLIER.
 439 01:20:43:19 01:20:45:07 "THEY WERE NOW," HE WROTE
 440 01:20:45:09 01:20:47:08 "A LORDLY COLLECTION
 OF GENTLEMEN
 441 01:20:47:10 01:20:48:24 "WHOM OUR COUNTRY LADIES
 442 01:20:48:26 01:20:51:13 "WOULD TAKE AS MODELS
 OF SPORTY ELEGANCE.
 443 01:20:51:15 01:20:53:19 "THEY ARE OFTEN TALL,
 YOUNG, BLONDE
 444 01:20:53:21 01:20:56:20 "WITH WELL-TRIMMED MUSTACHES
 AND POLISHED SHOES.
 445 01:20:56:22 01:20:58:04 "THEY WEAR HANDSOME TIES
 446 01:20:58:06 01:21:00:25 AND PLAID JACKETS
 AND LITTLE HARD HATS."
 447 01:21:04:06 01:21:06:28 THEN, IN A REMARKABLE PASSAGE,
 GIACOSA CAUGHT
 448 01:21:07:00 01:21:09:28 THE CENTRAL PARADOX
 OF AMERICAN MASS PRODUCTION.
 449 01:21:17:01 01:21:18:26 PRIDE AND SELF-ESTEEM
 USED TO COME
 450 01:21:18:28 01:21:20:25 FROM THE KIND OF WORK
 A PERSON DID.
 451 01:21:20:27 01:21:22:12 WITH PHYSICAL WORK DEGRADED
 452 01:21:22:14 01:21:25:07 SELF-ESTEEM CAME FROM WHAT
 WORKERS COULD PURCHASE.
 453 01:21:25:09 01:21:28:14 GIACOSA WAS DESCRIBING THE
 BEST-PAID WORKERS IN THE PLANT
 454 01:21:28:16 01:21:31:06 THE SEMI-SKILLED BUTCHERS,
 MOST OF THEM IRISHMEN
 455 01:21:31:08 01:21:33:19 AND GERMANS WHO LIVED IN
 WELL-KEPT COTTAGES
 456 01:21:33:21 01:21:36:04 IN THE NEIGHBORHOODS
 NOT FAR FROM THE YARDS.
 457 01:21:36:06 01:21:38:24 BUT IN THE YEAR HE VISITED
 THE YARDS, 1898
 458 01:21:38:26 01:21:41:15 THESE BUTCHERS WERE BEING
 RAPIDLY REPLACED
 459 01:21:41:17 01:21:45:04 BY MISERABLY PAID, UNSKILLED
 EASTERN EUROPEAN IMMIGRANTS.
 460 01:21:45:06 01:21:46:22 BY THEN, THESE IMMIGRANTS
 461 01:21:46:24 01:21:50:08 MADE UP ALMOST TWO-THIRDS
 OF THE INDUSTRY'S WORKFORCE.
 462 01:21:50:10 01:21:52:12 THEY MOVED INTO THE DECAYING
 NEIGHBORHOODS
 463 01:21:52:14 01:21:55:11 JUST BEHIND THE YARDS THAT
 THE BUTCHERS WERE ABANDONING.
 464 01:21:55:13 01:21:57:28 THE PLACE WAS
 CALLED "PACKINGTOWN"
 465 01:21:58:00 01:22:00:25 AND IT WAS
 THE VILEST SLUM IN CHICAGO.
 466 01:22:00:27 01:22:03:26 PACKINGTOWN WAS A FORTRESS
 OF OPPRESSION
 467 01:22:03:28 01:22:07:12 A PLACE OF STENCH

AND DISEASE, SMOKE AND SLIME.
 468 01:22:07:14 01:22:10:26 THE UNPAVED STREETS WERE LINED
 WITH ACID-EATEN WOODEN SHACKS
 469 01:22:10:28 01:22:14:15 AND IN FRONT AND BACK OF THEM
 WERE CREEKS AND DRAINAGE DITCHES
 470 01:22:14:17 01:22:16:17 SO PACKED
 WITH DECAYING ANIMAL MATTER
 471 01:22:16:19 01:22:19:00 THAT CARBOLIC ACID
 BUBBLED TO THE SURFACE.
 472 01:22:19:02 01:22:22:10 CHILDREN AND DRUNKEN MEN DROWNED
 IN THESE GARBAGE DITCHES
 473 01:22:22:12 01:22:23:26 WHICH WERE HARD TO SPOT
 474 01:22:23:28 01:22:27:10 BECAUSE LAYERS OF HARD BROWN
 SCUM SETTLED ON THE SURFACE.
 475 01:22:27:12 01:22:30:17 POLISH AND ITALIAN IMMIGRANTS
 COULD BE SEEN IN PACKINGTOWN
 476 01:22:30:19 01:22:33:18 PICKING AROUND THE LOCAL DUMP
 FOR KINDLING FOR COOKING
 477 01:22:33:20 01:22:36:21 FOR OLD MATTRESSES, AND EVEN
 FOR EDIBLE PIECES OF FOOD.
 478 01:22:38:12 01:22:41:06 ONE OF THE WORST PLACES TO WORK
 AT ARMOUR AND COMPANY
 479 01:22:41:08 01:22:42:17 WAS THE PAINT ROOM.
 480 01:22:42:19 01:22:44:23 THERE, POLISH GIRLS
 INHALED SO MUCH PAINT
 481 01:22:44:25 01:22:46:07 THEIR SPUTUM WAS BLUE.
 482 01:22:46:09 01:22:49:02 ONE YEAR, A CRUSADING
 WOMAN REPORTER, NELL NELSON
 483 01:22:49:04 01:22:51:27 TOOK A JOB IN THE PAINT ROOM
 TO SEE HOW ARMOUR
 484 01:22:51:29 01:22:54:19 A CIVIC HERO IN CHICAGO,
 TREATED HIS WORKERS.
 485 01:22:54:21 01:22:57:11 "IT WAS GOOD OF ARMOUR
 TO BUILD SUNDAY SCHOOLS
 486 01:22:57:13 01:22:58:23 AND SCHOOLS FOR BOYS"
 487 01:22:58:25 01:23:01:14 SHE WROTE, AFTER FINISHING
 HER INVESTIGATION
 488 01:23:01:16 01:23:03:18 "BUT IT WOULD NOT BE
 WASTED CHARITY
 489 01:23:03:20 01:23:05:16 "TO GIVE A LITTLE CONSIDERATION
 490 01:23:05:18 01:23:08:15 TO THE WORKING CONDITIONS
 OF 13-YEAR-OLD GIRLS."
 491 01:23:09:22 01:23:11:13 BUT IT WAS
 DR. CAROLINE HEDGER
 492 01:23:11:15 01:23:14:14 A COURAGEOUS PHYSICIAN WHO
 GAVE HER LIFE TO THESE PEOPLE
 493 01:23:14:16 01:23:16:09 WHO PUT IT ALL
 INTO ONE SENTENCE:
 494 01:23:24:03 01:23:25:24 YET THESE IMMIGRANTS KEPT COMING
 495 01:23:25:26 01:23:27:27 LIKE TRAINLOADS
 OF THE CATTLE AND HOGS
 496 01:23:27:29 01:23:29:14 THEY WERE PAID TO SLAUGHTER.
 497 01:23:29:16 01:23:31:08 CATTLE AND HOGS,
 COMING FROM THE WEST
 498 01:23:31:10 01:23:35:09 POLES AND ITALIANS FROM
 THE EAST-- THAT WAS CHICAGO.

499 01:23:35:11 01:23:37:15 WHEN THESE WORKERS
 TRIED TO ORGANIZE UNIONS
 500 01:23:37:17 01:23:40:07 ARMOUR CRUSHED THEM WITH THE
 HELP OF STRIKE-BREAKERS
 501 01:23:40:09 01:23:42:10 STATE MILITIA
 AND PINKERTON DETECTIVES.
 502 01:23:42:12 01:23:44:19 THESE PACKING CONCERNS,
 YOU HAVE TO REMEMBER
 503 01:23:44:21 01:23:47:04 WERE FAMILY BUSINESSES,
 BUILT FROM THE GROUND UP
 504 01:23:47:06 01:23:48:12 BY THE MEN WHO RAN THEM.
 505 01:23:48:14 01:23:50:16 THERE WAS A DEEP FEELING
 AMONG THESE MEN
 506 01:23:50:18 01:23:51:26 THAT NO ONE BUT OWNERSHIP
 507 01:23:51:28 01:23:54:08 SHOULD HAVE A VOICE
 IN HOW THINGS WERE DONE.
 508 01:23:56:10 01:23:58:27 IN 1885,
 THE CAREERS OF PHILIP ARMOUR
 509 01:23:58:29 01:24:02:22 AND ANDREW CARNEGIE CROSSED,
 IN WAYS UNKNOWN TO THEM.
 510 01:24:02:24 01:24:05:28 THAT YEAR, THE CHICAGO ARCHITECT
 WILLIAM LE BARON JENNEY
 511 01:24:06:00 01:24:09:05 WAS BUILDING THE WORLD'S FIRST
 METAL-FRAME SKYSCRAPER
 512 01:24:09:07 01:24:10:26 WHEN A LOAD OF STEEL BEAMS
 513 01:24:10:28 01:24:13:24 ARRIVED FROM ONE OF
 CARNEGIE'S PITTSBURGH MILLS.
 514 01:24:13:26 01:24:16:15 JENNEY WAS PERSUADED BY THE
 COMPANY'S LOCAL SALESMEN
 515 01:24:16:17 01:24:18:08 THAT LIGHTWEIGHT
 STRUCTURAL STEEL
 516 01:24:18:10 01:24:20:19 COULD BE USED
 AS EFFECTIVELY IN SKYSCRAPERS
 517 01:24:20:21 01:24:22:28 AS IT WAS BEING USED
 IN SUSPENSION BRIDGES
 518 01:24:23:00 01:24:24:12 LIKE THE BROOKLYN BRIDGE
 519 01:24:24:14 01:24:27:11 ONE OF THE SUPREME ENGINEERING
 ACHIEVEMENTS OF THE AGE.
 520 01:24:27:13 01:24:29:22 AFTER RECEIVING PERMISSION
 FROM HIS CLIENT
 521 01:24:29:24 01:24:31:09 THE HOME INSURANCE COMPANY
 522 01:24:31:11 01:24:34:14 JENNEY SUBSTITUTED STEEL FOR
 IRON BEAMS IN THE TOP STORIES
 523 01:24:34:16 01:24:37:20 OF THE SKYSCRAPER
 HE WAS CONSTRUCTING.
 524 01:24:37:22 01:24:40:15 IT WAS THE BEGINNING
 OF A NEW TYPE OF CITY--
 525 01:24:40:17 01:24:42:02 ONE NEVER SEEN BEFORE--
 526 01:24:42:04 01:24:44:05 A SKYSCRAPER CITY,
 BUILT OF STEEL.
 527 01:24:44:07 01:24:47:01 WHEN THE BUILDING WAS COMPLETED,
 PHILIP ARMOUR MOVED IN
 528 01:24:47:03 01:24:49:25 TRANSFERRING HIS CORPORATE
 OFFICES FROM THE STOCKYARDS
 529 01:24:49:27 01:24:52:15 TO PLUSH OFFICES IN
 THE CENTER OF DOWNTOWN CHICAGO.

530 01:24:52:17 01:24:55:17 IT WAS AN IMPORTANT MOMENT
IN AMERICAN CAPITALISM.
531 01:24:55:19 01:24:57:19 A GREAT TRANSFORMATION
WAS UNDERWAY--
532 01:24:57:21 01:24:59:09 IN CAPITALISM AND THE CITY--
533 01:24:59:11 01:25:02:00 THE SEPARATION OF MANAGEMENT
FROM PRODUCTION
534 01:25:02:02 01:25:03:23 AND THE RISE OF THE BIG CITY
535 01:25:03:25 01:25:07:01 AS THE HEADQUARTERS OF
AMERICA'S BIGGEST CORPORATIONS.
536 01:25:07:03 01:25:08:17 THESE CHANGES, AS WE'LL SEE
537 01:25:08:19 01:25:11:13 WOULD BRING FORWARD NEW TYPES
OF CORPORATE LEADERS
538 01:25:11:15 01:25:13:24 CAPITALISTS MORE FAMILIAR
WITH HIGH FINANCE
539 01:25:13:26 01:25:15:21 THAN WITH WORK
ON THE PLANT FLOOR.
540 01:25:17:17 01:25:19:25 BUT IN THE LAST DECADES
OF THE 19th CENTURY
541 01:25:19:27 01:25:22:10 WHEN PHILIP ARMOUR
WAS OPERATING AT FULL STRIDE
542 01:25:22:12 01:25:25:15 THE CITY THAT BEST REPRESENTED
AMERICA AND ITS UNIQUE FORM
543 01:25:25:17 01:25:27:17 OF BUCCANEERING CAPITALISM
WAS CHICAGO.
544 01:25:28:23 01:25:30:04 IN THESE YEARS, CHICAGO
545 01:25:30:06 01:25:33:04 THE CITY THAT INVENTED
A NEW WAY OF MAKING THINGS
546 01:25:33:06 01:25:35:03 WOULD INVENT A NEW TYPE OF CITY.
547 01:25:41:13 01:25:45:13 [Captioned by
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