EVERYWHERE, EAST AND WEST
THE SENSE OF POSSIBILITY, OPPORTUNITY, EXCITEMENT.
THE CIVIL WAR IS OVER
RECONSTRUCTION'S FAILURE DENIED.
SO THERE'S THIS ENORMOUS SWIRLING CHANGE THAT GOES ON AND THE CREATION OF AN INDUSTRIAL MACHINE AND WHAT IT DOES TO HUMAN LIFE AND THE CULTURE.
TOLSTOY CALLED IT "THE PERMANENT REVOLUTION."
YOU COULD HEAR ITS ROAR AROUND THE WORLD.
I MEAN, WHEN I LOOK AT THE 19th CENTURY THROUGH THE EYES OF EUROPEANS
WHAT THEY'RE IMPRESSED BY IN THE WEST, AS WELL AS IN THE EAST
IS THEY'RE IMPRESSED BY BUSINESSMEN THAT'S WHO IMPRESSES THEM
THEY CAPTURE THE EYE OF THESE PEOPLE.
ONE FOREIGNER, UH, CALLS THEM "CAPITALIST CONQUISTADORS."
HE SAYS, HE'S NEVER SEEN ANYTHING LIKE THIS.
MEN LIKE GUSTAVUS SWIFT AND ANDREW CARNEGIE.
IN NEW YORK AND CHICAGO AND ACROSS THE NATION
AMERICANS ARE MAKING THINGS AND MONEY ON A SPECTACULAR SCALE, BUT THERE IS ALWAYS A PRICE.
"INDUSTRIAL SUPREMACY"
TODAY ON A BIOGRAPHY OF AMERICA.
IN THE SUMMER OF 1877, FORMER PRESIDENT ULYSSES GRANT
WAS VACATIONING IN EUROPE WHEN HE HEARD ALARMING NEWS FROM HOME.
A RAILROAD STRIKE, THE GREAT UPRISING OF 1877
FROM PITTSBURGH TO CHICAGO.

32 01:02:13:03 01:02:14:08 STRIKING WORKERS WERE BURNING INDUSTRIAL PROPERTY
33 01:02:14:10 01:02:15:22 AND PILLAGING
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 THEM AT NEW ORLEANS."
49 01:03:02:11 01:03:05:13 "BUT REMEMBER HOW YOU DENOUNCED THIS LITTLE EXCHANGE SHOWED HOW THE COUNTRY HAD CHANGED.
50 01:03:05:15 01:03:08:24 "THE NEGRO ISSUE," AS ONE PAPER CALLED IT, "WAS DEAD."
51 01:03:08:26 01:03:11:28 THE STRIKE OF 1877 HAD PUSHED TO THE FOREFRONT
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
DONATED MONEY TO THE CITY'S POLICE FORCE TO BUY AN ARSENAL THAT INCLUDED FOUR 12-POUND NAPOLEON CANNONS.

CHICAGO AND OTHER CITIES BEGAN CONSTRUCTING ARMORIES TO HOUSE BEEFED-UP NATIONAL GUARD UNITS AND GENERAL SHERIDAN, NOW STATIONED IN THE CHICAGO AREA BEGAN ISSUING THREATS AGAINST LABOR AGITATORS.

THIS WAS INDISPUTABLY A NEW AMERICA AND THE REVOLUTION THAT WAS CREATING IT--

THE INDUSTRIAL REVOLUTION WAS, FOR THE NEXT CENTURY AND MORE THE GREATEST AGENCY OF CHANGE IN THE HISTORY OF HUMANKIND.

THE CIVIL WAR HAD SPAWNED A NEW GENERATION OF CAPITALISTS ANDREW CARNEGIE IN STEEL, JOHN D. ROCKEFELLER IN OIL J. PIERPONT MORGAN IN BANKING AND PHILIP ARMOUR AND GUSTAVUS SWIFT IN MEAT-PACKING.

WORKING CLOSELY WITH INVENTORS LIKE THOMAS EDISON, ALEXANDER GRAHAM BELL AND GEORGE WESTINGHOUSE THEY WOULD RADICALLY TRANSFORM THIS COUNTRY AND MUCH OF THE WORLD.

IN THESE YEARS, AMERICA CAME TO BE KNOWN TO THE WORLD AS A TECHNOLOGICAL NATION AND A NATION OF BUILDERS AND INVENTORS.

MAKERS OF ROARING STEEL MILLS, LONG-REACHING RAILROADS AND WONDROUS SUSPENSION BRIDGES.

AS THE WRITER WILLIAM DEAN HOWELLS DECLARED:

AMERICA'S MOST CHARACTERISTIC AND CHARACTER-SHAPING ACHIEVEMENT HAS BEEN ITS TALENT FOR INVENTING AND MAKING THINGS AND IN NO PERIOD WAS THIS MORE DECISIVELY IN EVIDENCE THAN IN THE FINAL THREE DECADES OF THE 19th CENTURY.
IN THIS GOLDEN AGE OF AMERICAN INVENTION


TO SEE THIS NEW AMERICA UNFOLDING THERE WAS NO BETTER PLACE TO GO THAN CHICAGO. A SCENE OF BOILING INDUSTRIAL ACTIVITY AND TECHNOLOGICAL INGENUITY. WITH ITS FAR-SPREADING FACTORY-LIKE ENVIRONMENT DOMINATED BY GIANT INDUSTRIAL CONCERNS IT WAS THE PROTOTYPICAL AMERICAN INDUSTRIAL CITY.

CHICAGO HOSTED A MYRIAD OF INDUSTRIES PRODUCING EVERYTHING FROM STRAW HATS TO PIANOS. NEW YORK'S SMALL SHOPS AND FACTORIES PRODUCED MORE MANUFACTURED GOODS THAN ANY OTHER AMERICAN CITY. BUT THE LONG, THIN, CROWDED ISLAND OF MANHATTAN WASN'T ABLE TO SUPPORT THE GIGANTIC NEW FACTORIES THAT WERE THE MARK OF THE AGE.

THE SPRAWLING PRAIRIE CITY OF CHICAGO WAS AND IT WAS THE PLACE THAT MOST FOREIGN VISITORS WENT TO SEE THE INDUSTRIAL FUTURE THAT AMERICA, THE WONDER COUNTRY OF THE WORLD WAS HAMMERING INTO SHAPE. CHICAGO WAS THE INTERNATIONAL CENTER OF MEAT-PACKING AND IN ITS VAST STOCKYARD DISTRICT IT WAS INVENTING A NEW WAY OF MAKING THINGS.

THE CHICAGO STOCKYARDS ARE THE CONCENTRATED ILLUSTRATION
OF THE INDUSTRIALIZING PROCESS THAT WOULD SWEEP THE WORLD.
IF YOU UNDERSTAND THEIR OPERATION
YOU BEGIN TO UNDERSTAND THE MAGNITUDE AND COMPLEXITY
THE HEROISM, THE HUMAN SUFFERING
OF THE AMERICAN INDUSTRIAL REVOLUTION.
...WROTE THE VISITING ENGLISHMAN, RUDYARD KIPLING.
THE FIRST IMPRESSION WAS THE SCENT
WHICH COULD BE PICKED UP SIX MILES AWAY
A COMBINATION OF MANGLED MEAT, ANIMAL BLOOD, DUNG AND URINE.
THEN THERE WAS THE SCALE OF THE PLACE.
IN 1890, THE CHICAGO MEAT-PACKING INDUSTRY
THE GREATEST CONCENTRATION OF LABOR AND CAPITAL IN THE WORLD.
MORE THAN 25,000 MEN, WOMEN AND CHILDREN WORKED IN THIS EMPIRE OF BLOOD AND ORDER
PROCESSING 14 MILLION ANIMALS A YEAR.
THE TWO LARGEST PACKINGHOUSES DID A BUSINESS WORTH $200 MILLION A YEAR.
THE BUSINESS WAS BASED-- AS ALL AMERICAN BIG BUSINESSES WERE--
ON THE RAILROAD.
EACH DAY, ACRES UPON ACRES OF PENS WOULD FILL WITH ANIMALS ARRIVING BY RAIL, FROM PLACES AS FAR AWAY AS WYOMING AND TEXAS.
ONCE IN THE YARDS THE ANIMALS WERE BOUGHT AND SOLD BY TRADERS ON HORSEBACK AND THEN SENT TO THE KILLING FLOORS OF THE PACKINGHOUSES.
BY THE END OF THE DAY, ALMOST ALL THE PENS WERE EMPTY.
AND THE RITUAL OF COLLECTING, SELLING AND KILLING BEGIN ALL OVER AGAIN.
The Stockyards were not only Chicago's biggest industry
ITS BIGGEST TOURIST ATTRACTION.

ON A TOUR OF NORTH AMERICA

THE ACTRESS

SARAH BERNHARDT SAID

THAT THE THING THAT MOST

IMPRESSED HER ABOUT CHICAGO WAS

"THE BUTCHERING OF THE HOGS, A

TERrible AND MAGNIFICENT SIGHT."

INSIDE THE HOUSE OF BLOOD WAS

AMERICA'S FIRST ASSEMBLY LINE

OR MORE ACCURATELY,

DISASSEMBLY LINE

FOR THE PRODUCT WAS PULLED

APART, RATHER THAN PUT TOGETHER.

HERE'S HOW THE PROCEDURE WORKED.

A LIVE HOG WAS ATTACHED

TO A GIANT WHEEL

BY A CHAIN AROUND

ONE OF ITS HIND LEGS.

WHEN THE WHEEL BEGAN TO ROTATE,

THE HOG WAS JERKED INTO THE AIR

UPSIDE DOWN,

SQUEALING AND KICKING

AND WAS CARRIED BY

THE MOVEMENT OF THE WHEEL

TO AN OVERHEAD RAIL

THAT RAN THE LENGTH

OF THE BUILDING

ON A DESCENDING ANGLE

FROM THE TOP

TO THE BOTTOM FLOOR.

THEN THE PIG'S THROAT WAS CUT

AND THE CARCASS WAS CLEANED,

WASHED AND BUTCHERED

BY HUNDREDS OF HANDS

AS IT PASSED ALONG THE OVERHEAD

WIRE TO THE COLD STORAGE AREA.

THE ENTIRE OPERATION

FROM THE KILLING WHEEL

TO THE DEATH LOCKER

TOOK LESS THAN TEN MINUTES.

THE KILLING AND CUTTING PROCESS

FOR CATTLE WAS DIFFERENT

WITH EQUAL EFFICIENCY.

FOREIGN WRITERS AND BUSINESSMEN

CAME TO CHICAGO

TO OBSERVE THE OPERATIONS

AT THE STOCKYARDS.

ONE OF THE MOST ASTUTE VISITORS

WAS THE FRENCH NOVELIST

PAUL BOURGET.

WHEN BOURGET WENT

TO THE UNION STOCKYARDS IN 1893

WITH A GROUP OF HIS COUNTRYMEN

HE WENT WITH THE IDEA
OF LEARNING MORE ABOUT THE IDEAS AND INGENUITY
THAT WOULD MAKE THE NEXT CENTURY
HE WAS CONVINCED, THE AMERICAN CENTURY
WITH CHICAGO AS ITS VANGUARD CITY.
AFTER TOURING ARMOUR AND COMPANY'S HOUSES OF BLOOD
BOURGET AND HIS COMPANIONS STEPPED INTO A CARRIAGE
AND HEADED BACK TO THEIR HOTEL EXCITEDLY DISCUSSING THE SIGNIFICANCE
OF WHAT THEY'D SEEN.
AS BOURGET WROTE IN HIS NOTEBOOK:
BUT BEHIND IT ALL WAS A PASSION FOR ORDER.
BOURGET SAW THE UNION OF ORDER AND VISION AS THE KEY TO AMERICAN INDUSTRIAL SUPREMACY.
AS THE BUSINESSMEN WHO BUILT THIS AND OTHER AMERICAN MASS-PRODUCTION MACHINES.
TO HIM, THEY WERE THE REAL MAKERS OF AMERICA

"CAPITALIST CONQUISTADORS," WHO HAD TAMED THE CONTINENT AND BUILT NEW WESTERN CITIES LIKE CHICAGO IN ONE GENERATION.

"A FEAT," HE SAID, "THAT WOULD NEVER AGAIN BE REPEATED."

WHAT BOURGET FOUND MOST ARRESTING ABOUT THESE CAPITALISTS, WAS THEIR WAR-LIKE COMBATIVENESS AND THEIR TASTE FOR RISK-TAKING.

NO TWO CAPITALISTS BETTER EMBODIED THESE TRAITS THAN THE MEAT KINGS OF CHICAGO PHILIP ARMOUR AND GUSTAVUS SWIFT. ARMOUR AND SWIFT ARRIVED IN CHICAGO IN THE SAME YEAR, 1875 AND THEIR CAREERS AS MEAT BARONS WERE CLOSELY LINKED.

LIKE THE STEEL KING, ANDREW CARNEGIE A FORMER BOBBIN BOY AND MACHINE TENDER, THEY WERE SELF-MADE MEN.

ARMOUR HAD BEEN A DITCH DIGGER, SWIFT, A COUNTRY BUTCHER AND THEIR ASCENT WAS GREATLY ATTRIBUTABLE LIKE CARNEGIE'S, TO ORGANIZATIONAL ABILITY.

SWIFT, THE TIGHT-LIPPED SON OF A MASSACHUSETTS FARMER STARTED LIFE AS A BUTCHER'S APPRENTICE AND THEN SHIFTED TO CATTLE DEALING, MOVING WEST WITH A GEOGRAPHICALLY EXPANDING BUSINESS UNTIL HE ARRIVED IN CHICAGO AT THE AGE OF 36.

THE CITY'S MEAT BUSINESS WAS THEN DOMINATED BY PACKERS OF PORK, NOT BEEF.

IN THE ABSENCE OF REFRIGERATION TECHNOLOGY OF REFRIGERATION TECHNOLOGY TO PRESERVE THE PRODUCT IN TRANSIT MEAT HAD TO BE PRESERVED BY SALTING OR SMOKING.

THIS WAS OKAY FOR PORK AND FOR AMERICANS HAD DEVELOPED A TASTE 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
276 01:13:30:28 01:13:32:14 CATTLE WAS SENT TO CHICAGO
277 01:13:32:16 01:13:35:15 AND SHIPPED FROM THERE TO SLAUGHTERHOUSES EVERYWHERE.
278 01:13:35:17 01:13:38:12 THE ANIMALS, HOWEVER, WERE BADLY BEATEN UP IN TRANSIT
AND EDIBILITY.

AND SWIFT, WHO HAD WHAT HIS SON CALLED "AN EYE FOR WASTE"

OBJECTED TO PAYING FREIGHT

ON THE INEDIBLE PARTS OF THE ANIMAL

WHICH AMOUNTED TO 60% OF THE WEIGHT.

THE ANSWER, OF COURSE, WAS TO SLAUGHTER THE STEERS IN CHICAGO

THE EDIBLE PARTS EAST.

THE TRICK WAS FINDING A WAY TO KEEP THE BEEF COOL

AND WELL-PRESERVED ALONG THE WAY.

HERE'S WHERE TECHNOLOGY AND ENTERPRISE JOINED HANDS.

SWIFT BEGAN SHIPPING BEEF IN WINTER WITH THE BOXCAR DOORS OPEN

BUT THAT DIDN'T WORK WELL.

THEN, ONE OF HIS ENGINEERS DEVELOPED A STATE-OF-THE-ART REFRIGERATOR CAR.

THIS WAS AN ENORMOUS TECHNOLOGICAL BREAKTHROUGH.

IT MADE CHICAGO THE CENTER OF AMERICAN BEEF-BUTCHERING

AND THE MEAT INDUSTRY BECAME THE CITY'S MAJOR INDUSTRY.

AFTER HE DEVELOPED HIS REFRIGERATOR CAR

SWIFT, WITH ARMOUR RIGHT BEHIND HIM BUILT THE MOST HIGHLY COORDINATED PRODUCTION AND DISTRIBUTION NETWORK IN THE WORLD.

A SIDE OF BEEF LEAVING A CHICAGO PLANT

WAS STORED IN A FREEZER IN NEW YORK ON THE VERY SAME HOOK ON WHICH IT WAS HUNG WHEN IT WAS KILLED IN CHICAGO.

SWIFT CREATED AMERICA'S FIRST VERTICALLY INTEGRATED COMPANY.

THIS IS A FIRM THAT REACHES OUT TO CONTROL THE SUPPLY, PRODUCTION AND DISTRIBUTION OF ITS PRODUCTS.

IN MEAT-PACKING, THAT MEANT CONTROLLING EVERYTHING FROM THE PURCHASE OF WESTERN STEERS
TO THEIR DELIVERY AS STEAKS TO THE LOCAL BUTCHER SHOP.

VERTICAL INTEGRATION WAS THE HALLMARK OF BIG INDUSTRY THAT WOULD COME TO DOMINATE THE AMERICAN ECONOMY.

ANDREW CARNEGIE WAS ALREADY A MILLIONAIRE WHEN HE WENT INTO STEEL PRODUCTION TWO YEARS AFTER THE GREAT STRIKE OF 1877.

VISITING A BRITISH STEEL MILL, HE WAS SO IMPRESSED BY THE AWE-INSPIRING DISPLAY OF A BESSEMER CONVERTER THAT HE DECLARED, "THE DAY OF IRON HAS PASSED" AND HE DECIDED THEN AND THERE TO BE A STEEL MAN.

CARNEGIE'S STEEL BUSINESS, LIKE ARMOUR'S MEAT BUSINESS, HAD AN IMPERIAL REACH.

HERE CARNEGIE DESCRIBES IT IN DECEPTIVELY SIMPLE LANGUAGE.

"TWO POUNDS OF IRON STONE PURCHASED ON THE SHORES OF LAKE SUPERIOR AND TRANSPORTED TO PITTSBURGH.

"TWO POUNDS OF COAL MINED IN CONNELLSVILLE AND MANUFACTURED INTO COKE AND BROUGHT TO PITTSBURGH.

"ONE-HALF POUND OF LIMESTONE MINED EAST OF THE ALLEGHENIES AND BROUGHT TO PITTSBURGH.

"A LITTLE MANGANESE ORE MINED IN VIRGINIA AND BROUGHT TO PITTSBURGH.

"AND THESE 4½ POUNDS OF MATERIAL MANUFACTURED INTO ONE POUND OF SOLID STEEL AND SOLD FOR ONE CENT.

"AND BROUGHT TO PITTSBURGH.

"AND BROUGHT TO PITTSBURGH.

"AND THESE 4½ POUNDS OF MATERIAL MANUFACTURED INTO ONE POUND OF SOLID STEEL AND SOLD FOR ONE CENT.

"THAT'S ALL THAT NEED BE SAID ABOUT THE STEEL BUSINESS," SAID CARNEGIE.

BY 1900, CARNEGIE'S ENORMOUS PITTSBURGH MILLS WERE PRODUCING MORE STEEL THAN THE ENTIRE OUTPUT OF GREAT BRITAIN.

FORMERLY THE WORLD'S GREATEST STEEL-MAKING POWER. STEEL WAS THE WONDER MATERIAL OF THE AGE: STEEL FOR RAILS, STEAM ENGINES, TROLLEY CARS, STEEL FOR BRIDGES.
FACTORIES AND LATER, AUTOMOBILES AND STEEL FRAMES FOR THE NEW SYMBOL OF CORPORATE AMERICA: THE URBAN SKYSCRAPER. STEEL WOULD BECOME AN EVEN BIGGER INDUSTRY THAN MEAT-PACKING BUT BOTH INDUSTRIES WERE BASED ON EFFICIENCY AND COST-CUTTING, HIGH VOLUME AND FULL PRODUCTION AND MEN WORKING FAST, FAST, FAST FOR THE MILLS HAD TO RUN FLAT OUT ALL THE TIME.

PHILIP ARMOUR, LIKE CARNEGIE WAGED INCESSANT WARFARE ON WASTE AND INEFFICIENCY. HE USED "EVERY PART OF THE SLAUGHTERED HOG," HE SAID "EXCEPT THE SQUEAL." ARMOUR CREATED AN ENTIRE BUSINESS FROM ANIMAL PARTS AMONG THEM GLUE, FERTILIZER, LARD, GELATIN AND MARGARINE PRODUCTION, MAKING A FORTUNE ON ANIMAL PARTS THAT OTHER PACKERS JUST DUMPED INTO THE CHICAGO RIVER.

BUT THE SIZE AND SPEED OF HIS OPERATIONS LED TO SCANDALOUSLY LAX HEALTH STANDARDS AS UPTON SINCLAIR VIVIDLY DOCUMENTED IN HIS NOVEL, THE JUNGLE.

WORK WAS HIS LIFE AND HE COULDN'T WAIT TO GET TO IT. HE WALKED TO HIS OFFICE AND WAS THERE BY 6:00 IN THE MORNING. "THE BIG DEALS WERE USUALLY MADE EARLY," HE SAID.
"BEFORE THE BOYS WITH POLISHED NAILS SHOW UP."

WORKERS ARRIVING AT THE OFFICE A LITTLE AFTER 7:00

WERE GREETED WITH BY ARMOUR WITH A BOOMING "GOOD AFTERNOON!"

HIS ONLY RELIEF FROM WORK, ASIDE FROM TIME WITH HIS FAMILY

WERE HIS REGULAR VISITS TO THE ARMOUR INSTITUTE

AN EXCELLENT TECHNICAL SCHOOL

ARMOUR HAD COME UP THE HARD WAY LEAVING HIS HOME IN ONEONTA, NEW YORK, AT AGE 19

FOR THE GOLD FIELDS OF CALIFORNIA

WHERE HE DUG SLUICEWAYS FOR MINERS.

AND HE WANTED TO GIVE THE SCRUBBED AND BRUSHED CHILDREN

WHO EAGERLY GREETED HIM AT THE INSTITUTE A GOOD START IN LIFE.

ARMOUR LIVED UNPRETENTIously FOR A MAN WORTH $25 MILLION

PREFERRING TO SPEND HIS EVENINGS AT HOME WITH HIS WIFE.

"I'M JUST A POOR BUTCHER TRYING TO GET TO HEAVEN"

HE DESCRIBED HIMSELF.

BY STAYING IN BUSINESS THROUGH RUTHLESS COST-CUTTING

ARMOUR CLAIMED HE WAS DOING THE ONLY TWO THINGS HE COULD DO FOR AMERICAN WORKERS:

PROVIDING THEM JOBS

AND AFFORDABLE MASS-PRODUCED MEAT FOR THEIR FAMILIES.

WHAT ARMOUR IGNORED, OR CHOSE TO PUT OUT OF HIS MIND

WAS HE RAN A BUSINESS LIKE INDUSTRIAL SLAVES.

IN WINTER, THE UNHEATED PACKINGHOUSES WERE SO COLD

THAT WORKERS WOULD STICK THEIR FEET INSIDE THE HOT CARCASSES

OF FRESHLY SLAUGHTERED CATTLE.

FOREMEN BARKED AT THE WORKERS AS IF THEY WERE GALLEY SLAVES

TO KEEP THEM MOVING, FOR IN THIS BUSINESS, SPEED WAS EVERYTHING.

AND TO KEEP DOWN LABOR COSTS

HUNDREDS OF WORKERS
FOR ONLY AS LONG AS THEY WERE NEEDED--
FOR A WEEK OR A DAY OR EVEN A FEW HOURS.
THE UNEMPLOYED SHOWED UP AT THE PLANT GATES
EVERY MORNING AT DAWN AND THE STRONGEST-LOOKING ONES OR THE ONES WITH A LITTLE MONEY TO SHELL OUT FOR BRIBES
WERE PICKED OUT BY COMPANY GUARDS AND UsherED INTO THE PLANT.
THEN A POLICEMAN WOULD WAVE HIS CLUB AND THE REST OF THE MEN WOULD GO DEJECTEDLY HOME.
WITH THIS SYSTEM, IT WAS EASIER TO KEEP DOWN COMPLAINTS.
THERE WAS ALWAYS A HUNGRY MAN WAITING AT THE GATE TO TAKE YOUR JOB AND BECAUSE YOUR JOB WAS SO SIMPLE--
BECAUSE MOST OF THE SKILL HAD BEEN TAKEN OUT OF IT--
THE GUY AT THE GATE COULD LEARN IT IN A FEW HOURS.
ALMOST EVERY WORKER WAS A DISPOSABLE PRODUCT.
PAUL BOURGET WAS TOO CAUGHT UP IN THE SPLENDID EFFICIENCY OF THE OPERATIONS BUT ANOTHER FOREIGN OBSERVER THE ITALIAN JOURNALIST GIUSEPPE GIACOSA GAVE A HAIR-RAISING REPORT OF PACKINGHOUSE WORK.
"THE WORKERS ON THE CUTTING-LINE," HE WROTE "HAVE NEITHER THE BODY NOR THE FACE OF HUMANS.
"HAVE NEITHER THE BODY NOR THE FACE OF HUMANS."
"A MIXTURE OF ANIMAL GREASE AND BLOOD STAINED THEIR FACES AND BLOOD HARDENED IN THEIR HAIR AND BEARDS"
AND ON THEIR OVERALLS, FORCING THEM TO WALK," HE SAID
"WITH LONG, STIFF STRIDES."
BUT IT WAS NOT THAT CLEAR-CUT AS GIACOSA LEARNED TO HIS AMAZEMENT
WHEN HE WALKED PAST THE PACKINGHOUSE GATE
AT CLOSING TIME.

OUT THROUGH THE PORTALS CAME THE BLOOD-SOAKED MEN HE HAD SEEN AN HOUR EARLIER.

"THEY WERE NOW," HE WROTE "A LORDLY COLLECTION OF GENTLEMEN."  "WHOM OUR COUNTRY LADIES WOULD TAKE AS MODELS OF SPORTY ELEGANCE.

"THEY ARE OFTEN TALL, YOUNG, BLONDE WITH WELL-TRIMMED MUSTACHES AND POLISHED SHOES.

"THEY WEAR HANDSOME TIES AND LITTLE HARD HATS."

THEN, IN A REMARKABLE PASSAGE, GIACOSA CAUGHT THE CENTRAL PARADOX OF AMERICAN MASS PRODUCTION.

PRIDE AND SELF-ESTEEM USED TO COME FROM THE KIND OF WORK A PERSON DID.

WITH PHYSICAL WORK DEGRADED SELF-ESTEEM CAME FROM WHAT WORKERS COULD PURCHASE.

GIACOSA WAS DESCRIBING THE BEST-PAID WORKERS IN THE PLANT, THE SEMI-SKILLED BUTCHERS, MOST OF THEM IRISHMEN AND GERMANS WHO LIVED IN WELL-KEPT COTTAGES IN THE NEIGHBORHOODS NOT FAR FROM THE YARDS.

BUT IN THE YEAR HE VISITED THE YARDS, 1898 THESE BUTCHERS WERE BEING RAPIDLY REPLACED BY MISERABLY PAID, UNSKILLED EASTERN EUROPEAN IMMIGRANTS.

BY THEN, THESE IMMIGRANTS MADE UP ALMOST TWO-THIRDS OF THE INDUSTRY'S WORKFORCE.

THEM MOVED INTO THE DECAYING NEIGHBORHOODS JUST BEHIND THE YARDS THAT THE BUTCHERS WERE ABANDONING.

THE PLACE WAS CALLED "PACKINGTOWN"

THE VILEST SLUM IN CHICAGO.

PACKINGTOWN WAS A FORTRESS OF OPPRESSION A PLACE OF STENCH
AND DISEASE, SMOKE AND SLIME.

THE UNPAVED STREETS WERE LINED WITH ACID-EATEN WOODEN SHACKS AND IN FRONT AND BACK OF THEM WERE CREEKS AND DRAINAGE DITCHES WITH DECAYING ANIMAL MATTER.

SOLDIERS AND DRUNKEN MEN DROWNED IN THESE GARBAGE DITCHES WHICH WERE HARD TO SPOT BECAUSE LAYERS OF HARD BROWN SCUM SETTLED ON THE SURFACE.

POLISH AND ITALIAN IMMIGRANTS COULD BE SEEN IN PACKINGTOWN PICKING AROUND THE LOCAL DUMP FOR KINDLING FOR COOKING, FOR OLD MATTRESSES, AND EVEN FOR EDIBLE PIECES OF FOOD.

ONE OF THE WORST PLACES TO WORK AT ARMOUR AND COMPANY WAS THE PAINT ROOM.

THERE, POLISH GIRLS INHALED SO MUCH PAINT THEIR SPUTUM WAS BLUE.

ONE YEAR, A CRUSADING WOMAN REPORTER, NELL NELSON TOOK A JOB IN THE PAINT ROOM TO SEE HOW ARMOUR TREATED HIS WORKERS.

"IT WAS GOOD OF ARMOUR TO BUILD SUNDAY SCHOOLS AND SCHOOLS FOR BOYS" SHE WROTE, AFTER FINISHING HER INVESTIGATION.

"BUT IT WOULD NOT BE WASTED CHARITY TO GIVE A LITTLE CONSIDERATION TO THE WORKING CONDITIONS OF 13-YEAR-OLD GIRLS."

DR. CAROLINE HEDGER A COURAGEOUS PHYSICIAN WHO GAVE HER LIFE TO THESE PEOPLE INTO ONE SENTENCE:

YET THESE IMMIGRANTS KEPT COMING LIKE TRAINLOADS OF THE CATTLE AND HOGS.

THEM THEY WERE PAID TO SLAUGHTER.

POLES AND ITALIANS FROM THE EAST-- THAT WAS CHICAGO.
WHEN THESE WORKERS TRIED TO ORGANIZE UNIONS, ARMOUR CRUSHED THEM WITH THE HELP OF STRIKE-BREAKERS AND PINKERTON DETECTIVES. THESE PACKING CONCERNS, YOU HAVE TO REMEMBER, WERE FAMILY BUSINESSES, BUILT FROM THE GROUND UP. THERE WAS A DEEP FEELING AMONG THESE MEN THAT NO ONE BUT OWNERSHIP SHOULD HAVE A VOICE IN HOW THINGS WERE DONE. IN 1885, THE CAREERS OF PHILIP ARMOUR AND ANDREW CARNEGIE CROSSED, IN WAYS UNKNOWN TO THEM. THAT YEAR, THE CHICAGO ARCHITECT WILLIAM LE BARON JENNEY WAS BUILDING THE WORLD'S FIRST METAL-FRAME SKYSCRAPER WHEN A LOAD OF STEEL BEAMS ARRIVED FROM ONE OF CARNEGIE'S PITTSBURGH MILLS. JENNEY WAS PERSUADED BY THE COMPANY'S LOCAL SALESMEN THAT LIGHTWEIGHT STRUCTURAL STEEL COULD BE USED AS EFFECTIVELY IN SKYSCRAPERS AS IT WAS BEING USED IN SUSPENSION BRIDGES LIKE THE BROOKLYN BRIDGE. ONE OF THE SUPREME ENGINEERING ACHIEVEMENTS OF THE AGE. AFTER RECEIVING PERMISSION FROM HIS CLIENT, JENNEY SUBSTITUTED STEEL FOR IRON BEAMS IN THE TOP STORIES OF THE SKYSCRAPER HE WAS CONSTRUCTING. IT WAS THE BEGINNING OF A NEW TYPE OF CITY-- A SKYSCRAPER CITY, BUILT OF STEEL. WHEN THE BUILDING WAS COMPLETED, PHILIP ARMOUR MOVED IN. TRANSFERRING HIS CORPORATE OFFICES FROM THE STOCKYARDS TO PLUSH OFFICES IN THE CENTER OF DOWNTOWN CHICAGO.
It was an important moment in American capitalism. A great transformation was underway--in capitalism and the city--the separation of management from production and the rise of the big city. These changes, as we'll see, would bring forward new types of corporate leaders, capitalists more familiar with high finance than with work on the plant floor.

But in the last decades of the 19th century, when Philip Armour was operating at full stride, the city that best represented America and its unique form of buccaneering capitalism was Chicago. In these years, Chicago, the city that invented a new way of making things, would invent a new type of city.