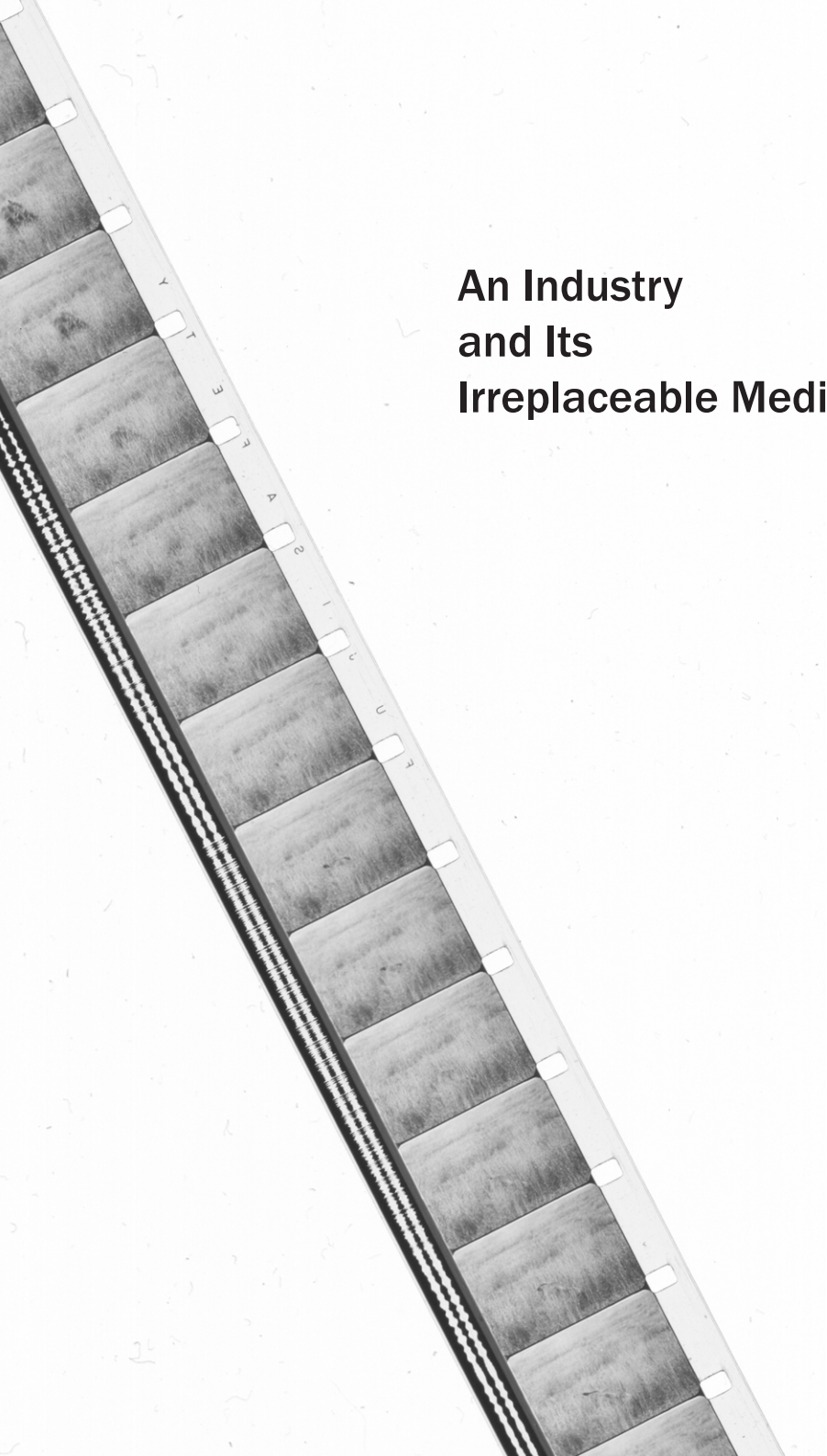


An Industry and Its Irreplaceable Medium

When the Founding Father strode along that evil-smelling stream known as Bubbly Creek, he would stop at the openings of the Swift sewers. If he saw any fat coming out, he knew there was waste in the packinghouse. Back he stormed and someone smarted. No fat issues from Swift's sewers today. That leakage has been stopped.

This legend of the Founding Father, disciplining workers for producing waste, appeared in the first issue of *Fortune Magazine*, released in early 1930.

The editors of this new publication described it as "the ideal super-class magazine."

They ran advertisements for everything from personal airplanes, to engineering consultants, to the doors of bank vaults weighing in at thirty-eight tons.

They had chosen Chicago's meatpacking industry as the lead story for the magazine's first issue.

Focusing on one of the largest companies based there, the story opens on a scene of consumption at an industrial scale:

SWIFT & COMPANY, butcher for 20,000,000 persons, buys no raw materials. Its cattle, its sheep and its hogs are finished products. Year after year it spends some $500,000,000 for these beautifully assembled mechanisms and proceeds at once to disassemble them.

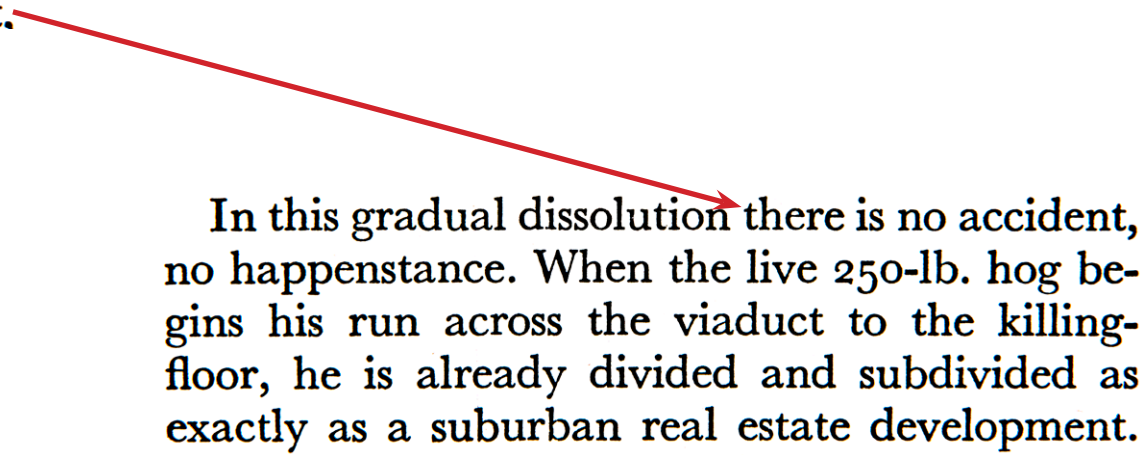
Huge numbers appear throughout the text. Always ending in a string of zeroes.

Sometimes four zeroes, sometimes nine.

The numbers are either preceded by a dollar sign, or followed by a noun: animals, refrigerator cars, men and women, hogs, carcasses, pounds of residue, tons of pig dust.

Surrounded by this overwhelming amount of substances, it's as if these numbers might save the writer, and the reader, from the fate of most of what enters the facility:

"a dissolution," in which there is no accident.

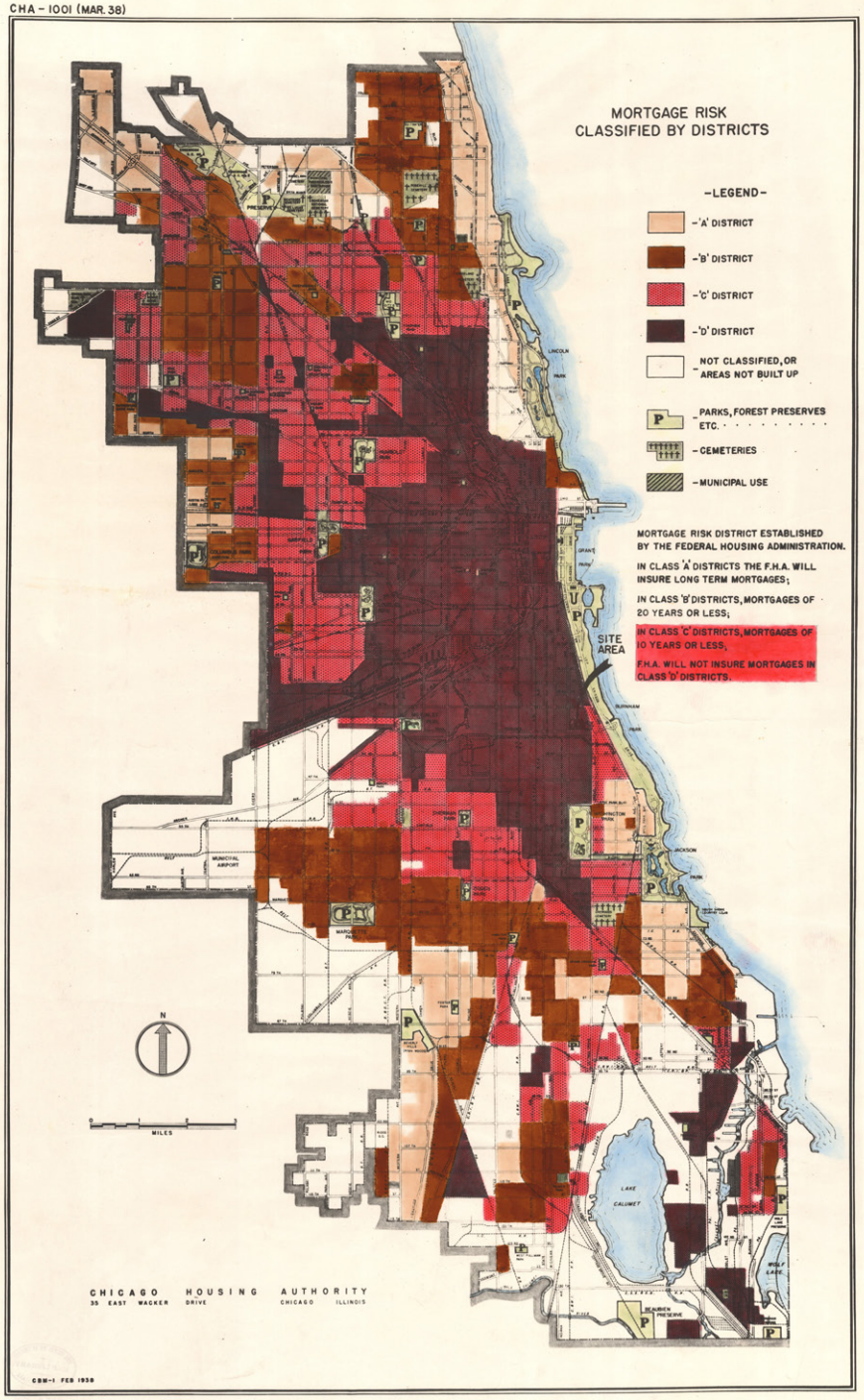


This division of the animal body "as exactly as a suburban real estate development," touches, perhaps unwittingly by the author, on one of the central arenas of racial capitalism—real estate. In the coming decade, Black Americans—the only workers who appear in the photographs printed in the meatpacking essay—would be locked out of much of the housing relief that the New Deal offered through the Federal Housing Authority, through the practice of redlining—marking off areas of the city as hazardous to investment. (See Ta-Nehisi Coates, "The Case for Reparations," on how "black people across the country were largely cut out of the legitimate home-mortgage market through means both legal and extralegal.")

Residents of what the essay's author refers to as "the black belt" that forms the north and northeast border to the Chicago stockyards and Packingtown, would fall victim to this practice of redlining.

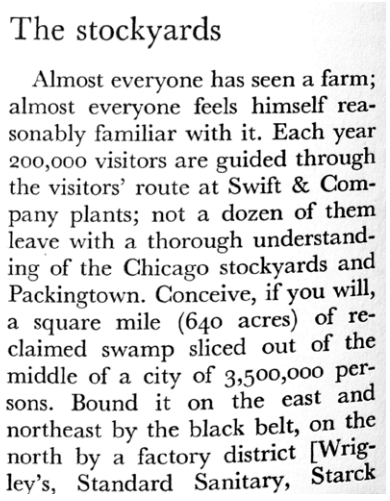
The destruction in which the workers were absorbed extended beyond the killing floor to the neighborhoods where they would return after work, which would be deprived of the capital that was now being funneled into the white suburbs.

NO ACORN COULD FIND ITS BEARINGS WITHIN A PIG BY STUDYING THIS MAP. NOR COULD A BUTCHER NICELY CARVE, NOR COULD A BIOLOGIST WRITE HIS THESIS. BUT SUCH A MAP—INFINITELY MORE DETAILED—GUIDES THE PACKERS OF PACKINGTOWN AS THEY SLICE INTO PROFITABLE PARTITIONS, 8,000,000 PIGS EACH YEAR.



racialized consumption

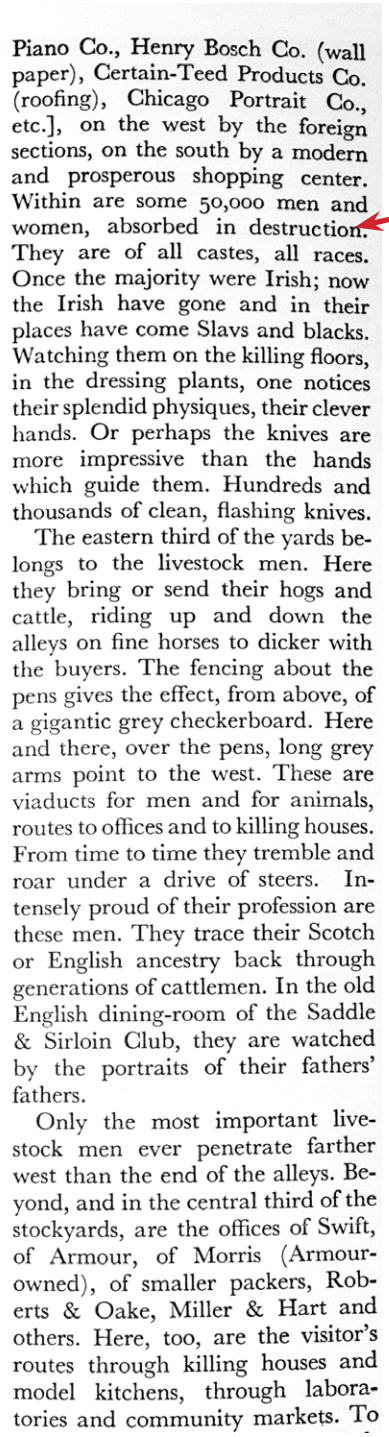
The offensive opening illustration for the meatpacking essay in *Fortune Magazine*, which refers twice to African Americans with a racist slur, suggests that the consumption of various parts of the pig was racially specific. While the readers of the magazine—an elite white "super class"—were imagined to be eating at the table below, it was only Black workers who appeared alongside the animal remains in the photographs printed in the essay.



The stockyards

Almost everyone has seen a farm; almost everyone feels himself reasonably familiar with it. Each year 200,000 visitors are guided through the visitors' route at Swift & Company plants; not a dozen of them leave with a thorough understanding of the Chicago stockyards and Packingtown. Conceive, if you will, a square mile (640 acres) of reclaimed swamp sliced out of the middle of a city of 3,500,000 persons. Bound it on the east and northeast by the black belt, on the north by a factory district [Wrigley's, Standard Sanitary, Starck

racialized production



Piano Co., Henry Bosch Co. (wall paper), Certain-Teed Products Co. (roofing), Chicago Portrait Co., etc.], on the west by the foreign sections, on the south by a modern and prosperous shopping center. Within are some 50,000 men and women, absorbed in destruction. They are of all castes, all races. Once the majority were Irish; now the Irish have gone and in their places have come Slavs and blacks. Watching them on the killing floors, in the dressing plants, one notices their splendid physiques, their clever hands. Or perhaps the knives are more impressive than the hands which guide them. Hundreds and thousands of clean, flashing knives.

The eastern third of the yards belongs to the livestock men. Here they bring or send their hogs and cattle, riding up and down the alleys on fine horses to dicker with the buyers. The fencing about the pens gives the effect, from above, of a gigantic grey checkerboard. Here and there, over the pens, long grey arms point to the west. These are viaducts for men and for animals, routes to offices and to killing houses. From time to time they tremble and roar under a drive of steers. Intensely proud of their profession are these men. They trace their Scotch or English ancestry back through generations of cattlemen. In the old English dining-room of the Saddle & Sirloin Club, they are watched by the portraits of their fathers' fathers.

Only the most important livestock men ever penetrate farther west than the end of the alleys. Beyond, and in the central third of the stockyards, are the offices of Swift, of Armour, of Morris (Armour-owned), of smaller packers, Roberts & Oake, Miller & Hart and others. Here, too, are the visitor's routes through killing houses and model kitchens, through laboratories and community markets. To

Fifty thousand racialized workers appear in the essay.

They are described as being absorbed in destruction.

How this destruction produces value is the "paradox" with which the essay begins.

By countless individual acts of destruction, Swift & Company paradoxically increases the value of products which are the result of countless individual acts of creation.

$1,250,000 is the average amount of cash that Swift & Company exchanged for pigs, every day, the author writes.

This is one of several vaults that would have held that money, in the basement of Chicago's National Stockyard Bank, just down the road from that evil smelling stream known as Bubbly Creek.

The money would not only pay for the beautifully assembled mechanisms—the pigs, the cows, the sheep—but also for the labor needed to disassemble them into a vast collection of commodities.

A monstrous collection that might resolve the paradox of profitable destruction.

"The wealth of societies in which the capitalist mode of production prevails appears as a 'monstrous collection of commodities'." The English translation of the German *ungeheuere* is "immense," not "monstrous." Thomas Keenan points out that it could, and perhaps *should* rather be translated as "monstrous," the *Ungeheuer* being "a *riesenhaftes, häßliches, Fabeltier* ('a gigantic hideous fable animal,' says the *Wahrig Deutsches Wörterbuch*)." As such, "Wealth appears as [...] a monster: something immense, colossal, yes, but also a thing compounded of elements from different forms, wild but not natural and certainly not domesticated, simply thrown together into a heap,* grown beyond the control of its creators."

The labour that produces this wealth (dis)appears as "a gelatin of undifferentiated human labour." It is in relation to this latter point that I first ran into Keenan's essay, in Nicole Shukin's *Animal Capital*. On the (mis)translation of *Gallerte* into English, not as "a gelatin of undifferentiated human labour," but as "merely congealed quantities of homogeneous human labour," see Keston Sutherland's "Marx in Jargon." There he points to how the description of abstract human labour as a gelatin of undifferentiated human labour "makes possible part of the thinking that happens later on in *Das Kapital*," one example being "the passage where Marx insists that labour is in reality 'a productive expenditure of human brains, muscles, nerves, hands, etc.'".

*The *Waarensammlung* (*collection* of commodities) described in the opening lines of *Das Kapital* is rendered in Dutch as an "*opeenhoping* van waren," or, literally, a *heaping* or *piling up* of commodities.

1867

"a monstrous collection of commodities"

appears in the opening lines of *Capital*.

In this monstrous collection

labour is transformed into a gelatin

"a gelatin of undifferentiated human labour"

By 1930, the industrial production of gelatin had become a major way of transforming that waste, which the "Founding Father" had once disciplined his workers for producing, into capital.

Near the end of the *Fortune Magazine* essay, the writer suggests that the meatpacking industry's future lies in a series of laboratories.

The first of these laboratories is "devoted to experiments with gelatin and motion picture films."

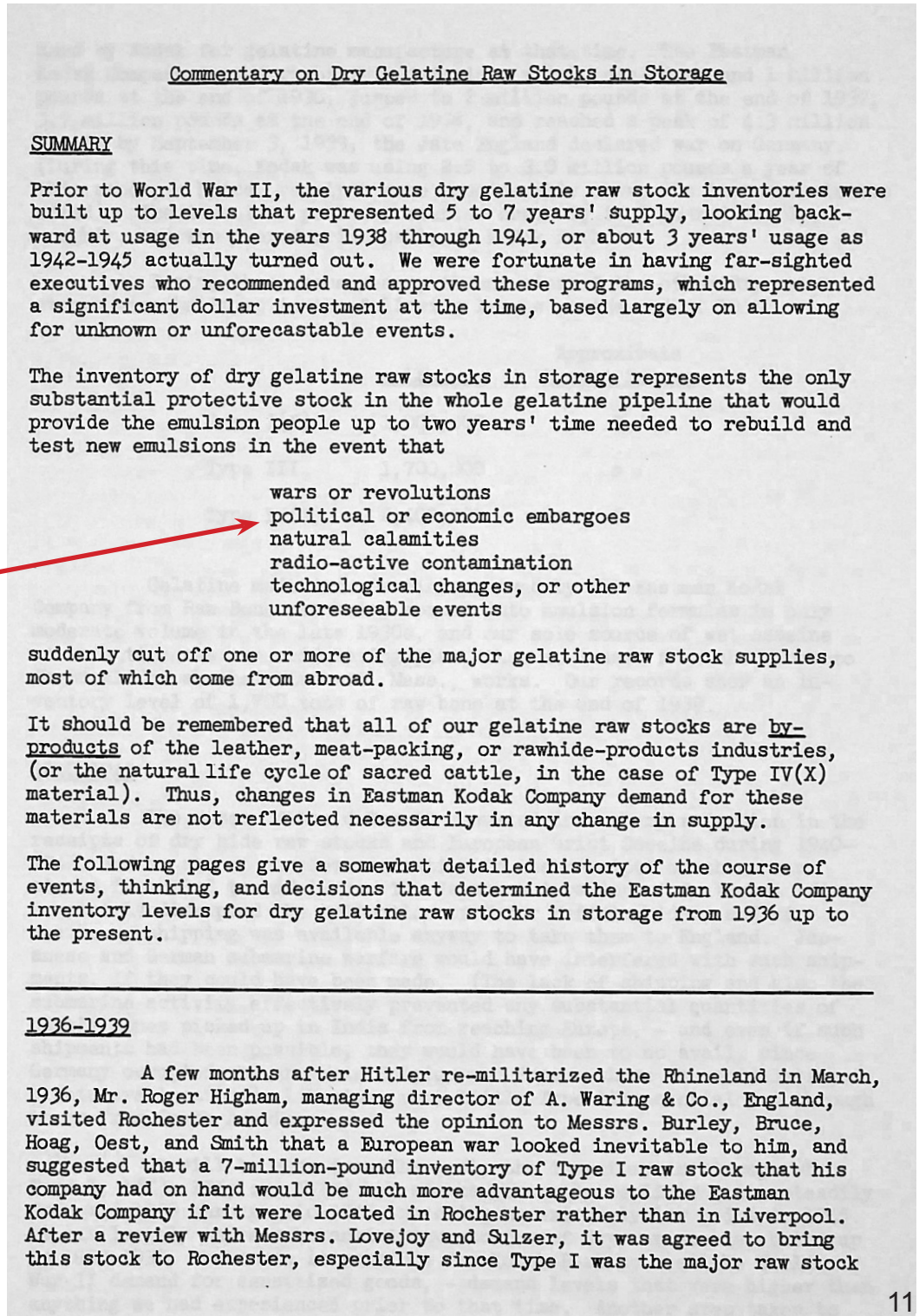
The film industry would come to consume massive amounts of gelatin—"animal tissue boiled down to a glutinous consistency," as the newly established Eastman Gelatine Corporation would describe their ultimate product.

Eastman Kodak had just bought out a gelatin and glue company and was preparing for "war, revolution, natural calamities, political and economic embargoes, technological changes, and other unforeseeable events" by stockpiling gelatin, the irreplaceable medium in which the photograph's light-sensitive particles are suspended.

Kodak's chief emulsion scientist at the time described gelatin as "a material embodying a history, which from first to last, affects its behavior."

Before registering, as an image, the "sensuous characteristics" of the persons, places or things to which the light-sensitive material might have been exposed, and continuing alongside these figures as the image was developed, accompanying them on their way to becoming a part of one sort of history, there was this other history—a history of the substance that held the image together, a material in which all "sensuous characteristics [seemed to have been] extinguished." (*Capital*, 128)

The scientist had realized that this history extends further back, beyond the brief moment in which the animal is slaughtered and then disassembled—to be transformed into a monstrous collection of commodities.



Commentary on Dry Gelatine Raw Stocks in Storage

SUMMARY

Prior to World War II, the various dry gelatine raw stock inventories were built up to levels that represented 5 to 7 years' supply, looking backward at usage in the years 1938 through 1941, or about 3 years' usage as 1942-1945 actually turned out. We were fortunate in having far-sighted executives who recommended and approved these programs, which represented a significant dollar investment at the time, based largely on allowing for unknown or unforecastable events.

The inventory of dry gelatine raw stocks in storage represents the only substantial protective stock in the whole gelatine pipeline that would provide the emulsion people up to two years' time needed to rebuild and test new emulsions in the event that

wars or revolutions
political or economic embargoes
natural calamities
radio-active contamination
technological changes, or other
unforeseeable events

suddenly cut off one or more of the major gelatine raw stock supplies, most of which come from abroad.

It should be remembered that all of our gelatine raw stocks are by-products of the leather, meat-packing, or rawhide-products industries, (or the natural life cycle of sacred cattle, in the case of Type IV(X) material). Thus, changes in Eastman Kodak Company demand for these materials are not reflected necessarily in any change in supply.

The following pages give a somewhat detailed history of the course of events, thinking, and decisions that determined the Eastman Kodak Company inventory levels for dry gelatine raw stocks in storage from 1936 up to the present.

1936-1939

A few months after Hitler re-militarized the Rhineland in March, 1936, Mr. Roger Higham, managing director of A. Waring & Co., England, visited Rochester and expressed the opinion to Messrs. Burley, Bruce, Hoag, Oest, and Smith that a European war looked inevitable to him, and suggested that a 7-million-pound inventory of Type I raw stock that his company had on hand would be much more advantageous to the Eastman Kodak Company if it were located in Rochester rather than in Liverpool. After a review with Messrs. Lovejoy and Sulzer, it was agreed to bring this stock to Rochester, especially since Type I was the major raw stock

Beyond the remains of the cows that became gelatin, beyond what one observer described as the vanishing point, "where a sort of human chopping-machine" converted animals into meat, there had been a herd of cattle.

And sometimes, these cattle would eat mustard seed.

When they ate mustard seed, this scientist discovered, their remains, on this side of the vanishing point, made for much better photographic gelatin.

It would seem that to produce the gelatin so crucial for Eastman Kodak's film, the company would need to extend their control beyond the rendering facility and the slaughterhouse, to the labor of the farm workers and the living animals themselves.

To raise Kodak cows, whose labor would now include the work of digesting mustard seed, alongside the grasses and other feed, to enrich the very hides that would eventually be torn from their bodies, to begin the process that would result in the perfectly transparent, consistent, and light-sensitive medium of film.

But the scientist took a different approach.

He set out to chemically reproduce, in the remains of the animals, what had once taken place in their bowels: the process by which cows, when still alive, digested mustard.

He filed two patents for this process, which would now allow for the transformation of the connective tissues of cattle—the very material that had held the animal body together—into the material that would hold the photographic image together: the gelatin emulsion called "film," regardless of what those animals had eaten before being slaughtered.

Patented July 6, 1926. 1,591,499

UNITED STATES PATENT OFFICE.

SAMUEL E. SHEPPARD, OF ROCHESTER, NEW YORK, ASSIGNOR TO EASTMAN KODAK COMPANY, OF ROCHESTER, NEW YORK, A CORPORATION OF NEW YORK.

PROCESS OF CHANGING THE LIGHT SENSITIVENESS OF PHOTOGRAPHIC EMULSIONS AND INTERMEDIATE USED THEREIN.

No Drawing. Application filed December 2, 1925. Serial No. 72,811.

This invention relates to processes for changing the light sensitiveness of photographic emulsions. One object of the invention is to provide a process by means of which photographic emulsions may be improved as regards their light-sensitiveness, without impairing the other properties of the emulsion. Another object of the invention is to provide a process in which a potential sensitizer may be incorporated with the materials of the emulsion, and then the sensitizer liberated at the desired time in the emulsion-making process. Other objects will hereinafter appear.

In my prior application 718,410, filed June 6, 1924, for art of light sensitive photographic materials, I have shown that light sensitizing substances may be prepared by suitably extracting certain organic materials. When these substances are incorporated in photographic emulsions, such as those of the gelatino-silver-halid type, they greatly increase the light-sensitiveness of such emulsions.

I have now found that such sensitizing materials may be prepared in a latent form in which they do not have a sensitizing action, and then can be readily changed from such form so that they do have the sensitizing action. I have further discovered that they stay in their latent form, when incorporated with the materials of the emulsions, and may be converted into the active sensitizing form in such emulsions at the desired time.

In the preferred form of my invention the sensitizing substance is combined with an organic group or radical which maintains it in its latent state until it is released from such group or radical. For instance, a mustard oil sensitizer may be combined in a glucoside, in which form it is latent or inactive, as regards sensitizing action.

While the sensitizing substance may be released from the group or radical by different chemical steps, I prefer to do it, particularly in the case of glucosides, by using a hydrolyzing enzyme. I shall now describe one form of my invention by way of illustration, but it will be understood that the invention is not restricted to the details thus given, except as indicated in the appended claims. Since mustard oils and their glucosides are readily prepared and easily treated, I shall refer to them by way of example.

Sensitizing mustard oils are contained in combined or latent form in vegetable bodies, particularly in the seeds of the plants of the order cruciferæ. They occur usually as glucosides, the monose group or radical with which the oil is combined acting to prevent light-sensitizing action.

While these glucosides can be hydrolyzed in various ways, I have found it particularly convenient to hydrolyze them by means of enzymes. The latter can be used in the emulsion itself, without adversely affecting the latter. Moreover suitable enzymes occur in the same plants as the glucosides only in different cells, and can be obtained in suitable form by simple technique.

I may, for example, crush the seeds of black mustard (*Brassica nigra*) and macerate them in hot alcohol (pure ethyl or denatured) which is raised to a boiling point and held at this point for some time. The residue is then extracted with cold water and evaporated down to a relatively small volume. This watery extract is then made slightly acid by the addition of tartaric acid. The liquid is then still further evaporated and extracted with alcohol. The syrup thus obtained is best diluted and neutralized with potassium carbonate in order to prevent decomposition.

The syrup in this form constitutes a latent sensitizer because it contains the sensitizing substance, namely the allyl mustard oil in combination with the monose radical. If this syrup be added to a photographic emulsion, say for instance a gelatino-silver-halid emulsion of the kind described in my above cited prior application, it produces no sensitizing effect. But at the same time it produces no ill effects on the other properties of the emulsion. It can be thus incorporated at any of the stages in the preparation of the emulsion, even the preliminary ones, say in the gelatine for instance.

Finally the emulsion, containing the latent sensitizer, can be greatly speeded up or sensitized by liberating the combined mustard oil, such as allyl isothiocyanate, which is contained in it. This liberation can be done by melting the emulsion, at a temperature preferably under 50° C., and adding to

Margaret Bourke-White was *Fortune Magazine*'s first photographer.

In her autobiography, she describes photographing a series of bank interiors around the same time that she was working on the meatpacking story.

She photographed a bank vault, similar to this one, on what turned out to be the eve of the 1929 stock market crash.

Annoyed by all the bank executives, who were supposed to have gone home by that time, but were instead racing around, popping up in her compositions, interrupting the empty space that she was trying to capture for her assignment–she describes having to repeatedly cover the lens to avoid having their ghostly figures turn up in the exposures.

"History," she would later write about that night, "was pushing her face into the camera, and here was I, turning my lens the other way."

When her autobiography was published, in 1963, Chicago's meatpacking industry was on its way out. Dispersed along the highways that had taken over the railways' role as the central logistics network for the industry.

Its dissolution here was just a phase in the industry's own reproduction on an expanded scale.

Looking back on her work for the meatpacking essay, Bourke-White describes the one place where its writer would not go.

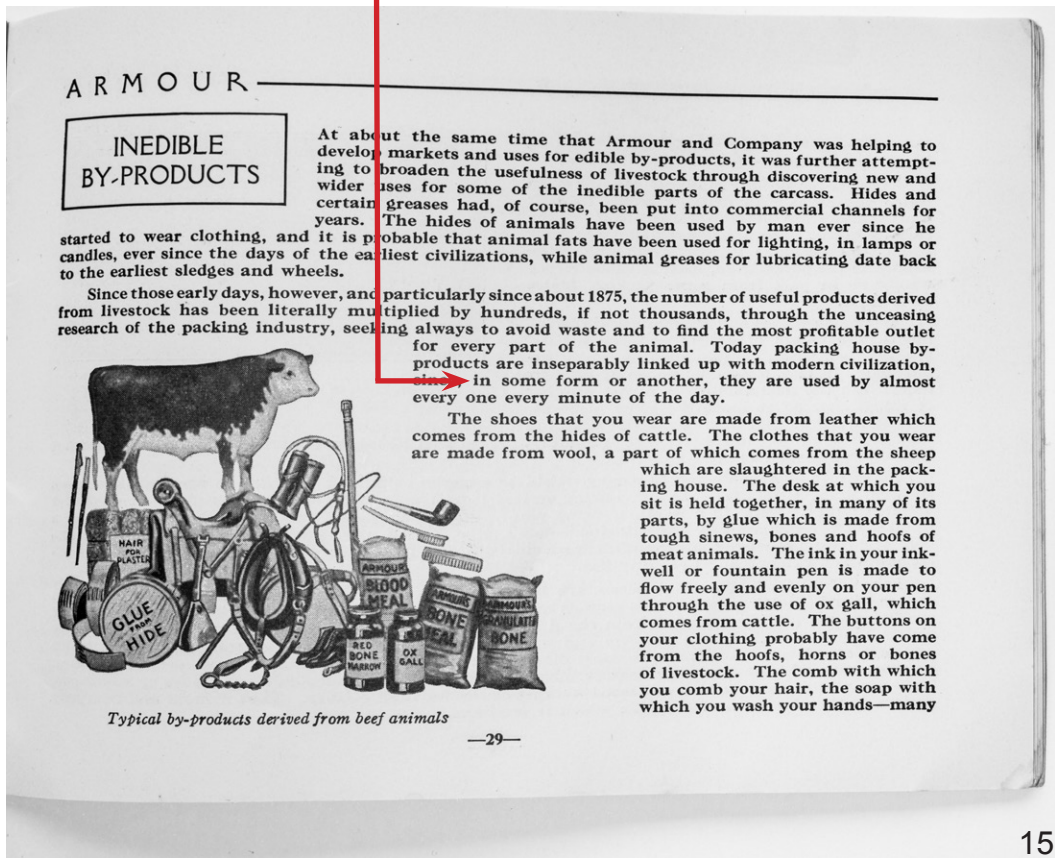
"Countless times we had heard the well-worn adage that the Swifts used all of the pig but the squeal. The sight that faced us proved it. Before us were pungent macabre mountains–rich tones of ochre in the yellow light–mountains of the finest pig dust. This was the last of the pig: the scraps, the leftovers, soon to be mixed in with meal, fed to livestock including presumably pigs, whereupon it would continue its endless reincarnation as meat and meal again."

The complete dissolution of animal bodies into a series of commodities, turns out to be a reproduction, of the very animals that were initially dissolved.

But these are peculiar animals, whose existence serves as a vehicle–a medium–for capital, which grows larger each time it passes through them.

It is as if these animals themselves are capital's medium.

Absorbing not the light-sensitive particles of photographic film, which might eventually capture the image of bodies in movement; these animals absorb the real movements of all those working to transform their bodies into that immense collection of commodities that are used, in some form or another, "by almost everyone, every minute of the day," as one meatpacking giant boasted back in 1930.



ARMOUR

INEDIBLE BY-PRODUCTS

At about the same time that Armour and Company was helping to develop markets and uses for edible by-products, it was further attempting to broaden the usefulness of livestock through discovering new and wider uses for some of the inedible parts of the carcass. Hides and certain greases had, of course, been put into commercial channels for years. The hides of animals have been used by man ever since he started to wear clothing, and it is probable that animal fats have been used for lighting, in lamps or candles, ever since the days of the earliest civilizations, while animal greases for lubricating date back to the earliest sledges and wheels.

Since those early days, however, and particularly since about 1875, the number of useful products derived from livestock has been literally multiplied by hundreds, if not thousands, through the unceasing research of the packing industry, seeking always to avoid waste and to find the most profitable outlet for every part of the animal. Today packing house by-products are inseparably linked up with modern civilization, since in some form or another, they are used by almost every one every minute of the day.

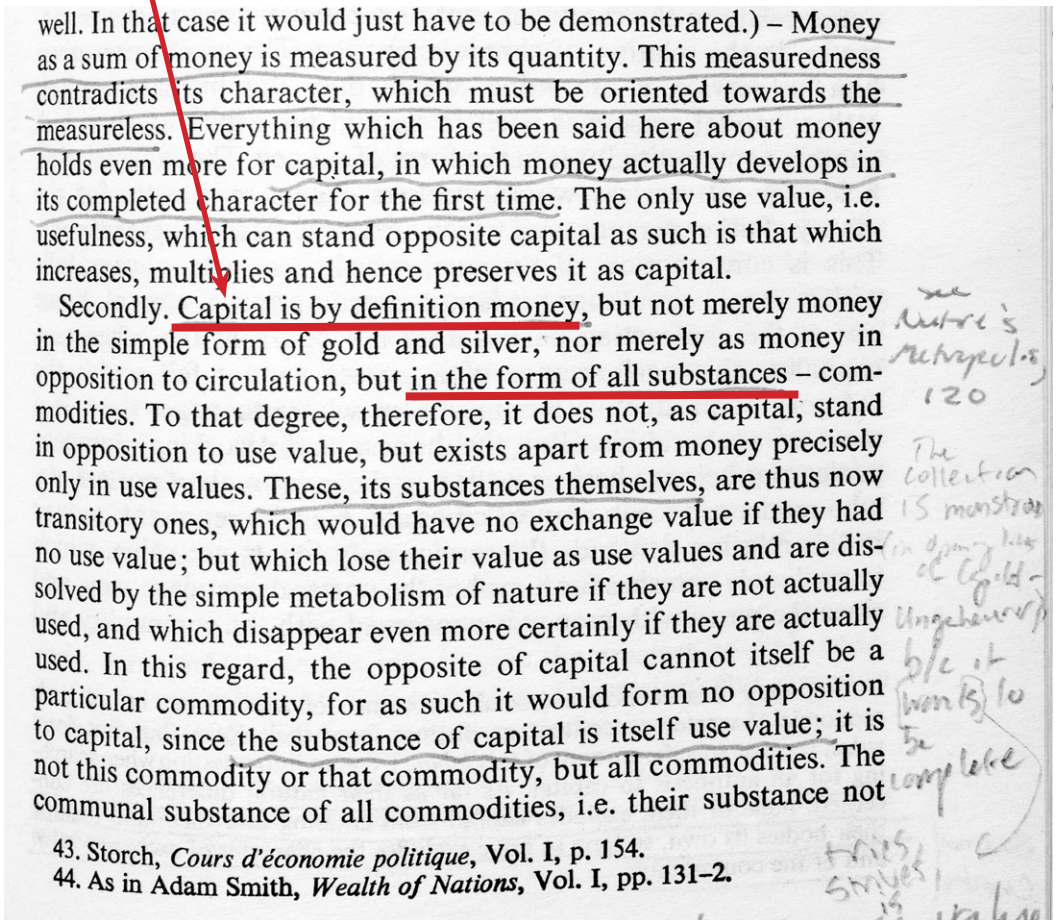
The shoes that you wear are made from leather which comes from the hides of cattle. The clothes that you wear are made from wool, a part of which comes from the sheep which are slaughtered in the packing house. The desk at which you sit is held together, in many of its parts, by glue which is made from tough sinews, bones and hoofs of meat animals. The ink in your inkwell or fountain pen is made to flow freely and evenly on your pen through the use of ox gall, which comes from cattle. The buttons on your clothing probably have come from the hoofs, horns or bones of livestock. The comb with which you comb your hair, the soap with which you wash your hands—many

Typical by-products derived from beef animals

—29—

If gelatin, as that emulsion scientist claimed nearly a century ago, is "a material embodying a history," then it is a history of work, of human and animal labor—a consumption of "brain, nerves, muscles and sense organs," that ultimately disappears in the transparent product that will itself be worked on—consumed—in the process of making an image.

The monstrous character of that image only really appears before it is ever taken; when it is still just a collection of commodities, put to work on each other by capital, in order to reproduce itself, as money in the form of all substances.



well. In that case it would just have to be demonstrated.) – Money as a sum of money is measured by its quantity. This measuredness contradicts its character, which must be oriented towards the measureless. Everything which has been said here about money holds even more for capital, in which money actually develops in its completed character for the first time. The only use value, i.e. usefulness, which can stand opposite capital as such is that which increases, multiplies and hence preserves it as capital.

Secondly. Capital is by definition money, but not merely money in the simple form of gold and silver, nor merely as money in opposition to circulation, but in the form of all substances – commodities. To that degree, therefore, it does not, as capital, stand in opposition to use value, but exists apart from money precisely only in use values. These, its substances themselves, are thus now transitory ones, which would have no exchange value if they had no use value; but which lose their value as use values and are dissolved by the simple metabolism of nature if they are not actually used, and which disappear even more certainly if they are actually used. In this regard, the opposite of capital cannot itself be a particular commodity, for as such it would form no opposition to capital, since the substance of capital is itself use value; it is not this commodity or that commodity, but all commodities. The communal substance of all commodities, i.e. their substance not

43. Storch, *Cours d'économie politique*, Vol. I, p. 154.
44. As in Adam Smith, *Wealth of Nations*, Vol. I, pp. 131–2.

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Zachary Formwalt 2022

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