

State of the Union 1999 / Box 5 / Josh Gottheimer Files

Consultation memo binder

Internal facts binder

Roosevelt room reading session drafts

Real rejected articles

Folders for drafts 12, 13, 19 and 22

Josh Gottheimer Facts Folder

DONE

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PHOTOCOPY
PENETRATION

✓ FACT

PROPERTY
DEPT. OF THE ARMY

Bumpers Votes

020

1975 -	536		602	
1976 -	600		688	
1977 -	572		635	90
1978 -	444		516	86
1979 -	446		496	90
1980 -	467		531	88
1981 -	435		483	90
1982 -	437		465	94
1983 -	338		371	91
1984 -	248		275	90
1985 -	370		381	97
1986 -	340		354	96
1987 -	407		420	97
1988 -	352		379	93
1989 -	309		312	99
1990 -	319		326	98
1991 -	277		280	99
1992 -	262		270	97
1993 -	368		395	98
1994 -	326		329	97
1995 -	545		613	97
1996 -	282		306	92
1997 -	298		298	100
1998 -			318	

74-75 -

how many votes cast

Elected 1974

1975 - 5 ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~ ~~|||||~~
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~~602~~

1

- 66

1975

536

1976 - 688 votes - 88 = 600

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1977 - 90% 635

572

1978 - 86% of 516

~~477~~ 444

1979 - 10% of 496

446

1980 - 88% of 531

467

1981 - 90% of 483

435

1982 - 94% of 465

437

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

October 11, 1998

REMARKS BY THE PRESIDENT
DURING EDUCATION BUDGET NEGOTIATIONS

The Cabinet Room

1:00 P.M. EDT

THE PRESIDENT: In only 447 days, the 21st century begins, a century in which the education of our nation's children will matter more than ever before. Yet, far too many of our schools are not ready for that new century. We've all seen the news stories about teachers teaching classes in subjects they didn't major in in college, about schools so overcrowded they have trailers out back to handle the overflow, about classrooms with 35 or more students all vying for a minute of attention from the teachers, about schools so old they can't be connected to the Internet.

This can be changed, but we cannot afford to wait. And we are waiting for the Republican majority in Congress to bring this year's education investment bill to the floor. The delay must end. On education, Congress must choose progress over partisanship. We need a strong bipartisan bill.

Just a few days ago I had the honor of signing into law such a bill to open the doors wider to higher education. And in just the last two days, Republicans and Democrats have worked together to pass strong charter school and vocational education measures. And I'd like to thank Senator Jefford, Senator Kennedy, Senator Coats, Congressmen Goodling and Clay and Roemer for that. Now it's time once again for Congress to cross party lines and send me an education budget that I can sign that is worthy of our children and their future.

This bill must make the right investments in our children's future. It must include a strong down payment on my request for 100,000 teachers for smaller classes in the early grades. It must invest in academically enriched after-school and summer school programs to keep kids in school and out of trouble. It must invest in modernized schools for our children -- we cannot raise students up in buildings that are falling down. Any budget that does not do anything to help modernize our schools, to give our children safe and clean places to learn does not fully prepare them for the 21st century.

Tomorrow night, the funding to keep the government open expires again. Senator Daschle, Congressman Gephardt, the Democratic colleagues and I will work with the Republican majority to do the right thing for our country. We must pass a budget that is fiscally responsible, that honors our values, that invests in the education of our children. That is the most important thing we can do in this long running Congress.

Q Mr. President, the Republican leaders were saying this morning that if you were serious about reaching this budget deal that you would stay in Washington instead of going on to fundraisers tomorrow and the following day.

THE PRESIDENT: Well, let me first of all say that in the State of the Union in January, I sent a program to Congress to

save the surplus until Social Security is fixed, to invest in education as I just described, to pass a patients' bill of rights, to keep our economy going amidst all this economic turmoil in the world. In February, I sent them a balanced budget with the same education program in it.

This is the first Congress in 24 years that did not pass a budget -- in 24 years. Now, they have turned their attention to this and we are making progress. And I worked on it yesterday, I am prepared to do whatever it takes to work with them now that they have turned their attention to this to get the job done. But in the end it is their votes. We are aggressively working with them to resolve this, but they have to decide that they will agree with us after this whole year that it is a priority, that we are going to do it and that we're going to do it now.

Q Mr. President, will you sign another continuing resolution if Congress passes one? Dick Arney said today that he felt one was needed.

THE PRESIDENT: You mean for a couple days?

Q That's right.

THE PRESIDENT: Well, sure, we're not going to shut the government down if we're working on this, of course. No one is interested in doing that. I just want to get this job done.

CONGRESSMAN GEPHARDT: Mr. President, can I add an answer? This Congress has been here probably less than most Congresses, but what I'm worried about is not when they're not here. What I'm worried about is when they are here -- they've killed campaign reform, they've killed the tobacco bill, they've killed all the education legislation the President has sent, they killed patients' bill of rights; they tried to spend the surplus on a tax cut, rather than saving it for Social Security.

They shouldn't be worried about whether the President is here or not -- the President is here, the President sent the bills. I'm worried about what they do when they are here. They kill everything that the American people want. And that's what they've got to get to work on, to do the things people want done.

~~Q Mr. President, you characterize this as a~~
do-nothing Congress. Do you think, with the results of the upcoming election will it be a referendum on your presidency? You're going to run against this Congress, do you think the election results will be a referendum on your presidency?

THE PRESIDENT: Well, first of all, I'm not running. But what I do intend to do is to bring the issues to the American people. The American people will have to decide if they believe that Social Security should be saved before this surplus is spent for other things. The American people will have to decide whether they really want a patients' bill of rights that guarantees people in HMOs the right to see a specialist or go to the nearest emergency room or have their medical records private or finish a treatment for chemotherapy or pregnancy before they can be forced to change doctors.

These are the kinds of decisions the American people have to make about what they want for their future. What I'd like to see is this election to be about the American people and their future, not about Washington, D.C. -- just as I think this last year could have been and should have been about the people in America and

not about Washington, D.C. That is the decision before them and I trust them. I think they'll make the right decision.

END

1:06 P.M. EDT

THE WHITE HOUSE

Office of the Press Secretary
(New York, New York)

For Immediate Release

October 12, 1998

REMARKS BY THE PRESIDENT
AT THE G & P CHARITABLE FOUNDATION FOR CANCER RESEARCH
FIRST ANNUAL GALA BENEFIT

Sheraton New York Hotel and Towers
New York, New York

9:15 P.M. EDT

THE PRESIDENT: Thank you. Well, when I told Denise I would do this for her in the memory of her daughter, I didn't know that an added bonus was I would be introduced by Bill Cosby -- (applause) -- a man who -- I mean, his net worth was 500 times mine before I met all those lawyers in Washington. (Laughter and applause.) But I thank you, Bill. I thank you and Camille for your friendship, the letters you sent me, the words of wisdom in the last several months, and for being here tonight.

I want to thank my wonderful friend, Denise Rich, for so many things, but for remembering her daughter in this magnificent and far-sighted and humane way. Hillary would like to have been here with me tonight, but she is in Prague on a trip for our country. But we love you, Denise, and we thank you for what you're doing. (Applause.)

I want to thank Les Moonves for his work in making this evening a success. And I want to say I am delighted that you're honoring Milton Berle. (Applause.) Thank you.

You know, when you're President, you can speak off the cuff a little bit, but you have all these wonderful people who work for you and they dig up interesting facts. Now, here are the facts they dug up for me to say about Milton Berle. (Laughter.) Oh, no, it gets better. Sit down. He's been in show business for 85 years. He's performed in drag more than any other entertainer except the road show cast of La Cage Aux Folles. (Laughter.) And, most important, he holds the Guinness Book of World Records for the most charity benefit performances of any entertainer in history. Thank you, Milton Berle. (Applause.)

I'd like to ask you to take just a couple of minutes to seriously consider the purpose for which you have come tonight. Twenty-five years ago, America declared war on cancer. Twenty-five years from now, I hope we will have won the war. I hope the war on cancer will have about as much meaning to schoolchildren as the War of 1812. Twenty-five years from now, I hope schoolchildren don't even know what the word chemotherapy means.

The progress now being made against cancer is stunning. We are closing in on the genetic causes of breast cancer, colon cancer and prostate cancer; testing medicines actually to prevent these cancers. New tools for screening and diagnosis are returning to many patients the promise of a long and healthy life. From 1991 to 1995, cancer death rates actually dropped for the first time in history.

For the last six years we have worked hard to fight this dreaded disease, helping cancer patients to keep their health coverage when they change jobs, accelerating the approval of cancer drugs while maintaining

THE WHITE HOUSE

Office of the Press Secretary .

For Immediate Release

October 31, 1998

RADIO ADDRESS OF THE PRESIDENT
TO THE NATION

Glen Forest Elementary School
Falls Church, Virginia

10:06 P.M. EST

THE PRESIDENT: Good morning. I'm speaking to you today from the Glen Forest Elementary School in Falls Church, Virginia, where I'm joined by students, parents and teachers to talk about a problem they understand all too well: the urgent need in America for school construction. In fact, I'm speaking to you from one of nine trailer classrooms that sit outside the schoolhouse on what used to be a playground, because there's simply not enough room inside for all the students. And the 10th trailer goes up in a matter of days.

Falls Church is not the only place with this problem. Rundown schools and rising enrollments have made these trailers an increasingly common sight all over our country. Too many children are going to school every day in trailers like this one. In other schools, class is held in gymnasiums and cafeterias. I've even heard some stories of classes being held in closets. Crumbling walls and ceilings have forced still other schools to bus their students to neighboring facilities.

With a record number of school buildings in disrepair, especially in our larger cities, and school enrollments all over America at record highs and rising by the millions, the need to renew our nation's public schools has never been more pressing. I've said many times that in this increasingly global world where what you earn depends upon what you learn, improving education must be our nation's top priority for all our children.

For nearly six years now I've done everything I could to meet that challenge. I'm especially proud of the victories for America's children our administration fought for and won in the balanced budget Congress passed just last week. We fought for and won new investments, from child literacy to college mentoring, from after-school programs to summer school programs, to opening the doors of college even wider by helping more people with financial aid. All these things will help all our children reach their highest potential no matter where they start out in life and where they go to school.

Perhaps even more important, we fought for and won an unprecedented commitment to put 100,000 new well-trained teachers in our nation's classrooms, to reduce class size, decrease discipline problems and increase student learning. But you don't have to be a math whiz to know that more teachers and smaller classes means we also need more classrooms. Unfortunately, the Republican leadership in Congress failed the simple test to pass my school construction initiative to help communities build, repair and modernize 5,000 schools around our country.

I'm disappointed that Congress also blocked our efforts to raise academic standards and strengthen accountability in our schools. At a time when our children's education matters more than ever to our children's future, and to our nation's strength in the 21st century, there are still even some Republicans in Congress who would shut down the Department of Education.

Now, in just a few days Americans will go to the polls to elect the next Congress. And there's a lot at stake. Our children don't need another two years of partisanship -- they need two years of progress, of putting people over politics. And we need a Congress that doesn't retreat from our commitment to hire 100,000 teachers; a Congress that makes a commitment to modern schools so those teachers can teach in classrooms, not in trailers; a Congress that puts aside partisanship and puts our children's future first.

The American people have the power to elect that kind of Congress. Our children are counting on us to do it. So this Tuesday let me urge all of you, without regard to your party, please, go out and vote for a Congress that will strengthen education and strengthen our nation for the 21st century.

Thanks for listening.

END

10:10 A.M. EST

THE WHITE HOUSE

Office of the Press Secretary
(New York, New York)

For Immediate Release

October 12, 1998

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For the last six years we have worked hard to fight this dreaded disease, helping cancer patients to keep their health coverage when they change jobs, accelerating the approval of cancer drugs while maintaining

safe standards, continually every year increasing funding for cancer research.

In the last few weeks, four critical steps have been taken. First of all, in spite of all the fights we've been having in Washington, we did succeed in getting from Congress on a bipartisan basis the largest single increase in funding for cancer and other medical research in history as part of our gift to the 21st century. (Applause.)

Second, I directed the National Cancer Institute to expedite a new computer system to give tens of thousands of cancer patients across our country access to clinical trials on the kinds of new cancer treatments that can save their lives.

Third, I have taken steps to ensure that by next year cancer patients and advocates will have a seat at the table when we set the medical research agenda in government, because those who suffer from cancer know truths about these diseases that even the experts do not understand.

And, fourth, we've made \$15 million available to study the long-term effects of cancer treatment and how to prevent cancer recurrence.

And I know, Denise, these grants have special significance to you because Gabriella, herself, succumbed as a result of the treatment she received from Hodgkin's Disease. So we give these grants with you and your family in mind. (Applause.)

Oh, we've still got a lot to do, all right, in this battle for victory over cancer. We have to convince the next Congress to finish the unfinished agenda of this one to pass a patients' bill of rights to ensure cancer patients high-quality care -- (applause) -- to help Medicare beneficiaries with cancer be a part of these clinical trials, to convince the next Congress to confirm the first oncologist ever nominated to be head of the FDA, Dr. Jane Henney; and finally to take strong action to protect our children against America's number one cancer threat, the sales of tobacco products illegally to our children. (Applause.)

But I came here to say to you two things. First of all, our country is moving in the right direction. And with all the partisanship in Washington, this is one area where we have pretty much moved together, hand in hand across party lines.

Secondly, I want you to know that there is so much to be done that, in spite of increasing and unprecedented government efforts, it's not enough. We need the kind of effort that you're making here tonight. You never know how many lives you'll save, how many children you'll give a future to, and it's really worth doing.

Let me just say one final thing. The fight against cancer is really a fight for life, a fight for the elemental proposition that all of us are bound to seek, not just for ourselves, but for all others, the chance to live out our dreams for as long and as well as we can. And whenever that chance is cut short, we are all diminished. I'm thinking about it in another context today because, like so many of you, I was heartbroken this morning to learn that young Matthew Shepard, who was beaten so viciously in Wyoming, succumbed to his injuries.

And I say that to remind you, when we come here tonight you feel good about it, you feel good about yourselves. You're contributing money to help people you'll never know live lives you'll never be a part of. And that is in the best tradition of humanity. You do it because you know in some profound and almost indescribable way we share a common

mission in these brief lives we live on Earth. And when someone else takes a life -- as this young man was apparently beaten to death and, apparently, only because he was gay -- and that taking is done out of blind hatred and maybe even fear, like cancer, it violates every sense of how we think life ought to be.

So I say to you tonight, when you go home and you ask yourselves what happened tonight -- besides the fact that you all look beautiful and you saw a lot of interesting people, and you had to put up with a speech from the President, and you marveled at Milton Berle, and Bill Cosby made you laugh -- you can say, I stood for life. Not my life, but someone else's. Not someone I know, but someone I don't. Not someone whose life I will share, but someone whose life I hope will be wonderful.

And it is the recognition of how we are all bound together across all the lines that superficially divide us that makes this a very great country. When we violate that, we diminish our own lives. When we honor it, we lift our lives. And I thank you for how you have honored it tonight.

God bless you. (Applause.)

END

9:28 P.M. EDT

THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release

November 6, 1998

REMARKS BY THE PRESIDENT AT SIGNING CEREMONY
DESIGNATING LITTLE ROCK CENTRAL HIGH SCHOOL
A NATIONAL HISTORIC SITE

The South Lawn

11:43 A.M. EST

THE PRESIDENT: Thank you very much. You know, when Ernie was up here introducing me, I remembered that he was the only senior among the Little Rock Nine. He graduated in the spring in 1958, and when they called him up to receive his diploma, the whole auditorium was quiet, not a single person clapped -- but we're all clapping for you today. (Applause.)

I would like to thank all the members of the Little Rock Nine who are here, including Elizabeth Eckford, Carlotta LaNier, Jefferson Thomas, Minnijean Trickey, Terrence Roberts. Melba Pattillo Beals is not here. Gloria Ray Karlmark is not here. Thelma Mothershed Wair is not here. I think we should give all of them another hand. (Applause.)

I would like to thank Congressman Elijah Cummings, Congressman Gregory Meeks for coming; Mayor Woodrow Stanley of Flint, Michigan; Commissioner Edna Bell, the president of the National Association of Black County Officials, from Wayne County, Michigan. I'd like to thank and welcome the Mayor-elect of Washington, D.C., Anthony Williams. (Applause.)

I told him I'd be for more federal aid if he'd teach me how to tie a bow tie. I never learned how to do that. (Applause.)

I would like to thank Secretary of Transportation Rodney Slater and the Secretary of the Interior Bruce Babbitt for their presence and leadership. (Applause.) And I would like to say a special word of welcome and profound appreciation for his historic role in Tuesday's historic turnout of voters, to Reverend Jesse Jackson. Welcome, sir, we're delighted to have you here. (Applause.)

I thank the United States Marine Band, as always, for their great performance, on the occasion of John Philip Sousa's birth anniversary. And let me say a special word of welcome again to the White House to the magnificent young people of Eastern High School Choir from Washington, D.C. Thank you. (Applause.)

Let me say, since we are here to talk about our reconciliation, I hope you will forgive me for taking just a moment -- and I know I speak for all Americans who are here -- to express my sympathy to the people of Israel, who this morning were once again the target of a vicious terrorist attack. No nation should live under the threat of violence and terror that they live under every day.

When Prime Minister Netanyahu and Chairman Arafat signed the Wye River Agreement, they knew they would face this moment. They knew when they went home both of them would be under more danger and the terrorists would target innocent civilians. They knew they would have to muster a lot of courage in their people to stick to the path of peace

in the face of repeated acts of provocation.

There are some people, you know, who have a big stake in the continuing misery and hatred in the Middle East, and indeed everywhere else in this whole world, just like some people had a big stake in continuing it in Little Rock over 40 years ago.

I ask for your prayers and support today for the Israelis and the Palestinians who believe in this agreement and who are determined to carry out their responsibilities and who understand that the agreement is the best way to protect the safety of the Israeli people. It was tenaciously negotiated, hard fought, but it is the best way to safety for the Israelis, the best way to achieve the aspirations of the Palestinians, and in the end, the only answer to today's act of criminal terror. I hope you will all feel that in your heart. (Applause.)

Let me say, this is a very, very happy day for the people who were part of the Little Rock Nine experience, for the people of Little Rock, all the Arkansans who are here, African Americans from throughout our country. There was an earlier reference made by Congressman Bennie Thompson -- and I thank him for his outstanding leadership in this endeavor and for his fine remarks today -- about the election.

Now, most of the publicity about the election has been the enormous turnout of African American citizens in a midterm election that resulted in the victories that have been well publicized for non-African American elected officials. And having been one of those on several occasions, I am immensely grateful. (Laughter.) But what has received less publicity that I would like to point out, because this too was a part of the road that the Little Rock Nine began to walk for us, is that on Tuesday in the state of Georgia, an African American was elected the Attorney General of the state, an African American was elected to the labor commission of the state. (Applause.)

And in the South on Tuesday, African American Congressmen were reelected in majority white districts, with large majorities -- large majorities. (Applause.) That is a part of the road we have walked together, a part of what we celebrate today.

There are so many here who played a role in it. One more person I would be remiss if I did not recognize, that Hillary and I love so much and are so grateful to, is the wonderful Dr. Dorothy Height. Thank you for being here. Let's give her a big hand. (Applause.) Thank you and bless you.

Ladies and gentlemen, there is only one bittersweet element in this magnificent moment for Hillary and for me, and that is that we are celebrating the last piece of legislation passed by our good friend Dale Bumpers. We have walked a lot of steps together since I first met Dale Bumpers about 25 years ago when he was Governor. And we've had a lot of laughs at each other's expense. After I became President, just to make sure that I didn't get a big head, he went around Washington introducing me to people as the second-best Governor Arkansas ever had. (Laughter.) Today I told him that I hadn't much time to review my remarks, and therefore hadn't had the opportunity to delete all the nice things that had been written for me to say about him. (Laughter.)

But I do want to tell you that this is a truly astonishing public servant. Hillary and I admire him, admire his wife Betty, admire the things that he's stood for and she's stood for, and we will miss them. Last month, in a final and, as always, brilliant speech on the Senate floor, Dale mentioned an inspiring teacher who once stopped him when he was reading out loud and said to the whole class, "Doesn't he have a nice voice. Wouldn't it be tragic if he didn't use that talent?"

I think it's fair to say that Dale Bumpers has done his teacher proud -- (applause) -- because he used that eloquent, impassioned voice to make sure that all the children of his state and our nation could make use of their God-given talents.

We owe him an enormous debt of gratitude for his nearly five decades of caring, often courageous public service, and I cannot thank him enough.

The bill that Senator Bumpers and Congressman Thompson have presented to me for signature today recognizes the courage of the Little Rock Nine and that of their parents, their leaders, their community leaders, especially our great friend, Daisy Bates, who could not be here today.

Because of all of them, Central High has become a hallowed place, a place every bit as sacred as Gettysburg and Independence Hall. Interestingly enough, back in the 1920s, it was voted the most beautiful school in America. It is still a functioning school -- very much so. There are some years when its students comprise 25 percent of our state's entire roster of National Merit Scholars. It's a place where children can still go and study Greek and Latin, something that's rare in all school districts throughout America. It is, I believe, about to become the only open, fully operating school that is a National Historic Site.

As Ernie said, Hillary and I welcomed the Little Rock Nine back to Little Rock on the 30th anniversary of the integration of Little Rock Central High School. Then I was profoundly honored to hold open the door of the school so they could walk through on the 40th anniversary. Today I was able to welcome them all to the White House to the Oval Office and now on the South Lawn.

On the fateful day they stepped into Central High School and were removed by the police, President Eisenhower was on vacation in Newport. When he learned what had happened to them, and that Governor Faubus had turned over the streets to the mob, he realized that -- even as a conservative -- the federal government had to act. The next day he flew back to the White House. His helicopter landed just a few steps from here. He had just ordered General Maxwell Taylor to put the might of the 101st Airborne Division behind their righteous march through the doors of Central High.

Now, thanks to Senator Bumpers and Congressman Thompson, and many others, as they said, our nation has found two very fitting ways to honor that march to ensure that the memory of the Little Rock Nine and all they represent remains alive long after those of us with living memories are gone.

As part of the budget I signed two weeks ago, I was authorized to confer Congressional Gold Medals, the highest civilian honor the Congress can bestow, on each and every member of the Little Rock Nine. It was only a few months ago that we presented President Nelson Mandela with that same award, and he spoke so movingly of his long struggle to tear down the walls of apartheid. The Little Rock Nine broke through the doors of apartheid.

I can't wait until the artists finish creating your medals and we can bestow them upon you, an honor you richly deserve. And then of course the main reason we're here today is to make a living monument forever out of the setting of your struggle.

Again, I thank Senator Bumpers and all the others. The bill will allow the National Park Service to work with the community to maintain and protect Central High's magnificent building. It will also allow the

Park Service to start acquiring land in the surrounding neighborhood to create new facilities where people can learn about the origins and the aftermath of the 1957 crisis -- topics that simply can't be fully explored in the existing visitor center's limited space.

Children will never fully understand what you experienced in 1957. Maybe that's not such a bad thing. But they need to know. And now, for ~~all time to come, children will have an opportunity to walk the stairs~~ you walked, to see the angry faces you braved, to learn of your sacrifice, and about what, as a result of your sacrifice, you, your fellow Arkansans, and your nation have become. Perhaps they will even see what it was about the Little Rock confrontation that made racial equality a driving obsession for so many of us who were young at the time and seared by it.

Again, I want to thank you for staying together over these 40-plus years now, for being willing to show up and be counted, and to remind us, for showing us the shining example of your lives so that we could never forget all those who went before you who never had the chance that you gave to all who came after.

Monuments and medals are important reminders of how far we have come, but it is not enough. The doors of our schools are open, but some of them are falling off their rusty hinges. And many of them are failing the students inside.

The economy has never been stronger, but there are still striking disparities in jobs, in investments in neighborhoods, in education and criminal justice. Still too many break down along what W.E.B. Du Bois first called the color line. And while the Little Rock Nine have enjoyed great success in business, in the media, in education, they can tell you that in spite of what we celebrated on Tuesday, there is still discrimination and hatred in the hearts of some Americans.

All of that we found in our Presidential Initiative on Race, and we must never forget that it is our continuing obligation to the Little Rock Nine and all others who brought us to this point to fight this battle.

The last point I want to make to you is that the face of America is changing, and changing fast. I went to an elementary school last Saturday to talk about the need to build and modernize our schools. There were children from 24 nations there. The principal said, Mr. President, we're so glad to have you here with all the parents here; I only wish that we could have translated your talk into Spanish and Arabic.

America is changing, and it is good thing, if we remember to live by the ideals on which this country was founded, if we remember the sacrifices of the Little Rock Nine, if we listen to our teachers like Dr. John Hope Franklin. We, in other words, have a whole new chapter in the nation's march to equality to write.

Remember what Senator Bumpers' teacher said: Wouldn't it be tragic if he didn't use that talent. That's exactly what the struggle for one America is all about, because that is a question that should be asked of every single child in our country. (Applause.)

When we ask that question with the Little Rock Nine in mind, it helps us to keep our eyes on the prize, the prize of true equality and true freedom, that ever elusive, always worth seeking, more perfect union.

These people that we honor today, in the school we save today for all time, have given us all a great and treasured gift. May God bless

them and the United States. Thank you very much.

END

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Comments: The data from Statistical Abstracts
is a bit old so I called AMA & AHA for
the latest data available. Let me know if we
can be of further assistance.

Number of pages including this coversheet:

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BICENTENNIAL EDITION

HISTORICAL STATISTICS

of the United States

COLONIAL TIMES TO 1970

PART 1



U.S. Department of Commerce
Rogers C. B. Morton, Secretary

James L. Pate, Assistant Secretary
for Economic Affairs

BUREAU OF THE CENSUS
Vincent P. Barabba, Director



Historical Statistics of the U.S.

B 305-330

VITAL STATISTICS AND HEALTH AND MEDICAL CARE

Series B 305-318. Hospitals and Beds, by Type of Service and Ownership (AHA): 1946 to 1970

Year	Total		Non-Federal								Federal, all types		Beds per 1,000 population	
			Short-term general and special		Long-term general and special		Psychiatric		Tuberculosis					
	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds	Total	Short-term
	305	306	307	308	309	310	311	312	313	314	315	316	317	318
1970...	7,123	1,615,771	5,859	848,232	286	59,961	519	526,889	101	19,720	408	160,969	8.0	4.2
1969...	7,144	1,649,662	5,853	825,795	260	63,075	509	570,550	107	20,562	416	169,681	8.3	4.1
1968...	7,137	1,663,203	5,820	805,912	280	66,517	505	593,916	116	22,213	416	174,645	8.4	4.1
1967...	7,172	1,671,125	5,850	788,446	331	80,311	470	609,075	105	18,228	416	175,065	8.5	4.0
1966...	7,160	1,678,658	5,812	768,479	291	67,337	476	639,041	156	30,796	425	173,005	8.7	4.0
1965...	7,123	1,703,522	5,736	741,292	283	65,897	483	685,175	178	37,196	443	173,962	8.9	3.9
1964...	7,127	1,696,039	5,712	720,810	300	68,783	487	691,367	187	39,589	441	175,490	9.0	3.8
1963...	7,138	1,701,839	5,684	698,191	323	73,525	499	714,661	186	39,144	446	176,318	9.1	3.7
1962...	7,028	1,689,414	5,564	676,795	323	73,474	491	716,781	203	44,687	447	177,677	9.2	3.7
1961...	6,923	1,669,789	5,460	658,521	321	70,636	483	714,622	222	48,566	437	177,554	9.2	3.6
1960...	6,876	1,657,970	5,407	639,057	308	67,214	488	722,493	238	52,101	436	177,105	9.3	3.6
1959*	6,845	1,612,822	5,364	619,877	330	68,323	459	688,410	254	67,392	438	178,820	9.2	3.5
1958...	6,786	1,572,036	5,200	609,732	321	78,383	475	646,270	261	57,077	439	180,574	9.1	3.5
1957...	6,818	1,688,691	5,309	594,529	340	77,608	452	641,455	280	62,097	437	183,002	9.2	3.5
1956...	6,966	1,607,692	5,299	586,498	395	75,646	525	695,331	315	66,096	432	184,121	9.6	3.5
1955...	6,956	1,604,408	5,237	567,612	402	76,278	542	707,162	347	70,194	428	183,162	9.8	3.5
1954...	6,970	1,577,961	5,212	553,068	406	70,926	564	691,176	368	73,558	430	189,233	9.8	3.4
1953...	6,978	1,680,654	5,212	545,903	406	68,039	541	691,855	384	72,253	435	202,604	10.0	3.5
1952...	6,903	1,561,809	5,122	530,669	405	69,731	546	675,749	391	72,642	439	213,018	10.0	3.4
1951...	6,832	1,521,959	5,066	516,020	394	62,768	551	655,932	399	72,642	422	214,597	9.9	3.4
1950...	6,788	1,455,825	5,031	504,504	412	70,136	533	619,530	398	72,178	414	189,477	9.6	3.3
1949...	6,277	1,435,282	4,585	476,584	395	79,145	507	614,465	414	78,330	376	186,764	9.7	3.2
1948...	6,160	1,411,450	4,499	471,565	362	77,040	504	601,103	409	75,906	386	185,846	9.7	3.2
1947...	6,173	1,400,318	4,475	465,209	385	84,768	499	580,273	411	70,807	403	199,771	9.8	3.2
1946...	6,126	1,435,778	4,444	473,059	389	83,415	476	568,473	412	74,867	404	235,964	10.3	3.4

* Denotes first year for which figures include Alaska and Hawaii.

† Non-Federal short-term general and special hospitals.

Series B 319-330. Hospitals and Beds, by Type of Service (AMA): 1909 to 1953

Year	Total		General		Mental		Tuberculosis		All other		Beds per 1,000 population	
	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds	Hospitals	Beds	Total	General
	319	320	321	322	323	324	325	326	327	328	329	330
1953	6,840	1,578,014	5,087	653,762	593	749,393	420	88,406	740	81,463	9.9	4.1
1952	6,665	1,541,615	4,924	640,923	585	732,929	428	89,571	728	78,192	9.9	4.1
1951	6,637	1,529,988	4,890	640,207	596	728,187	430	88,379	721	78,215	10.0	4.2
1950	6,480	1,456,912	4,713	587,917	579	711,921	431	85,746	707	71,328	9.6	3.9
1949	6,572	1,439,030	4,761	574,683	606	705,423	444	83,470	761	75,454	9.7	3.9
1948	6,335	1,423,520	4,589	576,459	586	691,499	438	81,993	722	73,569	9.7	3.9
1947	6,276	1,425,232	4,539	592,458	585	680,913	441	81,328	711	70,528	9.9	4.1
1946	6,280	1,468,714	4,523	641,831	575	674,930	450	88,187	732	69,266	10.5	4.6
1945	6,511	1,798,944	4,744	922,549	563	657,393	449	78,774	755	80,228	13.1	7.0
1944	6,811	1,729,945	4,833	925,818	566	648,745	453	79,848	759	75,534	13.0	7.0
1943	6,655	1,649,254	4,885	850,576	575	650,993	455	79,860	740	67,825	12.0	6.3
1942	6,345	1,383,827	4,567	694,260	586	646,118	468	82,372	734	61,077	10.3	4.4
1941	6,358	1,324,381	4,518	633,498	596	638,144	477	82,365	767	70,374	9.9	4.0
1940	6,291	1,226,245	4,492	462,360	602	621,284	479	78,246	778	64,355	9.3	3.5
1939	6,226	1,195,026	4,356	444,947	600	606,284	480	75,972	790	67,823	9.1	3.4
1938	6,166	1,161,380	4,286	425,924	592	591,822	493	76,022	795	68,212	8.9	3.3
1937	6,128	1,124,548	4,245	412,091	579	570,616	508	76,751	796	65,090	8.7	3.2
1936	6,189	1,096,721	4,207	402,605	584	548,952	506	73,692	892	71,472	8.6	3.1
1935	6,246	1,075,139	4,257	406,174	592	529,311	496	70,373	901	69,281	8.4	3.2
1934	6,334	1,048,101	4,198	393,435	614	513,845	495	70,063	1,027	70,768	8.3	3.1
1933	6,437	1,027,046	4,237	386,713	621	498,955	497	70,682	1,082	70,696	8.2	3.1
1932	6,562	1,014,364	4,305	395,548	624	479,548	512	69,676	1,121	69,587	8.1	3.2
1931	6,613	974,115	4,309	384,333	687	451,245	509	65,923	1,208	72,614	7.9	3.1
1930	6,719	955,869	4,302	371,609	561	437,919	515	65,940	1,341	80,401	7.8	3.0
1929	6,665	907,133	4,268	357,034	572	414,386	502	61,310	1,323	74,403	7.4	2.9
1928	6,852	892,934	4,361	363,337	553	394,268	508	62,113	1,430	73,216	7.4	3.0
1927	6,807	853,318	4,322	345,364	563	378,864	508	63,170	1,414	71,420	7.2	2.9
1926	6,946	859,445									7.3	
1925	6,896	802,065	4,041	293,301	589	341,480	466	49,131	1,800	118,163	6.9	2.5
1924	7,370	813,926									7.1	
1923	6,830	755,722	3,793		593		476		1,968		6.8	
1921	6,286											
1920	6,152	817,020	4,013	311,159	521	295,882	52	10,150	1,566	200,329	7.7	2.9
1918	5,323	612,251									5.9	
1914	5,047	592,481									5.4	
1909	4,359	421,065									4.7	

† Excludes hospitals with less than 10 beds.

earliest statistic available

[In thousands. See headnote table 662]

INDUSTRY	1987 SIC code	1980	1985	1990	1994	1995	1996
Health services ²	80	5,278	6,293	7,814	8,992	9,257	10,159
Offices and clinics of MD's	801	802	1,028	1,338	1,545	1,606	1,714
Offices and clinics of dentists	802	(NA)	439	513	574	597	624
Offices and clinics of other practitioners	804	96	165	277	378	407	44
Nursing and personal care facilities	805	997	1,198	1,415	1,649	1,693	1,742
Skilled nursing care facilities	8051	(NA)	791	989	1,221	1,252	1,271
Intermediate care facilities	8052	(NA)	(NA)	200	206	213	217
Other, n.e.c.	8059	(NA)	(NA)	227	222	229	232
Hospitals	806	2,750	2,997	3,549	3,763	3,784	3,855
General medical and surgical hospitals	8062	(NA)	2,811	3,268	3,459	3,484	3,519
Psychiatric hospitals	8063	(NA)	59	104	97	91	87
Specialty hospitals, exc. psychiatric	8069	(NA)	126	176	207	208	211
Medical and dental laboratories	807	(NA)	119	166	189	193	200
Home health care services	808	(NA)	(NA)	291	559	626	681

NA Not available. ¹ Based on the 1987 Standard Industrial Classification code; see text, section 13. ² Includes data industries not shown separately. ³ N.e.c. means not elsewhere classified.

Source: U.S. Bureau of Labor Statistics, Bulletins 2445 and 2481, and *Employment and Earnings*, monthly, March and June issues.

No. 176. Physicians, by Selected Activity: 1980 to 1995

[In thousands. 1980, 1985, and 1995, as of Dec. 31; other years as of Jan. 1, except as noted. Includes Puerto Rico and outlying areas]

ACTIVITY	1980	1985	1990	1992	1993	1994	1995
Doctors of medicine, total	467.7	552.7	615.4	653.1	670.3	684.4	728.1
Professionally active	435.5	511.1	560.0	594.7	605.7	619.8	661.1
Place of medical education							
U.S. medical graduates	343.6	398.4	437.2	460.4	466.6	475.0	489.2
Foreign medical graduates ¹	91.8	112.7	122.8	134.3	139.1	144.8	152.3
Sex: Male	386.7	436.3	463.9	484.6	488.5	494.9	505.3
Female	48.7	74.8	96.1	110.1	117.2	124.9	141.6
Active Non-Federal	417.7	489.5	539.5	575.5	584.0	597.3	634.2
Patient care	361.9	431.5	487.8	520.2	531.7	543.2	584.1
Office-based practice	271.3	329.0	359.9	387.9	398.8	407.0	427.1
General and family practice	47.8	53.9	57.6	58.6	58.1	58.2	58.1
Cardiovascular diseases	8.7	9.1	10.7	11.4	12.1	12.9	13.1
Dermatology	4.4	5.3	6.0	6.3	6.5	6.7	7.1
Gastroenterology	2.7	4.1	5.2	5.7	6.3	6.7	7.1
Internal medicine	40.5	52.7	57.8	65.1	67.3	67.8	70.1
Pediatrics	17.4	22.4	26.5	29.0	30.8	31.5	32.3
Pulmonary diseases	2.0	3.0	3.7	4.0	4.4	4.6	5.1
General surgery	22.4	24.7	24.5	24.9	24.3	24.2	24.1
Obstetrics and gynecology	19.5	23.5	25.5	27.1	27.6	28.2	28.5
Ophthalmology	10.6	12.2	13.1	13.7	13.9	14.3	14.4
Orthopedic surgery	10.7	13.0	14.2	15.8	16.3	16.6	17.1
Otolaryngology	5.3	5.8	6.4	6.6	6.7	6.9	7.1
Plastic surgery	2.4	3.3	3.8	4.0	4.1	4.3	4.4
Urological surgery	6.2	7.1	7.4	7.7	7.8	7.8	8.1
Anesthesiology	11.3	15.3	17.8	20.0	20.6	22.0	23.1
Diagnostic radiology	4.2	7.7	9.8	10.9	11.9	12.1	12.1
Emergency medicine	(NA)	(NA)	8.4	9.4	9.8	10.6	11.7
Neurology	3.2	4.7	5.6	6.3	6.8	7.1	7.1
Pathology, anatomical/clinical	6.0	6.9	7.3	7.9	8.5	8.7	9.1
Psychiatry	15.9	18.5	20.0	21.8	22.3	22.8	23.1
Other specialty	31.9	35.8	38.8	31.7	32.4	33.2	36.1
Hospital-based practice	90.6	102.5	127.9	132.3	132.9	136.1	136.1
Residents and interns ²	59.6	72.2	89.9	92.2	89.0	91.5	93.1
Full-time hospital staff	31.0	30.3	38.0	40.1	43.9	44.8	43.1
Other professional activity ³	35.2	44.0	39.0	38.7	37.7	39.9	40.1
Not classified	20.6	14.0	12.7	16.6	14.7	14.3	20.4
Federal	17.8	21.6	20.5	19.2	21.7	22.5	21.1
Patient care	14.6	17.3	16.1	15.0	18.8	19.3	18.1
Office-based practice	0.7	1.2	1.1	1.5	0.1	-	-
Hospital-based practice	13.9	16.1	15.0	13.5	18.7	19.3	18.1
Other professional activity ³	3.2	4.3	4.4	4.2	2.9	3.2	3.1
Inactive/unknown address	32.1	41.6	55.4	58.4	64.7	64.7	74.2
Doctors of osteopathy ⁴	18.8	24.0	30.9	33.5	33.4	35.0	38.1

- Represents zero. NA Not available. ¹ Foreign medical graduates received their medical education in schools outside the United States and Canada. ² Includes clinical fellows. ³ Includes medical teaching, administration, research, and other. ⁴ As of July. Total DO's. Source: American Osteopathic Association, Chicago, IL.
Source: Except as noted, American Medical Association, Chicago, IL, *Physician Characteristics and Distribution in the U.S.* annual (copyright).

[As of end of year. Excludes Puerto Rico and outlying areas]

ITEM	Unit	1980	1985	1989	1990	1991	1992	1993	1994	1995
Number	1,000	141	156	168	173	179	183	187	190	(NA)
Active (exc. in Federal service) ³	1,000	121	136	144	147	149	152	154	157	(NA)
Rate per 100,000 population ⁴	Rate	53	57	58	59	59	60	60	60	(NA)
Number (active registered)	1,000	1,273	1,538	1,731	1,790	1,853	1,907	1,976	2,044	2,116
Rate per 100,000 population	Rate	560	644	698	713	730	755	774	793	798

NA Not available. ¹ Includes current year's graduates. ² Revised since originally published. ³ Source: American Dental Association, Bureau of Economic and Behavioral Research, Master Membership file and periodic censuses. ⁴ Based on Bureau of Census estimated resident population as of July 1. Estimates reflect revisions based on the 1990 Census of Population.
Source: Except as noted, U.S. Dept. of Health and Human Services, Health Resources and Services Administration, unpublished data.

No. 178. Health Professions Schools—Number, Enrollment, and Graduates: 1980 to 1996

[Data on the number of schools are reported as of the beginning of the academic year; all other data are reported as of the end of the academic year. Data are based on reporting by health professions schools]

YEAR	Medicine	Osteopathy	REGISTERED NURSING				Licensed practical nursing	Dentistry	Optometry	Pharmacy
			Total	Baccalaureate	Associate degree	Diploma				
NUMBER OF SCHOOLS ¹										
1980	126	14	1,385	377	697	311	1,299	60	16	72
1985	127	15	1,473	441	776	256	1,165	80	17	72
1986	127	15	1,469	455	776	238	1,087	59	17	73
1987	127	15	1,465	467	789	209	1,068	58	17	74
1988	127	15	1,442	479	792	171	1,095	58	17	74
1989	127	15	1,457	488	812	157	1,171	58	17	74
1990	126	15	1,470	489	829	152	1,154	56	17	74
1991	126	15	1,484	501	838	145	1,125	55	17	74
1992	126	15	1,484	501	848	135	1,154	55	17	74
1993	126	16	1,493	507	857	129	1,159	54	17	74
1994	126	16	1,501	509	868	124	(NA)	54	17	74
1995	126	16	1,516	521	876	119	(NA)	54	17	74
FIRST-YEAR ENROLLMENT										
1980	18,930	1,428	105,952	35,414	53,633	16,905	55,316	6,132	1,202	8,035
1985	16,997	1,750	118,224	39,573	63,776	14,875	47,034	5,047	1,187	6,986
1986	16,963	1,737	100,791	34,310	56,835	9,846	44,477	4,843	1,251	7,091
1987	16,819	1,724	90,693	28,026	54,330	8,337	42,452	4,554	1,234	7,554
1988	16,713	1,692	94,259	28,505	57,375	8,389	43,774	4,370	1,268	7,751
1989	16,868	1,780	103,025	29,042	63,973	10,010	47,602	4,196	1,271	7,990
1990	16,756	1,844	108,580	29,858	68,634	10,088	52,969	3,979	1,258	8,033
1991	16,876	1,950	113,526	33,437	69,869	10,220	56,176	4,001	1,239	8,267
1992	17,071	1,974	122,656	37,886	74,079	10,691	58,245	4,047	1,355	8,343
1993	17,079	2,035	126,837	41,290	75,382	10,165	60,749	4,072	1,395	8,664
1994	17,121	2,162	129,897	42,953	77,343	9,601	(NA)	4,100	1,351	8,970
1995	17,085	2,217	127,184	43,451	76,016	7,717	(NA)	4,121	1,390	9,157
1996	17,058	2,274	(NA)	(NA)	(NA)	(NA)	(NA)	4,237	1,438	8,740
TOTAL ENROLLMENT										
1980	63,800	4,571	234,559	98,939	92,069	43,651	52,202	22,482	4,517	23,074
1985	67,016	6,547	237,232	95,008	104,968	37,256	48,840	20,588	4,569	18,646
1986	66,535	6,608	217,355	91,020	96,756	30,179	39,345	19,563	4,562	19,098
1987	66,125	6,640	193,712	81,602	89,469	22,641	38,510	18,673	4,636	20,073
1988	65,735	6,586	182,947	73,621	90,399	18,927	40,035	17,895	4,646	21,424
1989	65,300	6,614	184,924	70,078	95,968	18,860	42,808	17,094	4,708	22,447
1990	65,016	6,615	201,458	74,865	106,175	20,418	46,720	16,412	4,723	23,013
1991	65,163	6,792	221,170	81,798	117,413	21,969	52,749	15,951	4,760	23,238
1992	65,602	7,012	237,598	90,877	123,816	22,905	56,762	15,882	4,864	23,482
1993	66,142	7,375	257,983	102,128	132,603	23,252	59,095	15,980	5,078	26,287
1994	66,629	7,822	270,228	110,693	137,300	22,235	61,007	16,250	(NA)	27,143
1995	67,072	8,148	268,350	112,659	135,895	19,796	(NA)	16,353	5,201	27,667
1996	66,970	8,475	261,219	109,505	135,235	16,479	(NA)	16,552	5,312	28,060
GRADUATES										
1980	15,113	1,059	75,523	24,994	36,034	14,495	41,892	5,256	1,073	7,432
1985	16,318	1,474	82,075	24,975	45,208	11,892	36,955	5,353	1,114	5,735
1986	16,117	1,560	77,027	25,170	41,333	10,524	29,599	4,957	1,085	5,800
1987	15,830	1,587	70,561	23,761	38,528	8,272	27,285	4,717	1,081	5,854
1988	15,919	1,572	64,839	21,504	37,397	5,938	26,912	4,581	1,106	6,184
1989	15,630	1,609	61,660	18,997	37,837	4,826	30,368	4,312	1,143	6,560
1990	15,398	1,529	66,068	18,571	42,318	5,199	35,417	4,233	1,115	6,956
1991	15,427	1,534	72,230	19,264	46,794	6,172	38,100	3,995	1,224	7,122
1992	15,365	1,532	80,839	21,415	52,896	6,528	41,951	3,918	1,150	7,113
1993	15,466	1,606	88,149	24,442	56,770	6,932	44,822	3,778	1,167	7,380
1994	15,555	1,775	94,670	28,912	58,839	7,113	(NA)	3,875	1,125	7,504
1995	15,688	1,843	97,052	31,254	58,749	7,049	(NA)	3,908	1,219	7,837
1996	15,907	1,877	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
2000, PROJ.	16,112	1,934	79,660	26,490	47,790	5,360	(NA)	3,242	1,200	7,120

Historical Statistics of the U.S.

275-290

VITAL STATISTICS AND HEALTH AND MEDICAL CARE

eries B 275-290. Physicians, Dentists, and Nurses; and Medical, Dental, and Nursing Schools: 1810 to 1970—Con.

Year	Physicians ¹			Medical schools ²			Dentists ⁴		Dental schools			Active professional graduate nurses		Professional nursing schools ⁵		
	Num-ber	Rate per 100,000 population	Physi-cians admitted to U.S. as immi-grants	Num-ber ³	Students	Grad-uates	Num-ber	Rate per 100,000 popula-tion	Num-ber ³	Students	Grad-uates	Num-ber	Rate per 100,000 popula-tion	Num-ber	Students	Grad-uates
	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290
1950	203,400	134	1,878	79	25,103	5,563	89,441	59	41	11,460	2,565	375,000	249	1,203	98,712	25,790
1950	191,947	128					74,856	50								
1949	201,277	135	1,141	78	23,670	5,094			41	10,132	1,574			1,215	88,817	21,375
1948				77	22,739	5,543			40	8,996	1,755			1,245	91,643	34,268
1947				77	23,500	6,389	82,990	58	40	8,287	2,225			1,253	106,900	40,744
1946				77	23,216	5,826			39	7,274	2,666			1,271	128,828	36,195
1945			202	77	24,028	5,135			39	8,590	3,212			1,295	126,576	31,721
1944			156	77	48,195	10,303			39	9,014	2,470			1,307	112,249	28,276
1943			214	76	22,631	5,223			39	8,847	1,926			1,287	100,486	26,816
1942	180,496	134	290	77	22,031	6,163			39	8,355	1,784			1,289	91,457	25,613
1941			705	77	21,379	6,275			39	7,720	1,568			1,308	87,588	24,899
1940	175,163	133	1,095	77	21,271	5,097			39	7,407	1,757	284,200	216	1,311	85,156	23,600
1940	165,989	126					69,921	53								
1939			1,384	77	21,302	5,089			39	7,381	1,794			1,328	82,095	22,485
1938	169,628	131	738	77	21,687	5,194			39	7,184	1,704			1,349	74,305	20,655
1937			533	77	22,095	5,377			39	7,397	1,739			1,389	73,286	20,400
1936	165,163	129	462	77	22,564	5,183			39	7,306	1,736			1,417	69,589	18,600
1935			304	77	22,888	5,101			39	7,175	1,840			1,472	67,533	19,600
1934	161,369	128	353	77	22,799	5,035			39	7,160	1,864					
1933			187	77	22,466	4,895			39	7,508	1,980					
1932			259	76	22,135	4,936			38	8,031	1,840			1,781	84,290	25,312
1931	156,406	126	329	76	21,982	4,735			38	8,129	1,842			1,844	100,419	25,971
1930			390	76	21,597	4,565			38	7,813	1,561	214,300	174			
1930	153,803	125					71,065	58								
1929	152,503	125	398	76	20,878	4,446			40	8,200	2,442			1,885	78,771	23,810
1928			454	80	20,545	4,262	67,334	56	40		2,563					
1927	149,521	126	486	80	19,662	4,035			40	10,333	2,642			1,797	77,768	18,623
1926			487	79	18,840	3,962			44		2,610					
1925	147,010	127	540	80	18,200	3,974	64,481	56	43	11,863	2,590					
1924			1,391	79	17,728	3,562			43		3,422					
1923	145,966	130	704	80	16,960	3,120			45	13,099	3,271					
1922			458	81	15,635	2,520			45		1,765					
1921	145,404	134	597	83	14,468	3,186			45	11,745	1,795					
1920			459	85	13,798	3,047			46		906	103,900	98	1,755	54,963	14,980
1920	144,977	137					56,152	59								
1919			236	85	13,052	2,856			46		3,587					
1918	147,812	141	182	90	13,630	2,670			46		3,345					
1917			326	96	13,764	3,379	45,988	44	46		3,010					
1916	145,241	142	326	95	14,012	3,518			49		2,835					
1915			476	96	14,891	3,536			49		2,388			1,509	46,141	11,118
1914	142,332	144	504	102	16,502	3,594	42,606	43	48		2,254					
1913			508	107	17,015	3,981			51		2,022					
1912	137,199	144	459	118	18,412	4,483	38,866	41	52		1,940					
1911			429	122	19,786	4,273			54		1,742					
1910	135,000	146	365	131	21,525	4,440	37,684	41	54		1,646	150,500	55	1,129	32,636	8,140
1910	151,132	164					39,997	43								
1909	134,402	149	332	140	22,145	4,515			56		1,761					
1908			504	151	22,602	4,741	36,670	41	55		2,005					
1907			480	159	24,276	4,980			55		1,724					
1906	134,688	158	725	162	25,204	5,364	35,238	41	55		1,519					
1905			1,043	158	26,147	5,600			55		2,621			862	19,824	5,796
1904	128,950	167	907	160	28,142	5,747	32,204	39	56		2,168					
1903			343	160	27,615	5,698			55		2,198					
1902	123,196	166	116	160	27,501	5,009	28,109	36	56		2,294					
1901			100	160	26,417	5,444			57		2,304					
1900	119,749	157		160	25,171	5,214	25,189	38	57		2,091			432	11,164	3,456
1900	138,002	173					49,665	39								
1898	115,524	157					28,911	33	54		1,894					
1896	104,554	147					20,063	28	48		1,432					
1893	103,090	154							37							
1890	100,180	159		133	15,404	4,454			31		960			35	1,552	471
1890	104,805	168					17,498	28								
1886	87,521	151							23		478					
1880	82,000	163		100	11,826	3,241			14		315			15	323	157
1880	85,671	171					12,314	25								
1870	60,000	160		75			7,988	20	10		147					
1870	64,414	162					5,606	18	3		64					
1860	55,055	175		65												
1850	40,755	176		52			2,923	13	2		17					
1840				35			1,000	6	1							
1830				20			300	2								
1820				10			100	1								
1810				6			50	1								

* Denotes first year for which figures include Alaska and Hawaii.

NA Not available.

¹ Beginning 1960, includes osteopaths.² Beginning 1964, includes Puerto Rico; beginning 1960, includes osteopaths and their schools.³ Approved medical and basic science schools.⁴ Beginning 1958, excludes graduates of year stated.⁵ For 1840 and 1926-1931, schools offering courses in dentistry; for 1850-1925, schools conferring degrees; for other years, schools in operation. Includes Puerto Rico.⁶ Includes Hawaii and Puerto Rico beginning 1960 for number and students and 1952 for graduates.⁷ Census estimate adjusted to exclude student nurses enumerated as graduates.⁸ Reflects enrollment of more than 1 class in some schools under accelerated program in operation during World War II.

No. 183. Percent of Adult Persons with a Dental Visit Within Past Year, by Patient Characteristics: 1989 to 1993

[Covers civilian noninstitutional population, 25 years old and over. Data are age-adjusted. Estimates are based on one adult member per sample household. Excludes persons with unknown dental data. Based on National Health Interview Survey, see Appendix III]

CHARACTERISTIC	1989	1990	1991	1993
Total ¹	58.9	62.3	58.2	60.3
25 to 34 years old	60.9	65.1	59.1	60.3
35 to 44 years old	65.9	69.1	64.8	66.2
45 to 64 years old	59.9	62.8	59.2	61.7
65 years old and over	45.8	49.6	47.2	51.3
65 to 74 years old	50.0	53.5	51.1	54.3
75 years old and over	39.0	43.4	41.3	44.3
Male	56.2	58.8	55.5	58.2
Female	61.4	65.6	60.8	61.4
White, non-Hispanic	61.8	64.9	61.5	64.1
Black, non-Hispanic	43.3	49.1	44.3	47.1
Hispanic origin	48.9	53.8	43.1	48.2
Years of school completed:				
Less than 12 years	36.9	41.2	35.2	38.0
12 years	58.2	61.3	56.7	58.1
13 years or more	73.9	75.7	72.2	73.9
Poverty status: ³				
Below poverty	33.3	38.2	33.0	34.3
At or above poverty	62.1	65.4	61.9	64.3

¹ Includes all other races not shown separately and unknown education level and poverty status. ² Persons of Hispanic origin may be of any race. ³ For explanation of poverty level, see text, section 14.
Source: U.S. National Center for Health Statistics, *Health, United States, 1995*.

No. 184. Hospitals and Nursing Homes—Summary Characteristics: 1980 to 1993

[Except as indicated, based on National Master Facility Inventory]

YEAR AND TYPE OF FACILITY	Total	FACILITIES UNDER—			FACILITIES WITH—			Resi- dents ² (1,000)	Full-time employees ³ (1,000)
		Gov't control	Propri- etary control	Non-profit control	Fewer than 25 beds	25-74 beds	75 or more beds		
1980: All facilities	30,118	3,498	18,611	7,007	8,852	8,573	12,691	2,427	3,111
Nursing homes ^{1,4}	23,065	936	18,669	3,460	8,498	6,362	8,205	1,398	1,778
Hospitals	7,051	2,562	942	3,547	354	2,211	4,486	1,031	1,333
1986: All facilities	32,600	3,275	21,399	7,926	9,903	8,755	13,942	2,427	3,111
All hospitals	6,954	2,230	1,178	3,546	290	2,150	4,514	874	1,211
General	5,958	1,871	829	3,256	259	1,849	3,848	690	1,011
Psychiatric	584	267	218	99	12	140	432	139	174
Chronic	44	30	4	10	-	6	38	13	17
Tuberculosis	4	3	-	1	-	1	3	(Z)	(Z)
Nursing homes ³	25,646	1,045	20,223	4,378	9,613	6,605	9,428	1,553	2,000
1990: All hospitals ⁵	8,779	2,145	1,203	3,431	326	2,077	4,376	840	1,100
General	5,811	1,788	711	3,112	290	1,690	3,631	673	911
Psychiatric	734	272	350	112	17	211	506	128	161
Chronic	34	27	2	5	-	6	28	10	13
Tuberculosis	4	3	-	1	-	1	3	(Z)	(Z)
1993: All hospitals ⁶	6,580	2,048	1,167	3,367	310	2,010	4,260	781	1,011
General	5,403	1,697	660	3,046	260	1,588	3,557	634	840
Psychiatric	737	268	358	113	24	242	471	107	131
Chronic	26	21	1	4	1	3	22	(Z)	(Z)
Tuberculosis	4	3	-	1	-	2	2	(Z)	(Z)

¹ Represents zero. ² NA Not available. ³ Z Fewer than 500. ⁴ For hospitals, minimum of six beds; for nursing homes, minimum of three beds. ⁵ Number of residents as of date of interview. ⁶ See footnote 1, table 202. ⁷ Includes 1978 data for Alaska and South Dakota. ⁸ Estimated. ⁹ Includes types not shown separately. Based on data from the American Hospital Association.

Source: U.S. National Center for Health Statistics, unpublished data

from: 1996 HANDBOOK OF HOSPITAL STATISTICS
6,201 — latest available statistics per AHA
No. 185. Hospitals—Summary Characteristics: 1980 to 1995

[Covers hospitals accepted for registration by the American Hospital Association; see text, section 3. Short-term hospitals have an average patient stay of less than 30 days; long-term, an average stay of longer duration. Special hospitals include obstetrics and gynecology; eye, ear, nose, and throat; rehabilitation; orthopedic; and chronic and other special hospitals except psychiatric, tuberculosis, alcoholism, and chemical dependency hospitals]

ITEM	1980	1985	1989	1990	1991	1992	1993	1994	1995
Number of hospitals	6,965	6,872	6,720	6,649	6,634	6,539	6,487	6,374	6,291
With 100 beds or more	3,755	3,805	3,650	3,620	3,611	3,572	3,558	3,492	3,376
Non-Federal	6,606	6,528	6,380	6,312	6,300	6,214	6,151	6,087	5,992
Community hospitals ¹	5,830	5,732	5,455	5,384	5,342	5,292	5,261	5,229	5,194
Nongovernmental nonprofit	3,322	3,349	3,220	3,191	3,175	3,173	3,154	3,139	3,092
For profit	730	805	769	749	738	723	717	719	752
State and local government	1,778	1,578	1,466	1,444	1,429	1,396	1,390	1,371	1,350
Long-term general and special	157	128	138	131	126	115	117	110	112
Psychiatric	534	610	741	757	800	774	741	696	657
Tuberculosis	11	7	4	4	4	4	4	5	3
Federal	359	343	340	337	334	325	316	307	299
Beds (1,000):									
All hospitals ³	1,365	1,309	1,224	1,211	1,197	1,174	1,158	1,128	1,081
Rate per 1,000 population ⁴	6.0	5.5	5.0	4.9	4.7	4.6	4.5	4.3	4.1
Rate per hospital	196	190	182	182	180	180	179	177	172
Non-Federal	1,248	1,197	1,124	1,113	1,101	1,085	1,071	1,044	1,004
Community hospitals ¹	988	1,001	933	928	924	921	918	902	873
Rate per 1,000 population ⁴	4.3	4.2	3.8	3.7	3.7	3.6	3.6	3.6	3.3
Nongovernmental nonprofit	692	707	650	657	656	656	649	637	610
For profit	87	104	103	102	100	99	99	101	106
State and local government	209	189	170	169	168	167	169	164	157
Long-term general and special	39	31	27	25	25	23	21	19	19
Psychiatric	215	169	160	158	150	139	131	121	110
Tuberculosis	2	1	(Z)	(Z)	(Z)	(Z)	(Z)	1	(Z)
Federal	117	112	100	98	95	89	87	84	78
Expenses (bil. dol.): ⁵									
All hospitals	91.9	153.3	214.9	234.9	258.5	282.5	301.5	310.8	320.3
Non-Federal	84.0	141.0	199.8	219.8	241.7	264.3	281.9	290.8	300.0
Community hospitals ²	76.9	130.5	184.9	203.7	225.0	248.1	266.1	275.8	285.6
Nongovernmental nonprofit	55.8	98.1	136.9	150.7	166.8	183.8	197.2	204.2	209.6
For profit	5.8	11.5	17.2	18.8	20.5	22.5	23.1	23.4	26.7
State and local government	15.2	22.9	30.8	34.2	37.7	41.8	45.8	48.1	49.3
Long-term general and special	1.2	1.9	2.5	2.7	2.9	2.7	2.7	2.3	2.2
Psychiatric	5.8	8.3	12.0	12.9	13.5	13.2	12.7	12.3	11.7
Tuberculosis	0.1	0.1	(Z)	0.1	(Z)	(Z)	0.1	0.7	0.4
Federal	7.9	12.3	15.1	15.2	16.6	18.2	19.8	20.0	20.2
Personnel (1,000): ⁶									
All hospitals	3,492	3,625	3,937	4,063	4,165	4,236	4,289	4,270	4,273
Non-Federal	3,213	3,326	3,648	3,760	3,864	3,929	3,970	3,969	3,971
Community hospitals ²	2,873	2,997	3,303	3,420	3,535	3,620	3,677	3,692	3,714
Nongovernmental nonprofit	2,066	2,216	2,454	2,533	2,624	2,692	2,711	2,719	2,702
For profit	189	221	261	273	281	285	289	301	343
State and local government	598	561	589	614	630	643	676	672	670
Long-term general and special	56	58	56	55	55	49	45	38	38
Psychiatric	275	263	284	280	263	256	242	233	215
Tuberculosis	3	2	1	1	1	1	1	1	1
Federal	279	299	288	303	301	306	320	301	301
Patients per 100 patients ⁷	329	398	462	482	504	525	548	573	602
Discharge visits (mil.)	263.0	282.1	352.2	368.2	387.7	417.9	435.7	453.6	483.2
Emergency	82.0	80.1	89.9	92.8	93.5	95.8	97.4	96.0	99.9
Sources	73	59	80	63	67	60	83	40	43

¹ Less than 500 beds or \$50 million. ² Short term (average length of stay less than 30 days) general and special (e.g., obstetrics and gynecology; eye, ear, nose and throat; rehabilitation etc. except psychiatric, tuberculosis, alcoholism and chemical dependency). Includes hospital units of institutions. ³ Excludes hospital units of institutions. ⁴ Beginning 1989, number of beds and of reporting period; prior years, average number in 12 month period. ⁵ Based on Bureau of the Census estimated resident population as of July 1. Estimates reflect revisions based on the 1990 Census of Population. ⁶ Excludes new construction. ⁷ Includes full-time equivalents of part-time personnel.

Source: American Hospital Association, Chicago, IL, *Hospital Statistics*, annual (copyright).

Statistical Abstracts of the U.S. 1997

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M. J. Rosenau

DEPARTMENT OF COMMERCE AND LABOR

BUREAU OF THE CENSUS

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SPECIAL REPORTS

BENEVOLENT INSTITUTIONS

1904

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1905

total amount designated as income was \$47,175, and would go but a small way toward paying cost of maintenance.

To attend to the wants of the children the services of 680 paid employees were required.

HOSPITALS.

Table XIV gives, by states and territories, a summary of the details presented for this class of institutions in Table 2, with the number designated as public, private,

As there were excluded from this report, so far as was possible to distinguish them, all institutions conducted for private profit, it follows that the number of hospitals given for any community represents only those of a distinctly benevolent character and does not indicate the whole extent of existing hospital facilities. Thus Nevada is the only state not credited with a hospital, but presumably the need of hospitals for its small population is met by private enterprises not to be classed as benevolent.

TABLE XIV.—HOSPITALS, BY STATES AND TERRITORIES.

STATE OR TERRITORY.	NUMBER OF INSTITUTIONS.				NUMBER OF PATIENTS—			NUMBER ON MEDICAL STAFF.		Number of institutions maintaining training schools for nurses.	Number of institutions subsidised from public funds, 1903.	Income from pay patients, 1903.	Cost of maintenance, 1903.	NUMBER OF PATIENTS—		
	Total.	Public.	Private.	Ecclesiastical.	On Jan. 1, 1904.	Admitted during 1904.	Remaining Dec. 31, 1904.	Resident.	Visiting.					On Dec. 31, 1904.	Admitted during 1904.	
United States..	1,493	220	881	442	71,427	1,064,512	71,580	2,868	15,914	21,544	867	\$2,276,886	\$12,161,494	\$28,200,849	87.3	1,493
Alabama.....	9	2	8	4	283	4,561	211	9	90	98	4	13,600	32,757	76,706	10.7	9
Arizona.....	10	2	8	3	183	2,277	168	9	37	42	1	11,171	32,360	90,436	113.8	10
Arkansas.....	13	8	6	6	311	9,124	237	15	49	89	3	2,048	25,982	52,670	18.4	13
California.....	50	14	23	13	2,728	48,606	2,897	123	441	925	30	0	811,809	1,450,123	180.0	50
Colorado.....	82	5	15	12	1,512	13,140	1,176	46	406	426	14	8,837	221,080	459,970	196.8	82
Connecticut.....	21	2	18	1	759	17,708	759	82	217	291	14	93,349	204,864	464,037	77.2	21
Delaware.....	3	0	2	0	74	988	52	1	25	30	2	500	7,624	28,484	27.1	3
District of Columbia.....	18	2	7	4	731	15,589	717	43	806	280	11	97,286	101,648	291,221	238.3	18
Florida.....	17	9	7	1	199	1,786	176	9	40	62	6	1,854	18,974	69,318	28.8	17
Georgia.....	17	6	6	3	432	7,333	838	21	117	168	11	33,900	63,677	162,017	14.1	17
Idaho.....	6	0	2	4	116	1,494	111	2	22	86	2	0	21,979	33,907	56.8	6
Illinois.....	105	11	42	52	5,935	86,601	5,344	242	1,222	2,043	61	22,820	1,365,206	2,165,847	101.8	105
Indian Territory.....	2	0	0	2	43	905	37	3	13	12	1	0	13,590	14,647	7.0	2
Indiana.....	81	4	12	15	868	11,186	813	23	344	357	14	5,223	173,797	255,621	80.5	81
Iowa.....	41	7	15	19	960	13,966	978	48	883	432	29	7,178	258,598	343,956	86.8	41
Kansas.....	28	0	13	10	790	9,185	565	36	194	241	15	4,600	100,182	184,387	37.9	28
Kentucky.....	29	6	15	8	1,097	11,209	878	28	261	314	18	11,900	65,424	252,497	38.5	29
Louisiana.....	10	4	8	8	1,807	19,912	1,042	42	151	147	5	10,200	67,958	240,345	69.4	10
Maine.....	12	1	10	1	378	6,274	405	20	140	202	8	38,000	126,771	281,640	67.1	12
Maryland.....	32	1	26	6	1,633	23,435	1,621	108	323	525	18	126,002	311,706	719,921	129.2	32
Massachusetts.....	98	13	68	12	4,513	73,485	4,450	208	1,154	1,647	67	73,148	973,858	2,702,646	146.2	98
Michigan.....	69	6	40	13	1,569	21,784	1,269	116	484	626	32	12,220	457,884	624,348	49.8	69
Minnesota.....	44	7	12	25	1,480	22,682	1,492	68	458	595	21	2,939	472,922	633,076	78.4	44
Mississippi.....	6	2	4	0	859	2,872	182	15	30	41	4	3,430	6,052	31,872	9.1	6
Missouri.....	65	3	23	24	3,178	50,014	2,946	126	526	768	31	8,277	459,393	919,865	89.2	65
Montana.....	16	1	4	11	484	5,270	480	16	68	109	3	6,895	140,924	300,359	169.0	16
Nebraska.....	17	1	9	8	454	6,463	426	10	147	234	11	1,774	186,400	175,078	39.9	17
Nevada.....																
New Hampshire.....	19	1	16	2	247	3,792	229	24	126	161	13	8,641	69,297	110,207	58.5	19
New Jersey.....	46	6	31	11	2,310	38,345	2,372	69	601	695	30	90,449	268,896	601,529	118.8	46
New Mexico.....	11	2	6	3	573	2,177	685	16	20	65	1	10,086	70,159	268,661	324.1	11
New York.....	194	20	123	42	15,023	246,820	15,068	808	2,932	8,869	117	712,129	1,861,022	6,732,943	190.6	194
North Carolina.....	21	1	15	5	219	4,110	227	16	118	117	11	28,288	98,459	94,911	11.2	21
North Dakota.....	8	1	3	4	181	2,036	117	9	41	86	2	0	46,462	48,164	31.0	8
Ohio.....	74	8	89	27	5,661	51,997	5,523	145	998	1,376	43	27,460	591,600	1,423,246	126.1	74
Oklahoma.....	1	0	0	1	35	(1)	(1)	0	20	10	0	0	3,408	4,105	(1)	1
Oregon.....	6	0	1	6	321	6,945	365	7	57	99	3	984	79,015	72,068	79.8	6
Pennsylvania.....	146	15	112	18	6,102	124,007	11,241	331	1,886	2,533	106	725,554	1,085,366	2,637,071	162.1	146
Rhode Island.....	9	1	7	1	495	9,249	462	23	104	174	6	28,382	80,458	234,044	99.0	9
South Carolina.....	5	2	4	2	124	1,211	120	11	67	66	6	1,000	20,728	54,849	8.4	5
South Dakota.....	8	1	2	5	142	1,669	98	5	56	61	1	500	49,417	54,813	23.0	8
Tennessee.....	13	6	2	3	468	10,628	448	25	160	145	8	0	78,142	100,073	21.0	13
Texas.....	81	7	13	11	981	22,856	823	43	211	822	12	9,034	212,730	832,416	44.1	81
Utah.....	7	2	8	2	201	3,389	172	5	30	69	8	0	88,004	76,626	66.0	7
Vermont.....	9	0	7	2	182	2,990	140	7	94	109	8	5,294	41,372	68,914	40.1	9
Virginia.....	19	1	17	1	658	13,936	590	27	226	250	17	9,575	119,225	174,921	27.6	19
Washington.....	25	4	10	14	987	13,110	986	21	221	226	16	9,752	226,767	299,480	164.6	25
West Virginia.....	20	5	12	3	470	6,216	369	19	102	161	14	6,000	67,665	180,761	84.2	20
Wisconsin.....	43	6	15	22	1,380	19,718	1,213	30	866	487	18	2,249	904,278	324,839	64.6	43
Wyoming.....	5	8	2	0	81	991	66	5	18	20	2	840	21,419	27,049	62.1	5

1 Not reported.

IN SICKNESS AND IN WEALTH

American Hospitals in
the Twentieth Century

ROSEMARY STEVENS

Basic Books, Inc., Publishers

1989

NEW YORK

table hospitals special and unique characteristics by 1900. The first was the long acceptance of paying patients in U.S. hospitals, in a tradition that went back to the establishment of the Pennsylvania Hospital in 1751—the first voluntary hospital in the American colonies. The second was the equally long tradition of government aid to private charitable endeavors.⁸ The American hospital was already a hybrid.

Establishing the Power Base: Patterns of Allegiance

There was no standard definition of a "hospital" in 1900. American hospitals were a heterogeneous group of institutions in terms of both function and size. They fell roughly into four categories of ownership: proprietary, private charitable, religious, and governmental. The most prestigious hospitals were organized as charities, by individuals who were usually not medical practitioners—and who had agendas of their own.

Proprietary hospitals—that is, hospitals operated by proprietors or owners—were nearest to the day-to-day routine of many private practitioners, scattered across the country, who set up a few beds for the convenience of paying patients, sometimes in their own homes. Proprietary hospitals flourished in particular where other types of hospitals were unavailable, notably in the South and West. In North Carolina fifty-four of the sixty-five hospitals existing in 1916 were "stock hospitals," virtually all of them new hospitals opened by surgeons.⁹

There may have been as many as 1,500 to 2,000 proprietary hospitals in 1910 out of a total of over 4,000 hospitals of all kinds.¹⁰ Eminent surgeons established their own small hospitals for private patients who preferred not to go to large institutions. Small-town doctors set up small units where no other hospital existed, and profit-oriented city specialists designed their own exclusive treatment centers, chiefly for women's surgery as this became a fashionable and lucrative field. Some of the profit-making medical schools also owned hospitals as a sideline. In Louisville, Kentucky, for example, medical-school professors ran a hospital as a profit-making venture. Such hospitals were essentially small businesses in character, intents, and methods.

Proprietary hospitals were important to the emerging structure of

Charities and Business

the American hospital's native form of organization, a form to which demands for hospital care and hospitals were also responsive. Paul Starr argues that the proprietors of their own practices, by lowering their medical importance and influencing the form itself, were important in transforming hospitals into businesses.

For physicians, it was preferable to admit patients by others, including governments—always bill private patients for private practice in income subsidy, for the separation of practice relieved and any hospital operation administration.

The traditional free to all hospital paid by 1910, even in the were still generally whom the hospital to medical billing for the older eastern cities Hospital in Chicago to bill patients admitted practitioners who helped charitable hospitals. I saw hospitals (and the competitors. As the medical members also sought matter of economics. The epitome of doctors in private practice

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F A X C O V E R S H E E TDATE: 12/14/98TO: Josh Gotthimer

PHONE: _____

FAX: 202-456-2505FROM: Lucretia McClurePHONE: 617.432.2635FAX: 617.432.3559

→ Did all pages come?

RE:

Number of pages including cover sheet: 5**Message**

The American Medical Directory published in
1906 by American Medical Association
lists 128,173 physicians in the U. S.
Please call if you have questions

BENEVOLENT INSTITUTIONS.

With some exceptions, it appears to be the general custom for parents or friends to make small payments for the care given children in the nurseries. The total amount designated as income was \$47,175, and would go but a small way toward paying cost of maintenance.

To attend to the wants of the children the services of 680 paid employees were required.

HOSPITALS.

Table XIV gives, by states and territories, a summary of the details presented for this class of institutions in Table 2, with the number designated as public, private,

and ecclesiastical, and the number of patients on December 31, 1904, and persons admitted during the year per 100,000 of population.

As there were excluded from this report, so far as was possible to distinguish them, all institutions conducted for private profit, it follows that the number of hospitals given for any community represents only those of a distinctly benevolent character and does not indicate the whole extent of existing hospital facilities. Thus Nevada is the only state not credited with a hospital, but presumably the need of hospitals for her small population is met by private enterprises not to be classed as benevolent.

TABLE XIV.—HOSPITALS, BY STATES AND TERRITORIES.

STATE OR TERRITORY.	NUMBER OF INSTITUTIONS.				NUMBER OF PATIENTS—			NUMBER ON MEDICAL STAFF.		Number of institutions maintaining training schools for nurses.	Annual subsidies from public funds, 1903.	Income from pay patients, 1903.	Cost of maintenance, 1903.	NUMBER OF PATIENTS PER 100,000 OF POPULATION.—			
	Total.	Public.	Private.	Ecclesiastical.	On Jan. 1, 1904.	Admitted during 1904.	Remaining Dec. 31, 1904.	Resident.	Visiting.					On Dec. 31, 1904.	Admitted during 1904.		
United States.....	1,493	220	831	442	71,427	1,064,512	71,630	2,869	16,914	21,844	667	\$2,276,236	\$12,181,484	\$22,200,809	87.3	1.30	
Alabama.....	9	2	3	4	283	4,591	211	9	90	96	4	13,600	32,757	76,706	10.7	2.2	
Arizona.....	10	2	5	3	183	2,777	158	9	37	42	1	11,171	32,880	90,426	118.6	1.6	
Arkansas.....	12	3	5	5	911	3,124	257	15	49	59	8	2,048	25,982	52,670	18.4	2.7	
California.....	30	14	23	13	2,728	48,606	2,897	123	441	913	30	0	811,809	1,450,123	180,000	3.0	3.0
Colorado.....	32	5	15	12	1,312	18,140	1,176	46	406	423	14	8,837	221,060	469,870	196.8	2.2	
Connecticut.....	21	2	18	1	759	17,708	769	32	217	291	14	99,949	204,864	404,037	77.2	1.8	
Delaware.....	3	0	8	0	74	998	52	1	25	30	2	500	7,624	29,484	27.1	5.5	
District of Columbia.....	13	2	7	4	731	15,589	717	48	308	280	11	97,286	101,648	291,222	288.3	5.2	
Florida.....	17	9	7	1	199	1,786	176	8	40	62	5	1,354	18,976	69,318	29.9	3.3	
Georgia.....	17	6	8	3	482	7,333	338	21	117	162	11	23,900	58,577	152,017	14.1	3.3	
Idaho.....	6	0	2	4	116	1,494	111	2	22	86	2	0	21,979	33,907	56.8	7.7	
Illinois.....	105	11	42	52	5,985	85,001	5,344	242	1,222	2,049	61	22,820	1,365,205	2,165,847	101.3	1.6	
Indian Territory.....	2	0	0	2	43	905	37	3	18	12	1	0	18,590	14,647	7.6	1.1	
Indiana.....	31	4	12	16	868	11,198	813	23	844	357	14	5,228	173,797	255,821	30.5	4.4	
Iowa.....	41	7	15	19	980	19,935	876	48	338	432	29	7,176	258,698	343,966	36.8	4.7	
Kansas.....	23	0	13	10	790	9,186	565	36	194	241	15	4,600	100,182	184,387	37.0	4.0	
Kentucky.....	23	6	15	8	1,097	11,209	878	28	281	314	18	11,900	85,424	253,487	38.5	4.7	
Louisiana.....	10	4	8	3	1,307	19,912	1,042	42	151	147	5	10,200	67,968	260,846	69.4	1.1	
Maine.....	12	1	10	1	878	6,274	403	20	140	202	8	39,000	126,771	281,640	57.1	1.1	
Maryland.....	32	1	28	3	1,688	28,435	1,821	108	822	825	18	126,002	311,706	719,921	129.2	1.1	
Massachusetts.....	93	13	68	12	4,618	78,485	4,450	208	1,154	1,647	67	73,148	973,358	2,702,648	145.2	2.4	
Michigan.....	69	0	40	13	1,569	21,764	1,289	116	484	628	82	12,220	97,854	624,842	49.8	1.1	
Minnesota.....	44	7	12	25	1,430	22,638	1,492	60	408	535	21	2,939	472,922	633,076	76.4	1.1	
Mississippi.....	6	2	4	0	859	2,372	152	15	30	41	4	9,480	6,052	31,872	9.1	1.1	
Missouri.....	55	8	28	24	8,178	50,014	2,948	126	526	758	31	8,277	459,398	919,856	89.2	1.1	
Montana.....	16	1	4	11	484	5,270	460	16	88	109	3	6,895	140,924	300,393	159.0	1.1	
Nebraska.....	17	1	8	8	454	6,463	426	10	147	234	11	1,774	156,400	175,078	39.9	1.1	
Nevada.....	19	1	18	2	247	3,792	229	24	126	161	13	8,641	69,297	116,207	53.6	1.1	
New Hampshire.....	48	6	31	11	2,310	36,845	2,372	69	501	595	30	99,449	258,396	801,529	113.8	1.1	
New Mexico.....	11	2	6	3	678	2,177	685	16	20	65	1	10,086	70,189	268,681	324.1	1.1	
New York.....	194	29	122	42	15,028	246,520	15,688	608	2,982	3,899	117	712,129	1,951,022	6,792,833	199.6	3.3	
North Carolina.....	21	1	16	5	219	4,110	227	16	118	117	11	23,238	88,459	94,911	11.2	1.1	
North Dakota.....	8	1	8	4	131	2,086	117	9	41	86	2	0	40,462	48,154	31.0	1.1	
Ohio.....	74	6	39	27	5,561	51,997	5,622	145	998	1,376	49	27,480	591,600	1,422,245	126.1	1.1	
Oklahoma.....	1	0	0	1	35	(1)	(1)	0	20	10	0	0	8,403	4,105	(1)	1.1	
Oregon.....	8	0	1	5	321	5,945	865	7	57	89	8	984	79,015	72,068	79.8	1.1	
Pennsylvania.....	145	15	112	18	8,162	124,007	11,261	331	1,836	2,638	106	725,654	1,085,866	3,637,671	160.1	1.1	
Rhode Island.....	9	1	7	1	495	9,249	462	23	104	174	6	38,882	60,468	234,044	98.0	1.1	
South Carolina.....	8	2	4	2	124	1,211	120	11	57	66	6	1,000	20,728	84,348	8.4	1.1	
South Dakota.....	8	1	2	5	142	1,669	98	5	66	61	1	500	43,417	54,813	23.0	1.1	
Tennessee.....	18	6	8	8	493	10,628	444	25	160	146	8	0	78,142	100,073	21.0	1.1	
Texas.....	31	2	18	11	931	22,546	623	45	211	323	12	9,034	212,730	352,410	24.1	1.1	
Utah.....	7	2	3	2	201	3,369	172	5	30	59	8	0	89,004	76,626	66.0	1.1	
Vermont.....	9	0	7	2	132	2,900	140	7	94	109	6	5,294	41,372	65,914	40.1	1.1	
Virginia.....	19	1	17	1	653	13,086	586	27	226	260	17	9,675	119,235	174,921	27.6	1.1	
Washington.....	28	4	10	14	967	13,110	998	21	224	326	16	9,762	226,787	299,400	164.0	1.1	
West Virginia.....	20	5	12	3	470	6,218	809	19	102	161	14	6,000	67,566	130,761	35.2	1.1	
Wisconsin.....	43	6	15	22	1,860	19,716	1,223	80	366	487	16	2,249	804,276	392,839	54.6	1.1	
Wyoming.....	5	3	2	0	81	991	66	5	18	20	2	840	21,419	27,049	62.1	1.1	

1 Not reported.

HEALTH

“Before 1880 we knew nothing; after 1890 we knew it all; it was glorious ten years.”

- William Segewick, bacteriologist

[Columbia, David Rosner, pg. 487]

NYC, Infant death rate per 1,000 births

1890 - 144

1990 - 9 NATIONALLY

Life Expectancy

1900: 47.3 years

1994: 75.7

“Between 1950 and 1990, there were profound changes in mortality and fertility, and by considering them, one can best understand the momentous demographic transformation of this period. Between 1950-1955 and 1965-1970, the world’s birth declined slightly, from 38 to 34 birth for every 1,000 people, while the death rate decreased noticeably from 20 to 13 -- thus explaining the acceleration of population growth. However, in the next twenty years, this growth slowed down, as a result of the greater decline in birth rates (34 to 27) than in death rates (13 to 10).” -- Sabagh in Columbia History, pg. 546.

Black woman’s life expectancy

1900 - 34 yrs.

1940 - 56

1980 - 74

1994 - 73.9

Causes of death, 1990

Heart disease - 281.3/100,000

Cancer - 205.2

Cerebrovascular disease - 58.9

Chronic obstructive pulmonary disease - 39

Accidents - 35.1

Diabetes - 21.8

Motor vehicles - 16.3

HIV - 16.2

Suicide - 12

Homicide - 9.6

Causes of death, 1900

Major cardiovascular renal diseases - 345/100,000

Influenza, pneumonia - 202.2

TB - 194.4 (1997 - 16,237 deaths total = 6/100,000)

Gastritis, duodentitis, colitis - 142.7

Accidents - 72.3
Malignant neoplasms - 64
Diphtheria - 40.3
Measles - 13.3
Cirrhosis of liver - 12.5
Whooping cough - 12.2
Diabetes - 11

According to Professor Sam Preston @ UPenn -- **If 1900 health standards still prevailed ½ of us would be dead.**

- 18% of children died before the age of 5.
- all infectious diseases (of which TB was the biggest - 15% of deaths) accounted for over ½ of all deaths; today they only account for less than 10 percent.

Doctors and Hospitals, Nationally

1900 - 119,749 Doctors in 1900; 1,493 Hospitals in 1904 (earliest available)
1997 - 756,710 Doctors end of 1997; 6,201 Hospitals in 1996

Hospital population, NYC

1900 - 5,402
1910 - 21,815

Child care - children in poorhouses

“Degrading and vicious influences surround them in these insitutions, corrupting to both body and soul. They quickly fall into ineradicable habits of idleness, which prepare them for a life of pauperism and crime. Their moral and religious training is, in most cases, entirely neglected, and their secular education is of the scantiest and most superficial kind. Self-respect is, in time, almost extinguished, and a prolonged residence in a poorhouse leaves upon them a stigma which clings to them in after years, and carries its unhappy influences through life.”

- NY State Commissioners of Public
Charities, 1874

[Katz, pg. 104]

Child care

“The president of the 1893 convention of New York’s County Superintendents of the Poor told his colleagues that “child-saving work ... alone is the foundation of prosperity, happiness, and heaven.” Few would have disagreed, or even expressed surprise. Throughout the country, by the 1890s children had captured the energy and attention of social reformers with an intensity never matched in other periods of American history.”

- Katz, 1990s

[Ibid., pg. 113]

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- all infectious diseases (of which TB was the biggest - 15% of deaths) accounted for over ½ of all deaths; today they only account for less than 10 percent.

Doctors and Hospitals, Nationally

1900 - 119,749 Doctors ~~in 1900~~; 1,493 Hospitals ~~in 1900~~ (earliest available)
1997 - 756,710 Doctors ~~end of 1997~~; 6,201 Hospitals in 1996 (most recent)

Hospital population, NYC

1900 - 5,402
1910 - 21,815

Child care - children in poorhouses

“Degrading and vicious influences surround them in these insitutions, corrupting to both body and soul. They quickly fall into ineradicable habits of idleness, which prepare them for a life of pauperism and crime. Their moral and religious training is, in most cases, entirely neglected, and their secular education is of the scantiest and most superficial kind. Self-respect is, in time, almost extinguished, and a prolonged residence in a poorhouse leaves upon them a stigma which clings to them in after years, and carries its unhappy influences through life.”

- NY State Commissioners of Public Charities, 1874

[Katz, pg. 104]

Child care

“The president of the 1893 convention of New York’s County Superintendents of the Poor told his colleagues that “child-saving work ... alone is the foundation of prosperity, happiness, and heaven.” Few would have disagreed, or even expressed surprise. Throughout the country, by the 1890s children had captured the energy and attention of social reformers with an intensity never matched in other periods of American history.”

- Katz, 1990s

[Ibid., pg. 113]

Record Type: Record

To: Joshua S. Gottheimer/WHO/EOP

cc:

Subject: Some stats

Benefits of Deficit Reduction

\$17,000 For Every Family in Reduced Debt Burden. Without deficit reduction, the Federal debt would be \$1.2 trillion higher than it is today. That represents a reduction of \$17,000 in each American family's share of the Federal debt burden.

\$1,600 Per Family in Tax Savings on Interest on Federal Debt. The interest that has been saved on this debt totaled \$112 billion over the past six years, corresponding to an average reduction of \$1,600 per family in the share of taxes necessary to pay interest on the Federal debt.

Interest Rates Are 2.5 Percentage Points Lower. The disappearance of the deficits the American people faced in 1993 is estimated to lower interest rates over the long run by about 2-1/2 percentage points.

More than \$2,000 Per Year in Savings for Typical Family With \$100,000 Mortgage. For a typical American family with a home mortgage of \$100,000, that's a savings of more than \$2,000 a year in mortgage payments. Like a tax cut, this places more cash in the hands of families and has been used in a variety of ways to make families better off, such as making home improvements, buying a car, or paying for college.

18 Million Families Have Refinanced their Mortgages -- Saving An Average of \$1,800 per year in Lower Mortgage Costs. In addition to lowering finance costs to purchase a home, falling mortgage interest rates have allowed home owners to save money by refinancing their existing mortgages. As mortgage interest rates fell below 7 percent in 1993, refinancings surged to nearly 5-1/2 million that year. Those homeowners shaved about 2 percentage points off their mortgage rate on average, saving about \$1,800 a year in interest payments for a typical-sized loan. The stream of refinancings has continued through 1998, with many families refinancing more than once. An additional 4-1/2 million are expected in 1998. Since 1993, total mortgage refinancings have topped 18 million.

More than \$1,300 in Savings for Students Over 10-Year Loan Period. Students leaving college with student loans typically owe about \$12,000 on average. With lower interest rates, the student's payments are estimated to decline by more than \$1,300 over a 10-year loan period.

Record Type: Record

To: Joshua S. Gottheimer/WHO/EOP

cc:

Subject:

Typical Family Income Up \$3,517 Since 1993. Last year, the median family's income, adjusted for inflation, increased 3.0 percent (or \$1,297) -- the fourth consecutive annual rise. Since President Clinton's Economic Plan passed in 1993, median family income has increased from \$41,051 in 1993 to \$44,568 in 1997 -- that's a \$3,517 increase in income, adjusted for inflation. From 1988 to 1992, median family income *fell* \$1,835, adjusted for inflation.

Under President Clinton, The Typical African-American Household's Income Is Up \$3,354. The median income of African-American households rose 4.3 percent (or \$1,029) last year. And since 1993, the median income of African-American households has increased from \$21,696 to \$25,050 -- that's \$3,354 or a 15-percent increase, adjusted for inflation, between 1993 and 1997.

Income of Typical Hispanic Household Up \$2,553 in Past Two Years. In 1997, the income of the median Hispanic household, adjusted for inflation, increased from \$25,477 in 1996 to \$26,628 in 1997 -- that's an increase of \$1,151 or 4.5 percent. Over the past two years, the income of the typical Hispanic household has risen \$2,553 -- or nearly 11 percent -- the largest two-year increase in Hispanic income on record.

After Rising Sharply for 20 Years, Inequality Has Stabilized. After rising for nearly 20 years, income inequality has not changed significantly over the past four years. Since 1993, every income group -- from the most well-off to the poorest -- experienced a real increase in their income.

David Frankel
2021 633. 3801

Sent for ystady - ✓

FA No. 1

Morgan

Vision of Flare
Arm.

That

Books:

John Dos Passos
39TH Parallel Continental Divide

1921- William Butler Yeats

" Second Coming "

Upton Sinclair
Jungle

Main Street
Sinclair Lewis

Martin Dresser
won Pulitzer
Sun of Century Man

102-338
1880

Sept 1st
with Auden

In Memory of W.B. Yeats
Lines 24 + ad 310 Sect.

Lines 46

Jules Verne, Edward Bellamy
Looking Backward

Theodore Dreiser
Sister Carrie

799-6786

1984

Arnold

crying of cat 249
late 60s

Walter
Lipmann

Walter Lipman
and American

Century

Churchill

TABLE OF CONTENTS

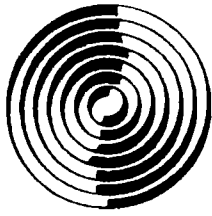
PREDICTIONS

- 1. Economic**
- 2. End of the World**
- 3. Equal Rights**
- 4. General**
- 5. Government and Politics**
- 6. Immigration**
- 7. Innovation**
- 8. The Presidency**
- 9. Thanking those before us**
- 10. Transportation**

See tabs for source information -- each quote is cross-referenced to a numbered tab.

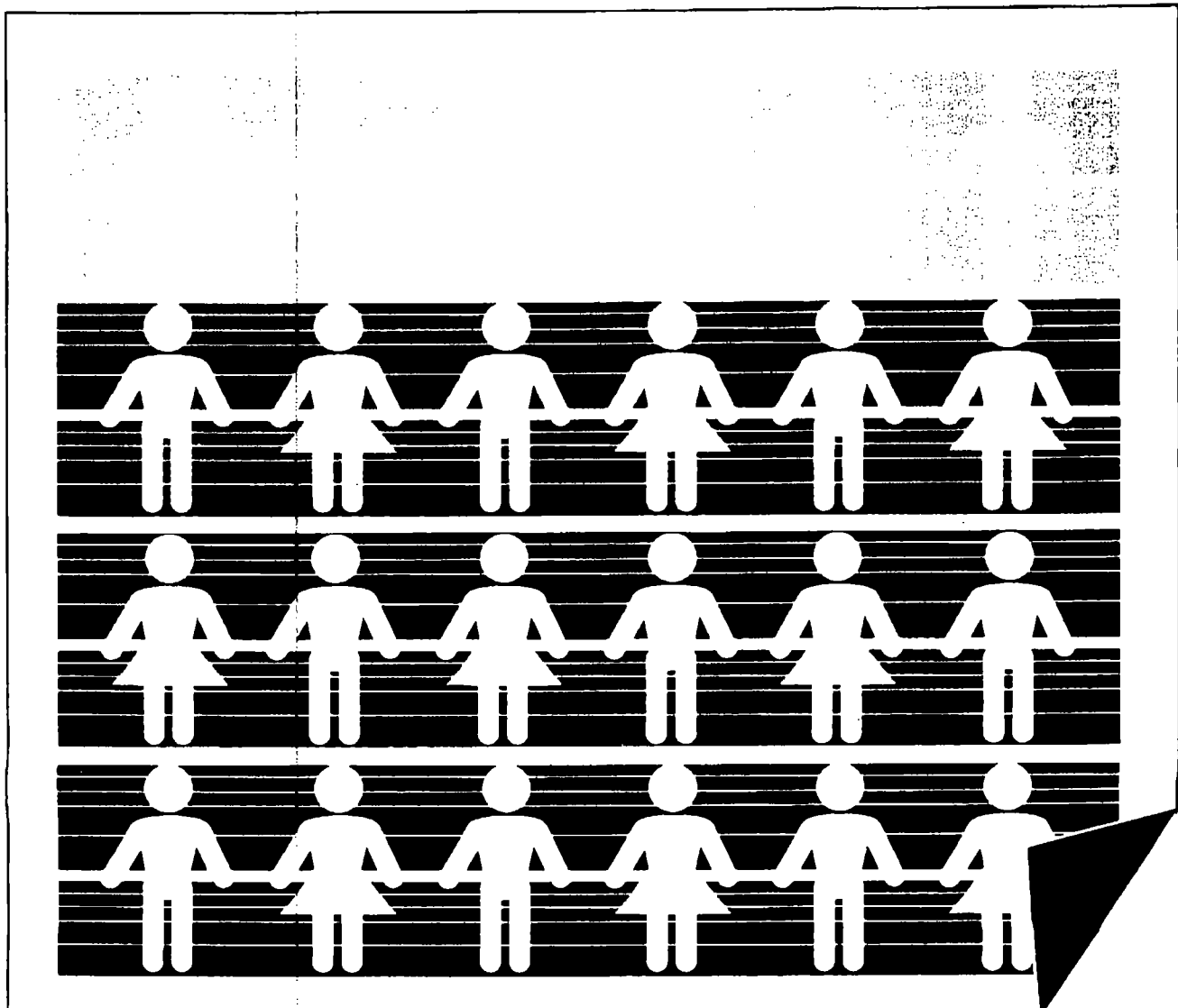
U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

1990 CP-2-34

CENSUS '90

1990 Census of Population
Social and Economic
Characteristics
New York

Section 2 of 3



→ OT B 15% of deaths
② all infectious diseases over 1/2 deaths
now under 10%

RESEARCH TASKS

No one may leave until all of these are completed

1. GDP - 1900, 1998 → ~~1900~~ 1998

2. **Ranked** cause of death - 1900, 1998

3. # of children who died in childbirth of childhood - 1900, 1998

4. Names of diseases big then, nonexistent now -- probably same as #2

5. Poverty rates - 1900, 1998 - might be difficult, good luck

6. % of Americans who went to college - 1900, 1998 OR degrees granted 1990 ONLY

7. % of Americans who graduated high school - 1900, 1998

8. How long did it take to travel from NY to SF *Cost*

9. GDP per manhour - 1998

10. Output per manhour, 1990 or 1998 INDEXED - 1900, 1998

11. U.S. Govt. Expenditures - 1998

12. Occupations by % - 1998

13. Energy sources - 1998

14. International trade (IM make ?% of GNP, EX ?) - 1998

15. # flights - Jeff's research, Arkansas airport opening - obviously 1900 # is 0

16. Miles of RR - 1998

17. Miles of Road - 1998

18. Total US car production - 1998

19. % of 18-21 yr. Olds in college - 1998

20. # Baccalaureate degrees granted - 1998

21. Telephones, # of users - 1998

children died before
5 = 18% (00)

JOSH now about 1%

16 → w Junior, Mark

1/2
of us
would not
be here
if 1900
health state
still prevailed

unw.
w/ team
needed
Judith
Levitt

Charles
Plesky
et
Henry
Pa

22. % of women working - 1900, 1998

Just

23. # of daily newspapers - 1900, 1998

24. # doctors, # hospitals - 1900, 1998

*1 doc + hospital
were irrelevant*

[Signature]

is still another sweater, — the public. Only by its sufferance of the bargain counter and of sweatshop-made goods has the nuisance existed as long as it has. I am glad to believe that its time is passing away. The law has driven the sweatshops out of the tenements, and so deprived them of one of their chief props: there was no rent at all to pay there. Child-labor, which only four years ago the Reinhard Committee characterized as "one of the most extensive evils now existing in the city of New York, a constant and grave menace to the welfare of its people," has been practically banished from the tailoring trade. What organization among the workers had failed to effect is apparently going to be accomplished by direct pressure of an outraged public opinion. Already manufacturers are returning to their own factories, and making capital of the fact among their customers. The new law, which greatly extends the factory inspector's power over sweatshops, is an expression of this enlightened sentiment. It will put New York a long stride ahead, and quite up to Massachusetts. The inspector's tag has proved, where the law was violated, an effective weapon. It suspends all operation of the shop and removal of the goods until the orders of the inspector have been obeyed. But the tag which shall finally put an end to sweating, and restore decent conditions, is not the factory inspector's, I am persuaded, but a trades union label, which shall deserve public confidence and receive it. We have much to learn yet, all of us. I think I can see the end of this trouble, however, when the Italian's triumph in the sweatshop shall have proved but a barren victory, to his own gain.

In all I have said so far, in these papers, I have not gone beyond the limits of the old city, — of Manhattan Island, in fact. I want now to glance for a moment at the several attempts made at colonizing refugee Jews in this part

of the country. Brownsville was one of the earliest. Its projector was a manufacturer, and its motive profit. The result was the familiar one, — as nasty a little slum as ever the East Side had to show. We have it on our hands now in the Greater City, — it came in with Brooklyn, — and it is not a gain. Down in southern New Jersey several colonies were started, likewise by speculators, in the persecution of the early eighties, and these also failed. The soil was sandy and poor, and, thrown upon their own resources in a strange and unfriendly neighborhood, with unfamiliar and unremunerative toil, the colonists grew discouraged and gave up in despair. The colonies were approaching final collapse, when the managers of the Baron de Hirsch Fund in New York, who had started and maintained a successful colony at Woodbine, in the same neighborhood, took them under the arms and inaugurated a new plan. They persuaded several large clothing contractors in this city to move their plants down to the villages, where they would be assured of steady hands, not so easily affected by strikes. For strikes in sweatshops are often enough the alternative of starvation. Upon the land there would be no starvation. The managers of the Fund built factories, bought the old mortgages on the farms, and put up houses for the families which the contractors brought down with them. This effort at transplanting the crowd from the Ghetto to the soil has now been going on for a year. At latest account, eight contractors and two hundred and fifty families had been moved out. The colonies had taken on a new lease of life and apparent prosperity. While it is yet too early to pass sober judgment, there seems to be good ground for hoping that a real way out has been found that shall restore the Jew, at least in a measure, to the soil from which he was barred so long. The experiment is of exceeding interest. The hopes of its project-

ors that a purely farming community might be established have not been realized. Perhaps it was too much to expect. By bringing to the farmers their missing market, and work to the surplus population, the mixed settlement plan bids fair to prove a step in the desired direction.

Some 18,500 acres are now held by Jewish colonists in New Jersey. In the New England states, in the last eight years, 600 abandoned farms have been occupied and are cultivated by refugees from Russia. As a dairy farmer and a poultry raiser, the Jew has more of an immediate commercial grip on the situation and works with more courage. At Woodbine, sixty-five boys and girls are being trained in an agricultural school that has won the whole settlement the friendly regard of the neighborhood. Of its pupils, eleven came out of tailor shops, and ten had been office boys, messengers, or newsboys. To these, and to the trade schools now successfully operated by the de Hirsch Fund, we are to look in the next generation for the answer to the old taunt that the Jew is a trader, and not fit to be either farmer or craftsman, and for the solution of the problem which he now presents in the slum.

I have spoken at length of the Jew and the Italian, because they are our present problem. Yesterday it was the Irishman and the Bohemian. Tomorrow it may be the Greek, who already undersells the Italian from his pushcart in the Fourth Ward, and the Syrian, who can give Greek, Italian, and Jew points at a trade. From Dalmatia a new immigration has begun to come, and there are signs of its working further east in the Balkan states, where there is no telling what is in store for us. How to absorb them all safely is the question. Doubtless the Irishman, having absorbed us politically, would be glad to free us from all concern on that score by doing a like favor for them.

But we should not get the best of the slum that way; it would get the best of us, instead. Would I shut out the newcomers? Sometimes, looking at it from the point of view of the Barge Office and the sweatshop, I think I would. Then there comes up the recollection of a picture of the city of Prague that hangs in a Bohemian friend's parlor, here in New York. I stood looking at it one day, and noticed in the foreground cannon that pointed in over the city. I spoke of it, unthinking, and said to my host that they should be trained, if against an enemy, the other way. The man's eye flashed fire. "Ha!" he cried, "here, yes!" When I think of that, I do not want to shut the door.

Again, there occurs to me an experience the police had last summer in Mulberry Street. They were looking for a murderer, and came upon a nest of Italian thugs who lived by blackmailing their countrymen. They were curious about them, and sent their names to Naples with a request for information. There came back such a record as none of the detectives had ever seen or heard of before. All of them were notorious criminals, who had been charged with every conceivable crime, from burglary to kidnapping and "maiming," and some not to be conceived of by the American mind. Five of them together had been sixty-three times in jail, and one no less than twenty-one times. Yet, though they were all "under special surveillance," they had come here without let or hindrance within a year. When I recall that, I want to shut the door quick. I sent the exhibit to Washington at the time. But then, again, when I think of Mrs. Michelangelo in her poor mourning for one child run over and killed, wiping her tears away and going bravely to work to keep the home together for the other five until the oldest shall be old enough to take her father's place; and when, as now, there strays into my hand the letter from my

good friend, the "woman doctor" in the slum, when her father had died, in which she wrote: "The little scamps of the street have been positively pathetic; they have made such shy, boyish attempts at friendliness. One little chap offered to let me hold his top while it was spinning, in token of affection," — when I read that, I have not the heart to shut anybody out.

Except, of course, the unfit, the criminal and the pauper, cast off by their own, and the man brought over here merely to put money into the pockets of the steamship agent, the padrone, and the mine owner. We have laws to bar these out. Suppose we begin by being honest with ourselves and the immigrant, and enforcing our own laws. In spite of a healthy effort at the port of New York, — I can only speak for that, — under the present administration, that has not yet been done. When the door has been shut and locked against the man who left his country for his country's good, whether by its "assistance" or not, and when trafficking in the immigrant for private profit has been stopped, then, perhaps, we shall be better able to decide what degree of ignorance in him constitutes unfitness for citizenship and cause for shutting him out. Perchance then, also, we shall hear less of the cant about his being a peril to the republic. Doubtless ignorance is a peril, but the selfishness that trades upon ignorance is a much greater. He came to us without a country, ready to adopt such a standard of patriotism as he found, at its face value, and we gave him the rear tenement and slum politics. If he accepted the standard, whose fault was it? His being in such a hurry to vote that he could not wait till the law made him a citizen was no worse, to my mind, than the treachery of the "upper class" native, who refuses to go to the polls for fear he may rub up against him there. This last let us settle with first, and see what remains of our problem. We

can approach it honestly, then, at all events.

When the country was in the throes of the silver campaign, the newspapers told the story of an old laborer who went to the subtreasury and demanded to see the "boss." He undid the strings of an old leathern purse with fumbling fingers, and counted out more than two hundred dollars in gold eagles, the hoard of a lifetime of toil and self-denial. They were for the government, he said. He had not the head to understand all the talk that was going, but he gathered from what he heard that the government was in trouble, and that somehow it was about not having gold enough. So he had brought what he had. He owed it all to the country, and now that she needed it he had come to give it back. The man was an Irishman. Very likely he was enrolled in Tammany and voted her ticket. I remember a tenement at the bottom of a back alley over on the East Side, where I once went visiting with the pastor of a mission chapel. Up in the attic there was a family of father and daughter in two rooms that had been made out of one by dividing off the deep dormer window. It was midwinter, and they had no fire. He was a peddler, but the snow had stalled his pushcart and robbed them of their only other source of income, a lodger who hired cot room in the attic for a few cents a night. The daughter was not able to work. But she said, cheerfully, that they were "getting along." When it came out that she had not tasted solid food for many days, was starving, in fact, — indeed, she died within a year, of the slow starvation of the tenements that parades in the mortality returns under a variety of scientific names which all mean the same thing, — she met her pastor's gentle chiding with the excuse: "Oh, your church has many poorer than I. I don't want to take your money."

These were Germans, ordinarily held to be close-fisted; but I found that in

their dire distress they had taken in a poor old man who was past working, and had kept him all winter, sharing with him what they had. He was none of theirs; they hardly even knew him, as it appeared. It was enough that he was "poorer than they," and lonely and hungry and cold.

It was over here that the children of Dr. Elsing's Sunday school gave out of the depth of their poverty fifty-four dollars in pennies to be hung on the Christmas tree as their offering to the persecuted Armenians. One of their teachers told me of a Bohemian family that let the holiday dinner she brought them stand and wait, while they sent out to bid to the feast four little ragamuffins of the neighborhood who else would have gone hungry. I remember well a teacher in one of the Children's Aid Society's schools, herself a tenement child, who, with breaking heart, but brave face, played and sang the children's Christmas carols with them rather than spoil their pleasure, while her only sister lay dying at home.

I might keep on and fill many pages with instances of that kind, which simply go to prove that our poor human nature is at least as robust on Avenue A as up on Fifth Avenue, if it has half a chance, and often enough to restore one's faith in it, with no chance at all; and I might set over against it the product of sordid and mean environment which one has never far to seek. Good and evil go together in the tenements as in the fine houses, and the evil sticks out sometimes merely because it lies nearer the surface. The point is that the good does outweigh the bad, and that the virtues that turn the balance are after all those that make for good citizenship anywhere, while the faults are oftenest the accidents of ignorance and lack of training, which it is the business of society to correct. I recall my discouragement when I looked over the examination papers of a batch of candidates

for police appointment, — young men largely the product of our public schools in this city and elsewhere, — and read in them that five of the original New England states were "England, Ireland, Scotland, Belfast, and Cork;" that the Fire Department ruled New York in the absence of the Mayor, — I have sometimes wished it did, and that he would stay away awhile; and that Lincoln was murdered by Ballington Booth. But we shall agree, no doubt, that the indictment of these papers was not of the men who wrote them, but of the school that stuffed its pupils with useless trash, and did not teach them to think. Neither have I forgotten that it was one of these very men who, having failed, and afterward got a job as a bridge policeman, on his first pay day went straight from his post, half frozen as he was, to the settlement worker who had befriended him and his sick father, and gave him five dollars for "some one who was poorer than they." Poorer than they! What worker among the poor has not heard it? It is the charity of the tenement that covers a multitude of sins. There were thirteen in this policeman's family, and his wages were the biggest item of income in the house.

Jealousy, envy, and meanness wear no fine clothes and masquerade under no smooth speeches in the slums. Often enough it is the very nakedness of the virtues that makes us stumble in our judgment. I have in mind the "difficult case" that confronted some philanthropic friends of mine in a rear tenement on Twelfth Street, in the person of an aged widow, quite seventy I should think, who worked uncomplainingly for a sweeter all day and far into the night, pinching and saving and stinting herself, with black bread and chicory coffee as her only fare, in order that she might carry her pitiful earnings to her big, lazy lout of a son in Brooklyn. He never worked. My friends' difficulty was a very real one, for absolutely every at-

tempt to relieve the widow was wrecked upon her mother heart. It all went over the river. Yet one would not have had her different.

Sometimes it is only the unfamiliar setting that shocks. When an East Side midnight burglar, discovered and pursued, killed a tenant who blocked his way of escape, a few weeks ago, his "girl" gave him up to the police. But it was not because he had taken human life. "He was good to me," she explained to the captain whom she told where to find him, "but since he robbed the church I had no use for him." He had stolen, it seems, the communion service in a Staten Island church. The thoughtless laughed. But in her ignorant way she was only trying to apply the standards of morality as they had been taught her. Stunted, bemuddled, as they were, I think I should prefer to take my chances with her rather than with the woman of wealth and luxury who, some years ago, gave a Christmas party to her lapdog, as on the whole the sounder of the two, and by far the more hopeful.

All of which is merely saying that the country is all right, and the people are to be trusted with the old faith in spite of the slum. And it is true, if we remember to put it that way, — in spite of the slum. There is nothing in the slum to warrant that faith save human nature as yet uncorrupted. How long it is to remain so is altogether a question of the sacrifices we are willing to make in our fight with the slum. As yet, we are told by the officials having to do with the enforcement of the health ordinances, which come closer to the life of the individual than any other kind, that the poor in the tenements are "more amenable to the law than the better class." It is of the first importance, then, that we should have laws deserving of their respect, and that these laws should be enforced, lest they conclude that the whole thing is a sham. Respect for law is a very

powerful bar against the slum. But what, for instance, must the poor Jew understand, who is permitted to buy a live hen at the market, yet neither to kill nor keep it in his tenement, and who on his feast day finds a whole squad of policemen detailed to follow him around and see that he does not do any of the things with his fowl for which he must have bought it? Or the day laborer, who drinks his beer in a "Raines law hotel," where brick sandwiches, consisting of two pieces of bread with a brick between, are set out on the counter, in derision of the state law which forbids the serving of drinks without "meals"? (The Stanton Street saloon keeper who did that was solemnly acquitted by a jury.) Or the boy, who may buy fireworks on the Fourth of July, but not set them off? These are only ridiculous instances of an abuse that pervades our community life to an extent that constitutes one of the gravest perils. Insincerity of that kind is not lost on our fellow citizen by adoption, who is only anxious to fall in with the ways of the country; and especially is it not lost on his boy.

We shall see how it affects him. He is the one for whom we are waging the battle with the slum. He is the to-morrow that sits to-day drinking in the lesson of the prosperity of the big boss who declared with pride upon the witness stand that he rules New York, that judges pay him tribute, and that only when he says so a thing "goes;" and that it is all for what he can get out of it, "just the same as everybody else." He sees corporations to-day pay blackmail and rob the people in return, quite according to the schedule of Hester Street. Only there it is the police who charge the peddler twenty cents, while here it is the politicians taking toll of the franchisees, twenty per cent. Wall Street is not ordinarily reckoned in the slum, because of certain physical advantages; but, upon the evidence of the day, I think we shall

have to conclude that the advantage ends there. The boy who is learning such lessons, — how is it with him?

The president of the Society for the Prevention of Cruelty to Children says that children's crime is increasing, and he ought to know. The managers of the Children's Aid Society, after forty-six years of wrestling with the slum for the boy, in which they have lately seemed to get the upper hand, say in this year's report that on the East Side children are growing up in certain districts "entirely neglected," and that the number of such children "increases beyond the power of philanthropic and religious bodies to cope properly with their needs." In the Tompkins Square Lodging House the evening classes are thinning out, and the keeper wails: "Those with whom we have dealt of late have not been inclined

to accept this privilege; how to make night school attractive to shiftless, indifferent street boys is a difficult problem to solve."

Perhaps it is only that he has lost the key. Across the square, the Boys' Club of St. Mark's Place, that began with a handful, counts five thousand members to-day, and is seeking a place to build a house of its own. The school census man announces that no boy in that old stronghold of the "bread or blood" brigade need henceforth loiter in the street because there is not room in the public school, and the brigade has disbanded for want of recruits. The shop is being shut against the boy, and the bars let down at the playground. But from Tompkins Square, nevertheless, came Jacob Beresheim, whose story I shall tell you presently.

Jacob A. Riis

THE VITALITY OF MACAULAY.

I.

THE reign of Queen Victoria has been the golden age of English prose. The royal masters lived earlier, — the makers of the English Bible, Milton, and Burke. Other masters of great fame — Hooker, Browne, Addison, Bolingbroke — have been scattered over other generations; but the prose of Victoria's reign has Newman, Ruskin, Carlyle, and Macaulay. Such diverse excellences of so high a reach have never appeared in England at one time before. In these men manner has so well matched matter that it seems the order of nature for a priest to write like Newman, a poet like Ruskin, a prophet like Carlyle, an historian like Macaulay. The diversity of these four, one from another, forbids any comparison; do you prefer a horseshoe, a salt cellar, or a bottle of cologne? Never-

theless, time has thrown out some hints concerning their enduring quality. Tract number 90 is already old with hoary age; Sartor Resartus is powerless to arouse the youth of to-day; the period of Ruskin's tyranny is past; and still Macaulay's essays, though it is fifty years since they were first published, are read continually, from London to Melbourne, from New York to Singapore.

It is the fashion at present to speak of Newman, Ruskin, and Carlyle with the utmost deference, even for those who dissent from their opinions; but many, both they who are fond of books and they who simulate such an affection, feel at liberty to speak of Macaulay as a sort of literary demagogue. The objects of admiration by a poet, a prophet, and a priest are more to the taste of the dainty than is the resolute, matter-of-fact man of business whom Macaulay celebrates.

POPULATION

Population

1900 - 76,304,799
1998 - 271,143,204

Population per square mile

1900 - 25.6
1998 - 76.7

Population by region

New England Division
1900 - 5,592,017
1990 - 13,206,943
Middle Atlantic Division
1900 - 15,454,678
1990 - 37,602,286
East North Central Division
1900 - 15,985,581
1990 - 42,008,942
West North Central Division
1900 - 10,347,423
1990 - 17,659,690
South Atlantic Division
1900 - 10,443,480
1990 - 43,566,853
East South Central Division
1900 - 7,547,757
1990 - 15,176,284
West South Central Division
1900 - 6,532,290
1990 - 26,702,793
Mountain Division
1900 - 1,674,657
1990 - 13,658,776
Pacific Division
1900 - 2,634,285
1990 - 39,127,306

Mean Center of Population

1900: Bartholomew County, Indiana
1990: Crawford County, Missouri

5 degrees 24 minutes W, 1 degree 51 minutes S - WILL DO MILE CALCULATION FRIDAY

$\Rightarrow 54.6 \text{ mi}^0 + 5.466.9 \text{ mi}^0$
 $\frac{24}{60} = \frac{1}{100}$
 $6 \overline{) 127.5}$

$$\begin{array}{r} 16256 \\ + 86966 \\ \hline 103222 \end{array}$$

$$\begin{array}{r} 274.9 \\ \times 221.3 \\ \hline 12709 \\ 2213 \\ 2213 \\ 2213 \\ \hline 6089 \end{array}$$

$$\times 1.85$$

$$\begin{array}{r} 3445 \\ \times 55120 \\ \hline 66900 \\ 127465 \\ \hline 187465 \end{array}$$

$$\begin{array}{r} 85 \\ 65 \overline{) 5100} \\ \underline{40} \\ 110 \end{array} \quad 321.3 \text{ m} \quad \text{SW}$$

Immigration

1901-1910 - 8,795,000 immigrants

1900- 448,572

FY 1996 - 915,900

Immigration rate

Annual immigration per 1000 U.S. pop. - 1900 - 10.4

1995 - 2.7

Immigration, specific countries, 1900

India - 9

Mexico - 237

Gender

1900 - 51.1% Male

2000, etc. - 51.1% Female

% of Population over 65

1900 - 4% (3,099,000)

2000 - 11%

Cities over > 1,000,000

1900 - 3

Urban population

1900 - 39.7%

In 1900 only 14 percent of the world's pop. lived in cities

By 2000 more than half will

1900 - 30.2 million urban

1990 - 187 million urban

1900 - 45.9 million rural

1990 - 20 million rural

In 1980s, 90 % of the U.S.' population growth and 89% of its employment growth took place "within the orbit" of large cities -- Jackson, in Columbia History, pg. 532

Live in State they were born in

1900 - 79%

Agriculture IM/EX, 1900

Ag. exports - \$949 million and accounted for 65 % of the total (exports, I believe)

Food imports - \$418 million, 51 % of all imports

“What was then in the nineteenth century beginning to be called the “world economy” climaxed in a great expansive burst from 1896 to 1914. Then for the next twenty-five years, through the 1930s, the props of nineteenth-century capitalism were knocked away from the industrial countries by organization disruption at the international level. Germany’s violent inflation of 1923 was followed everywhere by volatile capital movements, currency instability, and the domestic political struggles of social classes -- all issuing into widespread deflation after 1930, long periods of prolonged and heavy unemployment, and ultimately the resumption of worldwide war. Of the sources of growth so vigorously employed before 1914, only one -- developing technological potential -- remained alive.”

- William Parker

[*Columbia History*, pg. 267]

“Even in the heyday of the nineteenth century, factories where many hand operatives were connected like pieces of machinery to a collection of machines around a single power source, as in the spinning mills or on the assembly line for automobiles (or the disassembly line in meat packing), industry offered many places where the small establishment, buying materials in semifinished state and selling a part of a more complex product to be assembled elsewhere, could survive and flourish.”

- William Parker

[*Ibid.*, pg. 271]

“Most of what farm families everywhere ate in 1900 came from their own farms. Their houses and farm buildings had been built by themselves with the help of neighbors or local craftsmen. Fuel of necessity came largely from local sources. Those who had access to books, newspapers, or magazines read them by daylight or by candles and gas lanterns in the evening. Even those who weren’t farmers relied on their own gardens, and livestock for a key portion of their food supply. Those who lived in cities were the minority, and those who lived in town were not far removed from families who made their living in the countryside. Farming, in other words, was the world’s primary occupation.”

- B.F. Stanton

[*Ibid.*, pg. 346]

Avg. Annual income

1900 - \$411/yr.

1988 - \$520/wk. (\$26,000 yr.)

HOUSING AND HOUSEHOLD ECONOMIC STATISTICS DIVISION

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Table 178. **Poverty Status in 1989 of Families and Persons: 1990—Con.**

(Data based on sample and subject to sampling variability. see text; for definitions of terms and meanings of symbols, see text)

Place and [in Selected States] County Subdivision [10,000 or More Persons]	New City CDP	New Hartford town	New Paltz town	New Rochelle city	New Windsor town	New York city	Niagara Falls city	Niskayuna town	North Amity- ville CDP	North Babylon CDP
ALL INCOME LEVELS IN 1989										
Families	9 250	5 934	2 181	17 171	6 329	1 755 718	16 433	5 424	3 080	4 992
In owner-occupied housing unit	8 725	5 113	1 620	10 926	4 696	637 849	11 208	4 895	2 327	4 345
With related children under 18 years	4 783	2 507	1 085	7 612	3 392	905 409	7 895	2 482	1 797	2 183
Householder worked in 1989	1 393	1 082	535	3 454	1 627	404 620	3 365	944	668	864
Householder worked year round full time in 1989	8 190	4 436	1 808	13 983	5 279	1 239 935	10 650	4 446	2 287	4 152
Householder under 65 years with work disability	6 445	3 357	1 196	9 922	4 073	826 916	6 862	3 380	1 518	3 208
Householder foreign born	307	303	153	719	315	129 243	1 421	166	247	246
Householder under 25 years	1 338	285	191	4 453	482	634 650	1 381	512	418	343
Householder 65 years and over	41	64	109	353	119	54 789	3 967	1 026	478	809
Householder high school graduate or higher	963	1 479	298	3 514	975	295 328	11 491	5 153	2 099	4 368
With public assistance income in 1989	8 583	5 127	1 933	13 738	5 153	1 168 825	2 048	121	445	1 134
With Social Security income in 1989	215	186	76	820	185	266 683	5 549	1 334	782	1 290
Married-couple families	1 486	1 824	372	4 251	1 414	375 582	11 680	4 010	1 971	4 232
With related children under 18 years	8 279	5 178	1 650	13 509	5 408	1 130 680	4 835	2 196	1 064	1 921
Householder worked in 1989	4 313	2 183	797	6 066	2 963	533 856	4 235	887	387	811
Householder worked year round full time in 1989	1 266	983	420	2 873	1 521	251 356	7 868	3 972	1 544	3 593
Householder under 65 years with work disability	7 479	3 927	1 385	11 383	4 645	875 620	5 524	3 098	1 069	2 668
Householder foreign born	5 928	3 033	958	8 205	3 660	610 979	8 257	4 613	1 389	3 711
Householder under 25 years	7 708	4 486	1 503	11 154	4 481	797 278	3 216	863	368	626
Householder 65 years and over	847	1 260	241	2 764	771	209 580	612	54	201	62
Householder high school graduate or higher	143	100	8	329	138	79 337	4 242	1 169	538	1 003
With public assistance income in 1989	1 236	1 532	285	3 256	1 109	256 003	4 040	526	883	614
With Social Security income in 1989	700	601	400	2 919	660	508 443	2 689	254	603	223
Female householder, no husband present	357	285	262	1 306	329	324 124	1 204	48	232	43
With related children under 18 years	91	82	115	492	71	133 058	2 306	399	601	464
Householder worked in 1989	473	395	297	2 067	453	277 924	1 014	221	337	287
Householder worked year round full time in 1989	321	240	157	1 376	286	160 710	2 760	452	585	524
Householder under 65 years with work disability	634	503	322	2 065	469	68 175	628	141	100	128
Householder 65 years and over	75	195	44	580	122	170 939	1 338	60	204	49
Householder high school graduate or higher	65	81	68	455	22	92 415	1 025	139	194	222
With public assistance income in 1989	198	226	59	741	214					
With Social Security income in 1989										
Unrelated individuals for whom poverty status is determined	1 637	2 921	2 144	11 159	2 456	1 440 888	11 558	1 998	1 913	1 518
Nonfamily householder	1 037	2 526	1 324	8 092	1 901	1 060 556	9 452	1 665	907	973
In owner-occupied housing unit	613	1 372	473	2 590	964	225 477	3 942	1 085	598	613
65 years and over	359	1 402	327	3 557	705	354 529	4 145	819	559	408
Persons for whom poverty status is determined	33 398	20 916	8 880	45 346	22 599	7 181 135	61 091	18 549	13 739	18 016
Persons 18 years and over	24 876	16 206	6 986	51 980	16 575	5 530 426	46 516	13 889	10 004	14 189
Persons 65 years and over	2 402	4 056	934	10 266	2 534	911 110	41 512	2 785	1 526	2 082
Related children under 18 years	8 514	4 683	1 888	13 343	6 002	1 641 870	14 477	4 660	3 710	3 795
Related children under 6 years	2 108	1 401	675	4 733	2 346	583 841	5 375	1 440	1 211	1 351
Related children 5 to 17 years	6 748	3 523	1 318	9 315	4 049	1 153 116	9 968	3 442	2 742	2 640
INCOME IN 1989 BELOW POVERTY LEVEL										
Families	149	173	154	801	209	25 671	2 551	97	212	128
Percent below poverty level	1.6	2.9	7.1	4.7	3.3	16.3	15.5	1.8	6.9	2.6
In owner-occupied housing unit	97	74	26	179	107	24 456	472	49	55	106
With related children under 18 years	116	148	145	612	151	224 988	2 157	63	197	79
Householder worked in 1989	42	85	94	310	89	114 385	1 248	46	90	34
Householder worked year round full time in 1989	77	99	102	326	64	81 601	1 092	42	107	72
Householder under 65 years with work disability	33	32	30	64	29	20 535	119	22	27	23
Householder foreign born	16	2	14	27	26	45 681	361	9	18	8
Householder under 25 years	26	9	17	275	19	103 303	183	14	-	19
Householder 65 years and over	-	17	18	51	6	20 080	515	-	-	-
Householder high school graduate or higher	13	24	-	101	24	27 426	185	8	47	35
With public assistance income in 1989	115	128	140	421	146	123 427	1 637	72	107	105
With Social Security income in 1989	32	34	35	231	21	136 295	1 218	10	108	4
Mean income deficit (dollars)	15	29	-	96	59	34 157	365	7	39	28
Married-couple families	5 452	4 989	4 253	5 258	4 647	6 374	5 289	6 480	5 336	3 584
With related children under 18 years	60	87	60	261	110	88 915	658	70	41	79
Householder worked in 1989	27	67	50	130	75	58 392	468	44	34	53
Householder worked year round full time in 1989	8	27	25	73	47	31 026	293	30	-	25
Householder under 65 years with work disability	35	64	44	111	42	37 417	350	36	41	47
Householder foreign born	19	32	23	54	29	12 839	80	22	7	19
Householder under 25 years	40	52	50	152	64	42 476	386	60	32	65
Householder 65 years and over	13	17	-	71	14	14 850	89	-	7	26
Householder high school graduate or higher	-	2	-	-	6	20 587	157	-	9	-
With public assistance income in 1989	-	-	-	52	35	15 622	138	7	15	19
With Social Security income in 1989	8	17	-	305	3 941	6 138	5 204	6 069	3 059	3 368
Mean income deficit (dollars)	4 513	4 886	2 671	4 42	93	179 357	1 773	27	161	45
Female householder, no husband present	80	88	104	442	93	155 912	1 576	19	153	22
With related children under 18 years	80	81	95	396	70	78 299	907	16	80	9
Householder worked in 1989	25	58	69	163	16	37 662	704	6	66	21
Householder worked year round full time in 1989	33	35	58	32	-	6 109	34	-	20	-
Householder under 65 years with work disability	5	-	7	231	76	23 254	1 158	12	75	36
Householder foreign born	66	76	90	30	10	10 789	96	8	30	9
Householder under 25 years	-	-	-	231	15	110 594	1 008	10	89	-
Householder 65 years and over	32	32	35	231	15	110 594	1 008	10	89	-
Householder high school graduate or higher	-	-	-	44	24	16 031	222	-	14	9
With public assistance income in 1989	7	12	-	44	24	16 031	222	-	14	9
With Social Security income in 1989	-	-	-	44	24	16 031	222	-	14	9
Mean income deficit (dollars)	6 234	5 092	5 014	5 662	6 073	6 540	5 333	7 546	6 041	4 233
Unrelated individuals	334	397	698	2 276	352	360 038	3 163	168	564	155
Percent below poverty level	20.4	13.6	32.6	20.4	14.3	25.0	27.4	8.4	29.5	10.2
Nonfamily householder	117	291	287	1 315	189	215 557	2 304	124	147	77
In owner-occupied housing unit	59	163	39	191	107	23 097	536	46	68	32
65 years and over	84	215	41	906	113	103 105	954	85	235	43
Mean income deficit (dollars)	3 935	2 697	3 440	3 317	3 757	3 639	2 707	3 032	4 546	3 576
Persons	809	1 011	1 153	4 937	987	1 384 954	11 387	688	1 359	583
Percent below poverty level	2.4	4.8	13.0	7.6	4.4	19.3	18.6	2.6	9.9	3.2
Persons 18 years and over	578	675	928	3 646	743	887 995	6 776	354	927	386
Persons 65 years and over	105	255	41	1 069	165	150 322	1 286	103	304	109
Related children under 18 years	223	97	219	1 248	222	490 385	4 519	134	407	162
Related children under 6 years	61	97	114	483	129	180 177	2 119	74	142	37
Related children 5 to 17 years	170	214	120	875	114	341 088	2 756	68	276	125
Persons below 125 percent of poverty level	1 078	1 511	1 487	6 435	1 654	1 706 855	14 874	698	1 874	832
Persons below 200 percent of poverty level	1 847	3 600	2 139	12 051	3 235	2 583 698	24 637	1 641	4 219	1 819

EQUAL RIGHTS

“Still, women will never largely control the coercive or military functions of government.”

- Van Buren Denslow

[*“Society Governed by Economic Laws,”* pg. 82, Tab 11]

“What is wanted for women is equal rights, equal admission to all social privileges; not a position apart, a sort of sentimental priesthood.”

- Harriet Taylor Mill, 1851

[*Columbia 20th Century History*, pg. 59]

POPULATION

Population

1900 - 75,994,575

1998 - 271,143,204

Population per square mile

1900 - 25.6

- 1998 = 76.7

Mean Center of Population

1900: Bartholomew County, Indiana

1990: Crawford County, Missouri

5 degrees 24 minutes W, 1 degree 51 minutes S - WILL DO MILE CALCULATION FRIDAY

Life Expectancy

1900: 47.3 years

1994 = 75.7

Black woman's life expectancy

1900 - 34 yrs.

1940 - 56

1980 - 74

1994 = 73.9

Birth per 100 population

1900: 3.23

wrong

Immigration

1901-1910 - 8,795,000 immigrants

1900 = 448,572

Immigration rate

Annual immigration per 1000 U.S. pop. - 1900 - 10.4

1995 - 2.7

FY 1996 = 915,900
immigrants

Immigration, specific countries, 1900

India - 9

make %

Mexico - 237

see attached table

Gender

1900 - 51.1% Male

2000, etc. - 51.1% Female

need to do

% of Population over 65

1900 - 4% (3,099,000)

2000 - 11%

Cities over > 1,000,000

1900 - 3

Urban population
1900 - 39.7%

Live in State they were born in
1900 - 79%

ECONOMIC

US Labor Force

1900: 28,500,000

1998: 138,253,000

Annual hrs. Worked per person

1900: 2,707

1979: 1,607

1998 = 1,799

GDP per manhour

1900: \$1.29

1979: \$8.28

1998

Output per man-hour

FIND 1990 Indexed

U.S. Govt. Debt

1900: \$1,260,000,000

1998 5,600,207,160,013

U.S. Govt. Expenditures

1903: \$1,700,000,000

Occupations, 1900, by %

Agriculture, forestry and fisheries - 38.4%

Mining - 2.6%

Manufacturing and hand trades - 21.5%

Construction - 5.6%

Transport/public utilities - 6.9%

Trade, finance and real estate - 10%

Education, professional, entertainment - 4%

Domestic, personal service - 9.5%

Government - 1% (1,400,000) incl., military

Federal civilians (312,000)

Energy sources, 1900

Coal - 3/4 fuel required by entire economy

International Trade, 1900

Imports made up 4.3 % of US GNP and exports were 6.1%.

Agriculture IM/EX, 1900

Ag. exports - \$949 million and accounted for 65 % of the total (exports, I believe)

Food imports - \$418 million, 51 % of all imports

“What was then in the nineteenth century beginning to be called the “world economy” climaxed

TRANSPORTATION

Cars, total US production

1908: 63,500

MISCELLANEOUS

In 1900:

- in New Haven, Connecticut, a restaurant pioneers the hamburger
- US Postal Serv. issues 1st book of stamps
- Paper clip is patented
- Gasoline sold in drug stores by quart in bottles
- Average American factory has about 24 employees

HEALTH

Deaths per 100,000 population, 1900

TB - 194.4

Diphtheria - 40.3

Whooping cough - 12.2

Measles - 13.3

Influenza and pneumonia - 202.2

TRANSPORTATION

Miles of surface roads

1900: 129,000 miles

Railroads

1900: 193,000 miles

EDUCATION

Black Women, Literacy

1900 - 40 %

1980 - virtually all

U.S. Census Bureau *the Official Statistics*
United States

Firms, Establishments, Employment, Annual Payroll, and Estimated Receipts by Industrial Division and Enterprise Employment for 1995

☐ <u>All Industries</u>	☐ <u>Agriculture, Forestry, Fishing</u>
☐ <u>Mining</u>	☐ <u>Construction</u>
☐ <u>Manufacturing</u>	☐ <u>Transport, Communication, Public Utilities</u>
☐ <u>Wholesale Trade</u>	☐ <u>Retail Trade</u>
☐ <u>Finance, Insur., Realty</u>	☐ <u>Services</u>
☐ <u>Non-Classifiable</u>	

United States

The Number of Firms, Establishments, Employment, Annual Payroll, and Estimated Receipts by Industrial Division and Enterprise Employment Size for 1995

	Total	<20	20-99	100-499	500+
Total - ALL INDUSTRIES					
Firms	5,369,068	4,807,533	469,869	76,222	15,444
Establishments	6,612,721	4,876,327	638,616	283,993	813,785
Employment	100,314,946	19,569,861	18,422,228	14,660,421	47,662,436
Annual Payroll (\$1,000)	2,665,921,824	454,009,065	437,065,364	361,060,815	1,413,786,580
Estimated Receipts (\$1,000)	15,751,365,178	2,663,857,848	2,678,292,849	2,062,235,050	8,346,979,431

United States

The Number of Firms, Establishments, Employment, Annual Payroll, and Estimated Receipts by Industrial Division and Enterprise Employment Size for 1995

	Total	<20	20-99	100-499	500+
Total - Ag. Serv., For., Fishing					
Firms	107,253	102,382	4,347	387	137
Establishments	108,666	102,445	4,494	567	1,160
Employment	630,287	361,202	147,065	52,060	69,960
Annual Payroll (\$1,000)	12,102,236	6,747,009	2,843,919	938,088	1,573,220
Estimated Receipts (\$1,000)	36,963,317	19,254,903	7,781,522	3,290,590	6,636,302

United States

The Number of Firms, Establishments, Employment, Annual Payroll, and Estimated Receipts by Industrial Division and Enterprise Employment Size for 1995

	Total	<20	20-99	100-499	500+
Total - Mining					
Firms	21,585	18,178	2,469	536	402
Establishments	27,406	18,340	3,038	1,412	4,616
Employment	627,531	76,430	91,513	75,196	384,392
Annual Payroll (\$1,000)	25,698,581	2,227,780	2,931,597	2,897,562	17,641,642
Estimated Receipts (\$1,000)	168,055,155	17,322,223	18,066,874	15,606,815	117,059,243

United States

The Number of Firms, Establishments, Employment, Annual Payroll, and Estimated Receipts by Industrial Division and Enterprise Employment Size for 1995

	Total	<20	20-99	100-499	500+
Total - Construction					
Firms	630,206	581,785	43,442	4,316	663
Establishments	636,580	582,009	44,195	5,635	4,741
Employment	5,040,598	2,211,245	1,594,071	696,278	539,004
Annual Payroll (\$1,000)	147,320,503	54,555,927	48,325,397	23,866,174	20,573,005
Estimated Receipts (\$1,000)	667,763,006	260,599,062	207,511,531	106,397,358	93,255,055

United States

The Number of Firms, Establishments, Employment, Annual Payroll, and Estimated Receipts by Industrial Division and Enterprise Employment Size for 1995

	Total	<20	20-99	100-499	500+
Total - Manufacturing					
Firms	330,310	242,338	66,235	16,821	4,916
Establishments	390,435	242,804	70,490	28,536	48,605
Employment	18,611,108	1,347,832	2,743,165	3,073,002	11,447,109
Annual Payroll (\$1,000)	630,965,899	33,359,627	74,126,239	86,752,908	436,727,125
Estimated Receipts (\$1,000)	3,417,662,925	149,518,691	339,266,138	460,292,303	2,468,585,793

United States

The Number of Firms, Establishments, Employment, Annual Payroll, and Estimated Receipts by Industrial Division and Enterprise Employment Size for 1995

	Total	<20	20-99	100-499	500+
Total - Transp.,Comm.,Public Utilities					
Firms	208,967	182,667	20,714	3,931	1,655
Establishments	285,654	184,846	26,974	12,957	60,877
Employment	5,924,706	725,709	798,021	628,665	3,772,311
Annual Payroll (\$1,000)	200,893,921	16,366,530	19,514,278	17,602,270	147,410,843
Estimated Receipts (\$1,000)	1,026,766,996	77,576,329	82,737,853	75,831,589	790,621,225

United States

The Number of Firms, Establishments, Employment, Annual Payroll, and Estimated Receipts by Industrial Division and Enterprise Employment Size for 1995

	Total	<20	20-99	100-499	500+
Total - Wholesale Trade					
Firms	405,435	345,929	47,849	8,321	3,336
Establishments	518,432	353,206	70,041	29,259	65,926
Employment	6,606,534	1,616,906	1,738,224	1,074,161	2,177,243
Annual Payroll (\$1,000)	226,998,566	48,877,273	53,242,969	34,935,893	89,942,431
Estimated Receipts (\$1,000)	3,849,002,650	882,973,143	969,355,108	584,259,478	1,412,414,921

United States

The Number of Firms, Establishments, Employment, Annual Payroll, and Estimated Receipts by Industrial Division and Enterprise Employment Size for 1995

	Total	<20	20-99	100-499	500+
Total - Retail Trade					
Firms	1,099,619	967,681	115,689	13,305	2,944
Establishments	1,571,073	990,360	167,260	78,759	334,694
Employment	21,086,617	4,405,883	4,349,787	2,208,976	10,121,971
Annual Payroll (\$1,000)	300,073,188	57,717,897	62,546,330	34,261,514	145,547,447
Estimated Receipts (\$1,000)	2,292,731,644	476,172,787	519,510,231	285,037,763	1,012,010,863

United States

The Number of Firms, Establishments, Employment, Annual Payroll, and Estimated Receipts by Industrial Division and Enterprise Employment Size for 1995

	Total	<20	20-99	100-499	500+
Total - Finance, Insurance, and Realty					
Firms	433,790	400,691	24,395	5,716	2,988
Establishments	629,479	408,589	46,474	30,062	144,354
Employment	6,984,830	1,252,906	934,421	815,342	3,982,161
Annual Payroll (\$1,000)	255,882,857	35,431,584	29,337,865	27,870,522	163,242,886
Estimated Receipts (\$1,000)	2,094,205,607	193,254,017	169,091,236	205,148,083	1,526,712,271

United States

The Number of Firms, Establishments, Employment, Annual Payroll, and Estimated Receipts by Industrial Division and Enterprise Employment Size for 1995

	Total	<20	20-99	100-499	500+
Total - Services					
Firms	2,114,127	1,918,185	154,867	32,610	8,465
Establishments	2,392,015	1,941,207	205,213	96,787	148,808
Employment	34,709,644	7,499,092	6,012,668	6,033,998	15,163,886
Annual Payroll (\$1,000)	864,399,439	197,369,219	144,073,113	131,909,508	391,047,599
Estimated Receipts (\$1,000)	2,188,812,082	579,077,680	364,264,223	326,214,385	919,255,794

United States
The Number of Firms, Establishments, Employment, Annual Payroll, and Estimated Receipts by Industrial Division and Enterprise Employment Size for 1995

	Total	<20	20-99	100-499	500+
Total - Nonclassifiable Estabs					
Firms	52,981	52,521	437	19	4
Establishments	52,981	52,521	437	19	4
Employment	93,091	72,656	13,293	2,743	4,399
Annual Payroll (\$1,000)	1,586,634	1,356,219	123,657	26,376	80,382
Estimated Receipts (\$1,000)	9,401,796	8,109,013	708,133	156,686	427,964

U.S. Census Bureau Last Revised 05/13/98

Economy at a Glance



	Oct '97	Nov '97	Dec '97	Jan '98	Feb '98	Mar '98	A
Labor Market							
Civilian Labor Force (1)	134,253	136,406	136,864	137,169	137,493	137,557	137,2
Unemployment (1)	6,099	6,496	6,289	6,392	6,409	6,393	5,8
Unemployment Rate (2)	4.4	4.8	4.6	4.7	4.7	4.6	4
Employees on Nonfarm Payrolls (1)	123,568	123,944	124,289	124,640	124,832	124,914	125,2
Hours, Earnings and Productivity							
Average Weekly Hours (3)	34.6	34.7	34.7	34.8	34.7	34.6	34
Average Hourly Earnings (3)	12.43	12.47	12.50	12.54	12.59	12.63	12.
Employment Cost Index (4)		1.0			0.7		
Productivity (5)		0.9			3.5		
Prices							
Consumer Price Index (6)	0.2	0.1	0.1	0.0	0.1	0.0	0
Producer Price Index (7)	0.0	-0.2	-0.2	-0.6	-0.1	-0.1	0

Footnotes:

(1) Seasonally adjusted, in thousands

(2) Seasonally adjusted, in percent

(3) For production and nonsupervisory workers on private nonfarm payrolls, seasonally adjusted

(4) Compensation, all civilian workers, seasonally adjusted, 3-month percent change

(5) Output per hour, nonfarm business, seasonally adjusted, percent change from previous quarter at annual rate

(6) All items, U.S. city average, all urban consumers, seasonally adjusted, 1982-84=100, 1-month percent change

(7) Finished goods, seasonally adjusted, 1982=100, 1-month percent change

(P) Preliminary

Source: Bureau of Labor Statistics



[Data Home Page](#)



[BLS Home Page](#)

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Aviation Daily

June 19, 1998

SECTION: Vol. 332, No. 57; Pg. 489

LENGTH: 293 words

HEADLINE: Airlines Had \$ 16.5 Billion Operating Profit In 1997, ICAO Reports

BODY:

The world's airlines posted revenues of \$ 291 billion and an operating profit of \$ 16.5 billion last year, according to preliminary data published by the International Civil Aviation Organization (ICAO). Operating expenses totaled \$ 274.5 billion. The revenue total was up 3% while expenses increased less than 2%. The global airline industry has never showed a double-digit operating margin, according to ICAO's statistics, which date from 1947. Last year's operating margin, the highest in a decade, is estimated at 5.7%.

Measured on a unit basis, the ICAO figures were not entirely positive. Yields fell universally, reflecting increasing fare competition and a higher-valued U.S. dollar. Operating revenue per available ton kilometer dropped from 84.8 cents (U.S.) in 1996 to 81.5 cents in 1997. But cost per ton kilometer fell too, from 81.1 cents to 76.9 cents. Total scheduled traffic rose 8% - international scheduled traffic was up 9% - and the load factor reached 69%, setting a record for the fourth straight year. International loads climbed to 70%.

The airlines carried 1.448 billion passengers last year, up 4% from 1.39 billion in 1996. Freight ton growth was 12%, to 26.1 million tons. The Asia/Pacific economic downturn had a negative effect on traffic growth. "For the first time in five years, in 1997 the growth in ton kilometers performed by airlines of Asia/Pacific was not the world's highest in regional growth and indeed fell to just above the world average of 8%," ICAO said. Growth at airlines in Latin America and the Caribbean was well above average. Carriers in Europe, Africa and North America grew at rates close to the world average, and airlines in the Middle East showed below-average growth.

LANGUAGE: ENGLISH

LOAD-DATE: July 01, 1998

= 3.9 million/day

Lewis L. Gould

The Presidency of
**WILLIAM
McKINLEY**



The Presidency of
WILLIAM McKINLEY

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by
Lewis L. Gould



McKINLEY TAKES OFFICE

Inauguration Day, March 4, 1897, was clear and crisp when McKinley took the oath of office on the Senate steps of the Capitol. As he read his inaugural address, "his voice was under perfect control, and his clear and well-modulated tones could be distinctly heard by thousands of people."¹ The speeches that new presidents deliver on such occasions rarely attain the oratorical or intellectual distinction that those of Abraham Lincoln or Franklin D. Roosevelt achieved. McKinley's remarks were not memorable, but in the problems that he discussed and in the solutions that he advanced, the incoming president provided a review of the nation's situation as he assumed power.

Since McKinley's presidency occurred at the end of the 1890s, estimates of the nation's population lacked the precision of the 1900 census. In 1890 the population of the United States was 62,979,766; seven years later, according to a Bureau of the Census estimate, the figure had risen to 72,189,000. The 1890 census reported 32,237,000 males in the population as compared with 30,711,000 women. Ten years later the margin had widened slightly, with 38,816,000 men and 37,178,000 females. The 1900 census also recorded 66,901,000 whites, 9,193,000 blacks, 238,196 Indians, 24,326 Japanese, and 89,863 Chinese in the nation.²

The majority of Americans, 39,817,386 in 1890 and 47,379,699 in 1900, lived in the northeastern and north-central areas of the country. The South's population rose from 20,028,059 to 24,523,527 during these ten years, and the West was much less densely populated, with 3,102,269 people in the 1890 tally and 4,091,349 a decade

THE PRESIDENCY OF WILLIAM McKINLEY

later. The most populous states were, in order, New York, Pennsylvania, Illinois, and Ohio. Texas and Georgia led the South, and California dominated the West.

During the 1890s the nation experienced a growing urbanization. There were 22,106,265 Americans who lived in the towns of 2,500 or more that the census called urban areas in 1890; whereas 40,841,449 resided in rural settings. When the century ended, the urban population had swelled to 30,160,000, and the rural population had increased to 45,834,654. In these ten years the number of individuals living in cities of one million or more rose from 3,662,115 to 6,429,474. New York City encompassed more than 3,400,000 people in 1900; Chicago and Philadelphia totaled 1,699,000 and 1,294,000 respectively. The two presidential candidates in 1896 came from more modest cities, ones which were more typical of the urban experience. Canton, in northeastern Ohio, had fewer than 30,000 people; they depended on railroads, coal mining, and farming for their living. Lincoln, Nebraska, which claimed more than 50,000 inhabitants, was a hub for western railroads and the shipping of agricultural goods.

Americans in 1898 moved across the United States on a railroad system that had grown to 245,334 miles of track and that carried 501,067,000 passengers in that year. On 13,380,000 passenger miles, the railroads earned \$266,970,000 of their total operating income of \$1,247,326,000. Travelers could expect a large degree of personal service if they were willing to pay a slightly higher fare. The mail moved efficiently as well, and politicians around the country exchanged letters at a speed that would seem improbable eight decades later. Proponents of the railroads contended, with some plausibility, that the United States led the world in rail service.

The depression of the 1890s was changing the American railroad system from the profusion of financially weak and overbuilt companies of the late nineteenth century to the banker-supervised, consolidated, and more stable communities of interest that characterized the early years of the new century. Freight rates were steady or actually declining, and the railroads were improving their physical plants. To critics of the rail lines or to the shippers who desired lower rates, the railroad problem remained one of obtaining greater regulation from the state or national government so that prices would be lowered and rate discrimination would be prevented. Strengthening the power of the Interstate Commerce Commission (ICC) became a rallying point for railroad reformers, especially after the Supreme Court decided in 1897 that Congress had not given

McKINLEY TAKES OFFICE

the ICC the authority to establish rates. That situation did not change during the McKinley administration, though by 1901 the public pressure that produced regulatory legislation under Theodore Roosevelt would show itself.

After an initial paragraph "invoking the guidance of Almighty God," McKinley said that the new administration would confront the difficulties of "the prevailing business conditions, entailing idleness upon willing labor and loss to useful enterprises." It had been nearly four years since the Panic of 1893 had signaled the start of a severe depression, and the economy was still stagnant. Following the initial sharp downturn between May 1893 and June 1894, the outlook improved through the end of 1895. It was, however, far from a complete recovery. The nation then experienced a second harsh contraction, which commenced in December 1895 and endured into 1897. "The country is suffering from industrial disturbances from which speedy relief must be had," the new president concluded.³

One measure of the impact of the depression was the gross national product. Expressed in 1929 prices, it had averaged \$27.3 billion between 1889 and 1893. The yearly average for the period 1892 to 1896 was only \$29.6 billion, as compared with a yearly figure of \$37.1 billion between 1897 and 1901. Farm products contributed an average of \$6.8 billion annually to the total from 1892 to 1896, an increase over the \$6.6 billion of the years 1889 to 1893. Nonfarm products stood annually at \$19.7 billion in the four predepression years, rose to \$21.7 billion for the years 1892 to 1896, and moved ahead to \$27.4 billion during the years of McKinley's presidency.

The work force that suffered through the slump of the 1890s reflected the industrializing character of the economy. The number of employed Americans rose from 23,740,000 in 1890 to 29,070,000 in 1900. Agriculture accounted for 9,990,000 of this total in 1890 and for 10,710,000 a decade later. In the nonfarm pursuits, manufacturing comprised 6,340,000 people in 1900, up from 4,750,000 ten years before. Manufacturing had become, at the end of the 1890s, a dominant part of the nation's economy. Construction in 1900 employed 1,660,000 people, 1,530,000 were in transportation, and 1,990,000 in trades, financial, and real-estate positions. There were 3,860,000 who worked in service employment, and another 300,000 had government jobs.

Working conditions and wages, which were those of an era before social-welfare programs, mirrored the troubled state of the

THE PRESIDENCY OF WILLIAM McKINLEY

economy. The average work week was around fifty-nine hours in these years, and the average annual income for all professions in 1897 was \$411. With farm labor omitted, the total rose to \$462. As to the cost of living, students of the problem agreed that an income below \$500 a year placed an urban family of five people in the Northeast at or below the subsistence level and was no more than a minimum income in other northern urban centers. One and three-quarters million children were listed as being employed in some form of work in 1900.

Labor-union members made up only a small percentage of the total working population. The 447,000 union members in 1897 were centered in the railroad, building, metal, printing, and food industries. In manufacturing, union men worked almost six fewer hours per week and received about thirteen cents more per hour than their nonunion counterparts. Work stoppages rose slightly—from 1,066 in 1896 to 1,110 in 1897; they involved 416,000 employees, and 680 of the strikes dealt with wages and hours.

After the improvement in business conditions in 1895, the economy slid backward over the next year. Farm income and prices struck their low points for the decade, and the unemployment rate moved upward toward 20 percent. Only a modest improvement, to 15 percent, marked 1897; unemployment persisted in 1898 and was still at around 8 percent two years after McKinley's term began. At the time of the inauguration, a rise in orders for steel, a stronger woolen industry, and prospects of larger farm exports led the correspondent of the *London Economist* to write: "The general business situation continues to move slowly in the direction of improvement." Within a week, however, caution returned: "While the movement of general trade, then, is unquestionably in the direction of improvement, it is seen to be halting, irregular, and thus far not up to expectations."⁴

The new president first addressed the issue that had agitated the electorate so profoundly in 1896. "Our financial system needs some revision; our money is all good now, but its value must not further be threatened." The outgoing administration had incurred substantial budget deficits, totaling \$137,800,000 between 1894 and 1896; and McKinley believed that an "adequate revenue" had to precede changes in the financial system. He proposed to name, with congressional agreement, a commission to consider revision of the banking and currency laws. Since the Republicans lacked a dependable majority in the Senate, where silver advocates held the balance of power, any more ambitious initiative was probably

420,918,664
536

McKINLEY TAKES OFFICE

doomed. The president did stress his commitment to government supervision of the currency, and he was critical of "the several forms of our paper money," which were, he thought, "a constant embarrassment to the government and to a safe balance in the Treasury." The currency that was in circulation in 1897 consisted of gold coin (\$517,590,000), gold certificates (\$37,285,000), silver dollars (\$51,940,000), silver certificates (\$357,849,000), treasury notes of 1890 (\$83,470,000) subsidiary silver (\$59,616,000), in addition to \$306,915,000 in United States notes and \$226,318,000 in national bank notes. On November 1, 1896, the amount of money in circulation per capita was \$22.63, only a slight rise from the \$22.55 of 1895. Since the last year of Harrison's presidency, the amount of money in circulation per capita had fallen almost \$2.00.⁵

The subject of monetary policy had been a political issue of varying intensity since the Civil War. During the 1890s, advocates of inflation through the free and unlimited coinage of silver at a ratio of 16 to 1 with gold had pressed their proposal as an answer to economic distress. The "silver men" contended that free coinage would raise the depressed price level and also would provide funds for agrarian America to escape the weight of debt. McKinley's victory had slowed but not stopped the silver proponents. "Those who fought in the battle," Bryan announced, "will continue in the ranks until bimetallism is restored."⁶

Supporters of the gold standard, who were centered in the Northeast, regarded the 1896 result as a temporary escape from financial chaos. The size of the vote for Bryan, however, served notice that the issue remained alive, and the unsettled state of the economy during the first half of 1897 kept the friends of the yellow metal alert against attempts to alter the existing system. While the administration had to wait for a more favorable congressional alignment in order to pursue monetary action, it endeavored to reassure the gold constituency of its intentions. Speaking in Chicago in late May, Secretary of the Treasury Gage said: "If any of you harbor the suspicion that the Administration, but just now installed into the responsibilities of high office, has forgotten or is likely to forget the mandate of the people, whose voice in behalf of honest money and sound finances rang out loud and clear in November last, put that suspicion aside."⁷

Between the extremes on the silver issue lay the third approach—international bimetallism. Envisioning a multination agreement to promote a wider use of the white metal. McKinley promised his "constant endeavor to secure it by cooperation with the other great

currency
circulation

1997 - \$420,918,
669,536

RESEARCH TASKS

No one may leave until all of these are completed

1996 - \$7,636,000,000,000

✓ 1. GDP - 1900 1998

⇒ ✓ 2. Ranked cause of death - 1900, 1998

3. # of children who died in childbirth or childhood - 1900, 1998 - Josh

4. Names of diseases big then, nonexistent now -- probably same as #2

5. Poverty rates - 1900, 1998 - might be difficult, good luck JOSH

6. % of Americans who went to college - 1900, 1998 OR degrees granted 1990 ONLY

1996 - 4 yrs. college or more - 23.6%

7. % of Americans who graduated high school (1900, 1998)

~~1995 - 1996 - 81.7%~~ ~~1995 - 1996 - 81.7%~~

8. How long did it take to travel from NY to SF - 1900

calculate TOM 9. GDP per manhour - 1998

~~10. Output per manhour, 1990 or 1998 INDEXED - 1900, 1998~~

✓ 11. U.S. Govt. Expenditures - 1996 - \$1,426,775,000,000

✓ 12. Occupations by % - 1998

✓ 13. Energy sources - 1998

✓ 14. International trade (IM make ?% of GNP, EX ?) - 1998

⇒ 15. # flights - Jeff's research, Arkansas airport opening - obviously 1900 # is 0

✓ 16. Miles of RR - 1994 222,000

✓ 17. Miles of Road - 1995 - 3,912,226

✓ 18. Total US car production - 1998

✓ 19. % of 18-21 yr. Olds in college - 1998 - ? - High Ed -

⇒ ✓ 20. # Baccalaureate degrees granted - 1998

✓ 21. Telephones, # of users - 1995 - 93.9% of households

(13) Consumption

1995 - 90.6 quadrillion Btus

Petroleum - 34.6

Nat. gas - 22.2

Coal - 19.6

Nuclear energy power - 7.2

Renewable - 6.9

Series B 149-166. Death Rate, for Selected Causes: 1900 to 1970

[Number of deaths, excluding fetal deaths, per 100,000 population. Prior to 1933, for death-registration area only; see general note for series B 1-220]

Year	Tuber- culosis, all forms	Syphilis and its sequelae ¹	Ty- phoid and para- typhoid fever	Scarlet fever and strep- toco- cal sore throat	Hepa- titis	Diph- theria	Whoop- ing cough	Meas- les	Malign- ant neo- plasms ²	Diabe- tes melli- tus	Major cardio- vas- cular- renal diseases	In- fluenza and pneu- monia ³	Gas- tritis, duo- denitis, enteri- tis, and colitis ⁴	Cirrho- sis of liver	Motor vehicle accidents ⁵	Acci- dental falls	All other accidents ⁶	Suicide
	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166
1970	2.6	0.2	(Z)	(Z)	0.5	(Z)	(Z)	(Z)	162.8	18.9	496.0	30.9	0.6	15.5	26.9	8.3	21.2	11.6
1969	2.8	0.3	(Z)	(Z)	0.5	(Z)	(Z)	(Z)	160.0	19.1	501.7	33.9	0.9	14.8	27.6	8.8	21.2	11.1
1968	3.1	0.8	(Z)	(Z)	0.4	(Z)	(Z)	(Z)	159.4	19.2	512.1	36.8	0.3	14.6	27.5	9.3	20.7	10.7
1967	3.5	1.2	(Z)	(Z)	0.4	(Z)	(Z)	(Z)	157.2	17.7	511.5	28.8	3.8	14.1	26.7	10.2	20.2	10.8
1966	3.9	1.1	(Z)	(Z)	0.4	(Z)	(Z)	1	155.1	17.7	521.4	32.5	3.9	13.6	27.1	10.2	20.7	10.9
1965	4.1	1.3	(Z)	(Z)	0.4	(Z)	(Z)	1	153.5	17.1	516.4	31.9	4.1	12.8	25.4	10.3	20.1	11.1
1964	4.3	1.4	(Z)	(Z)	0.4	(Z)	(Z)	2	151.3	16.9	514.3	31.1	4.3	12.1	24.5	9.9	19.8	10.8
1963	4.9	1.4	(Z)	(Z)	0.5	(Z)	(Z)	2	151.3	17.2	527.8	37.5	4.4	11.9	23.1	10.2	20.1	11.0
1962	5.1	1.5	(Z)	(Z)	0.5	(Z)	(Z)	2	149.9	16.8	521.2	32.3	4.4	11.7	22.0	10.5	19.8	10.9
1961	5.4	1.6	(Z)	1	0.5	(Z)	(Z)	2	149.4	16.4	511.4	30.1	4.3	11.3	20.8	10.2	19.4	10.4
1960*	6.1	1.6	(Z)	1	0.5	(Z)	1	2	149.2	16.7	521.8	37.3	4.4	11.3	21.3	10.6	20.4	10.6
1959	6.5	1.7	(Z)	1	0.5	(Z)	2	2	147.3	15.9	515.9	31.2	4.4	10.9	21.5	10.6	20.1	10.6
1958	7.1	2.0	(Z)	1	0.5	(Z)	1	3	146.8	15.9	523.5	33.1	4.5	10.8	21.3	10.5	20.4	10.7
1957	7.8	2.2	(Z)	1	0.5	(Z)	1	2	148.6	16.0	523.4	35.8	4.7	11.3	22.7	12.1	21.1	9.8
1956	8.4	2.3	(Z)	1	0.5	1	2	3	147.8	15.7	510.5	28.2	4.5	10.7	23.7	12.1	20.9	10.0
1955	9.1	2.3	(Z)	1	0.5	1	3	2	146.5	15.5	506.0	27.1	4.7	10.2	23.4	12.3	21.2	10.2
1954	10.2	3.0	(Z)	1	0.5	1	2	3	145.6	15.6	495.1	25.4	4.9	10.1	22.1	12.3	21.5	10.1
1953	12.3	3.3	(Z)	1	0.5	1	2	3	144.7	16.3	514.8	33.0	5.4	10.4	24.0	13.0	23.1	10.1
1952	15.8	3.7	1	2	0.5	1	3	4	143.3	16.4	511.9	29.7	5.6	10.2	24.3	13.5	24.0	10.0
1951	20.1	4.1	1	2	0.4	2	6	4	140.5	16.3	513.2	31.4	5.2	9.8	24.1	13.9	24.5	10.4
1950	22.5	5.0	1	2	0.4	3	7	3	139.8	16.2	510.8	31.3	5.1	9.2	23.1	13.8	23.7	11.4
1949	26.3	5.8	1	3	0.4	4	5	6	138.8	16.9	502.1	30.0	6.7	9.2	21.3	15.0	24.3	11.4
1948	30.0	8.0	2	(Z)	0.4	4	8	6	134.9	26.4	488.0	38.7	6.0	11.3	22.1	16.6	28.2	11.2
1947	33.5	8.8	2	1	0.6	6	1.4	3	132.3	26.2	491.0	43.1	5.6	10.4	22.8	16.7	29.7	11.5
1946	36.4	9.3	3	1	0.9	9	9	9	130.0	24.8	476.8	44.5	5.8	9.6	23.9	16.1	29.8	11.5
1945	39.9	10.6	4	2	1.2	1.3	2	2	134.0	26.5	508.2	51.6	8.7	9.5	21.2	17.7	38.2	11.2
1944	41.2	11.2	4	3	0.9	1.4	2	1.4	128.8	26.3	500.5	61.6	9.9	8.6	18.3	17.0	36.0	10.0
1943	42.5	12.1	5	3	0.9	2.5	1	1.0	124.3	27.1	510.8	67.1	9.6	9.8	17.7	18.0	37.7	10.2
1942	43.1	12.2	6	3	1.0	1.9	1	1.0	122.0	25.4	479.5	56.7	8.8	9.4	21.1	16.6	33.5	12.0
1941	44.5	13.8	8	3	1.0	2.8	1	1.7	120.1	25.4	475.3	63.8	10.5	8.9	30.0	16.7	29.2	12.8
1940	45.9	14.4	1.1	5	1.1	2.2	5	5	120.3	26.6	485.7	70.3	10.3	8.6	26.2	17.2	29.8	14.4
1939	47.1	15.0	1.5	7	1.5	2.3	9	9	117.5	25.5	466.3	75.7	11.6	8.3	24.7	17.5	28.1	14.1
1938	49.1	15.9	1.9	9	2.0	3.7	2.5	11.4	114.9	23.9	456.8	80.4	14.3	8.3	25.1	19.5	27.2	15.3
1937	53.8	16.1	2.1	1.4	2.0	3.9	1.2	11.4	112.4	23.7	454.6	114.9	14.7	8.5	30.8	20.4	30.0	15.0
1936	55.9	16.2	2.5	1.9	2.4	2.1	1.0	11.4	111.4	23.7	461.1	119.6	16.4	8.3	29.7	20.8	34.9	14.3
1935	55.1	15.4	2.8	2.1	3.1	3.7	3.1	108.2	22.3	431.2	104.2	14.1	7.9	28.6	19.2	30.1	14.3	
1934	56.7	15.9	3.4	2.0	3.3	5.9	5.5	106.4	22.2	430.0	96.9	18.4	7.7	28.6	18.8	32.0	14.9	
1933	59.6	15.1	3.6	2.0	3.9	3.6	2.2	102.3	21.4	413.6	95.7	17.3	7.4	25.0	16.1	31.8	15.9	
1932	62.5	15.4	3.7	2.2	4.4	4.5	1.6	102.3	22.0	418.2	107.3	16.1	7.2	23.6	14.8	32.4	17.4	
1931	67.8	15.4	4.5	2.2	4.8	3.9	3.0	99.0	20.4	407.1	107.5	20.5	7.4	27.1	14.6	36.1	16.8	
1930	71.1	15.7	4.8	1.9	4.9	4.8	3.2	97.4	19.1	414.4	102.5	26.0	7.2	26.7	14.7	38.4	15.6	
1929	75.3	15.6	4.2	2.1	6.5	6.2	2.5	95.8	18.8	418.9	146.5	23.3	7.2	25.5	14.5	39.7	13.9	
1928	78.3	16.4	4.9	1.9	7.2	5.4	5.2	95.7	19.0	419.1	142.5	26.4	7.5	23.2	14.1	40.8	13.5	
1927	79.6	16.4	5.3	2.3	7.7	6.8	4.1	95.2	17.4	398.3	102.2	27.1	7.4	21.6	14.0	41.5	13.2	
1926	85.5	17.1	6.4	2.5	7.4	8.8	8.3	94.6	17.9	410.6	141.7	32.9	7.2	19.9	14.0	43.3	12.6	
1925	84.8	17.3	7.8	2.7	7.8	6.7	2.3	92.0	16.8	391.5	121.7	38.6	7.2	16.8	13.4	46.3	12.0	
1924	87.9	17.8	6.6	3.1	9.3	8.1	8.2	90.4	16.4	383.4	115.2	33.7	7.3	15.3	13.1	45.4	11.9	
1923	91.7	17.9	6.7	3.5	12.0	9.6	10.7	88.4	17.7	380.8	151.7	39.1	7.1	14.6	12.8	46.9	11.5	
1922	95.3	18.0	7.4	3.5	14.6	5.5	4.3	86.2	18.3	366.6	132.3	38.9	7.4	12.4	12.1	43.8	11.7	
1921	97.6	17.5	8.8	5.8	17.7	9.1	4.2	85.5	16.7	351.2	98.7	50.7	7.3	11.3	11.4	44.1	12.4	
1920	113.1	16.5	7.6	4.6	15.3	12.5	8.8	83.4	16.1	364.9	207.3	53.7	7.1	10.3	11.8	47.9	10.2	
1919	125.6	16.2	9.2	2.8	14.9	5.6	3.9	81.0	15.0	348.6	223.0	55.2	7.9	9.3	11.3	50.5	11.5	
1918	149.8	18.7	12.3	3.1	14.0	17.0	10.8	80.8	16.1	387.0	588.5	72.2	9.6	9.3	12.7	59.5	12.3	
1917	143.5	19.1	13.3	3.5	15.6	10.5	14.1	80.8	16.9	396.4	164.5	75.2	10.9	8.6	14.8	62.6	13.0	
1916	138.4	18.6	13.2	3.1	13.9	10.5	11.4	81.0	16.9	389.4	163.3	75.5	11.8	7.1	15.1	59.4	13.7	
1915	140.1	17.7	11.8	3.6	15.2	8.2	5.2	80.7	17.6	383.5	145.9	67.5	12.1	5.8	14.8	52.9	16.2	
1914	141.7	16.7	14.7	6.6	17.2	10.2	6.8	78.7	16.2	374.5	132.4	75.1	12.5	4.2	15.0	57.5	16.1	
1913	143.5	16.2	17.5	7.7	18.1	10.1	12.8	78.5	15.4	370.6	140.8	86.7	12.9	3.8	15.4	64.5	15.4	
1912	145.4	15.1	16.1	6.0	17.6	9.2	7.2	77.0	15.1	375.7	138.4	79.6	13.1	2.8	15.4	62.6	15.6	
1911	155.1	15.3	20.1	8.6	18.4	11.0	9.9	74.2	15.1	366.5	145.4	86.8	13.6	2.1	15.0	66.5	16.0	
1910	153.8	13.5	22.5	11.4	21.1	11.6	12.4	76.2	15.3	371.9	155.9	115.4	13.3	1.8	15.4	67.0	15.3	
1909	156.3	12.9	20.2	11.1	19.9	10.0	10.0	74.0	14.1	362.0	148.1	101.8	13.4	1.2	15.4	77.5	16.0	
1908	162.1	12.4	23.4	12.4	21.9	10.7	10.6	71.5	13.8	356.7	150.9	112.5	13.5	0.8	15.4	82.1	16.8	
1907	174.2	12.4	28.2	9.3	24.2	11.3	9.6	71.4	14.2	389.8	180.0	115.0	14.8	0.7	15.4	94.1	14.5	
1906	175.8	14.1	30.9	7.3	26.3	16.1	12.9	69.3	13.4	364.3	156.3	123.6	14.1	0.4	15.4	94.0	12.8	
1905	179.9	13.8	22.4	6.8	23.5	8.9	7.4	73.4	14.1	384.0	169.3	118.4	14.0	0.4	15.4	81.3	13.5	
1904	188.1	13.9	23.9	11.6	29.3	5.8	11.3	71.5	14.2	388.8	192.1	111.5	13.9	0.4	15.4	85.4	12.2	
1903	177.2	13.2	24.6	12.3	31.1	14.3	8.8	70.0	12.7	364.4	169.3	100.3	13.5	0.4	15.4	81.4	11.3	
1902	174.2	12.9	25.4	11.9	29.9	12.4	9.3	66.3	11.7	349.8	161.3	104.9	13.0	0.4	15.4	72.5	10.3	
1901	189.9	12.5	27.6	13.6	33.5	8.7	7.4	66.4	11.6	347.7	197.2	118.5	13.1	0.4	15.4	83.8	10.4	

per cap income
\$ 24,231 - 96

100 Death
per 1000

RESEARCH TASKS

No one may leave until all of these are completed

1. GDP - 1900, 1998

96 = 17.6 Tr

1900

HS deg.

94,883

Collg

27,410

2. Ranked cause of death - 1900, 1998

1996

2,572,000

1,145,000

3. # of children who died in childbirth of childhood - 1900, 1998

4. Names of diseases big then, nonexistent now -- probably same as #2

5. Poverty rates - 1900, 1998 - might be difficult, good luck

6. % of Americans who went to college - 1900, 1998 OR degrees granted 1990 ONLY

7. % of Americans who graduated high school - 1900, 1998

1995 grads = 2,274,000

8. How long did it take to travel from NY to SF 1900

9. GDP per manhour - 1998

calculate Tom = 13.50 in '96

10. Output per manhour, 1990 or 1998 INDEXED - 1900, 1998

11. U.S. Govt. Expenditures - 1998

12. Occupations by % - 1998

13. Energy sources - 1998

14. International trade (IM make ?% of GNP, EX ?) - 1998

1996 ex = 624 million; 1m = 291,364 M

15. # flights - Jeff's research, Arkansas airport opening - obviously 1900 # is 0

16. Miles of RR - 1998

17. Miles of Road - 1998

18. Total US car production - 1998

4.15 M

19. % of 18-21-yr. Olds in college - 1998

518142
1425754
2210012
4153963
Digent of higher ed.

20. # Baccalaureate degrees granted - 1998

21. Telephones, # of users - 1998

Govt employees Federal = 2.9M
All govt = 6.7M

~~22. % of women working - 1900, 1998~~

~~23. # of daily newspapers - 1900, 1998~~

~~24. # doctors, # hospitals - 1900, 1998~~

¹⁹⁹⁶
→ 61,857,000

$$\frac{\text{employed}}{\text{women of age}} = \frac{58,501,000}{104,385,000}$$

YSL

[4CALL # HC59 .U4.[4
[4AUTHOR United Nations Development Programme.[4
[4TITLE Human development report.[4
[4PUB INFO New York : Published for the United Nations Development Programm
[4 by Oxford University Press, 1990-[4
[4DESCRIPT v. ; 28 cm.[4
[4FREQUENCY Annual.[4
[4PUB DATE 1990-[4
[4SUBJECT Human capital.[4
[4 Economic development -- Social aspects.[4
[4LIB. HAS NEOB.[4
[4 OEOB.[4
[41 > HC59 .U4 OEOB[4
[4 LIB. HAS: Current year + 4 years[4
[4 Latest received: [4 1995 [4
[42 > HC59 .U4 NEOB[4
[4 LIB. HAS: Current year[4
[4 Latest received: [4 1998 [4

TRANSPORTATION

Cars, total US production

1908: 63,500

1998 -

→ figures (Jeff's research)

Miles of RR - 1998

Miles of road - 1998

MISCELLANEOUS

In 1900:

- in New Haven, Connecticut, a restaurant pioneers the hamburger
- US Postal Serv. issues 1st book of stamps
- Paper clip is patented
- Gasoline sold in drug stores by quart in bottles
- Average American factory has about 24 employees

TRANSPORTATION

- COMBINE

Miles of surface roads

1900: 129,000 miles

Railroads

1900: 193,000 miles

HEALTH

Deaths per 100,000 population, 1900

TB - 194.4 (1963 - 4.9)
Diphtheria - 40.3
Whooping cough - 12.2
Measles - 13.3
Influenza and pneumonia - 202.2

“Before 1880 we knew nothing; after 1890 we knew it all; it was glorious ten years.”
- William Segewick, bacteriologist

[Columbia, David Rosner, pg. 487]

NYC, Infant death rate per 1,000 births

1890 - 144
1990 - 9 NATIONALLY

Life Expectancy

1900: 47.3 years

75.7 yrs.

“Between 1950 and 1990, there were profound changes in mortality and fertility, and by considering them, one can best understand the momentous demographic transformation of this period. Between 1950-1955 and 1965-1970, the world's birth declined slightly, from 38 to 34 birth for every 1,000 people, while the death rate decreased noticeably from 20 to 13 -- thus explaining the acceleration of population growth. However, in the next twenty years, this growth slowed down, as a result of the greater decline in birth rates (34 to 27) than in death rates (13 to 10).” -- Sabagh in Columbia History, pg. 546.

Black woman's life expectancy

1900 - 34 yrs.
1940 - 56
1980 - 74

EDUCATION

Black Women, Literacy

1900 - 40 %

1980 - virtually all

Compulsory school attendance

1900 - 32/45 states

% of 18-21 year olds in college

1900 - < 5%

— 1998

Baccalaureate degrees granted

1900 - 28,000 (c. 18 per 1,000 23 yr. olds)

— 1998

Avg. Days in school terms

145 days in public elementary and secondary schools

TECHNOLOGY

Telephones

1892 - 240,000 telephones for 70 million citizens

Private phones cost approximately \$250 per year

Public pay phones cost 15 cents -- quite a bit for "back in the day"

1907 - 6 million phone users

1998

High technology

"Already, in the 1910s, following the development of long-distance wire transmission of sound, high-energy, high-frequency transmitters had pioneered wireless telegraphy and the radio. The late 1920s brought the first wireless transmission of visual images, and soon the age of the television -- direct sound and visual communication from all over the earth -- dawned, adding to books, newspapers, photographs, and moving pictures an immediate visual and auditory experience, and an intimate -- though highly controlled, selective, and unidirectional -- view of contemporary events and theatrical entertainment. By these means, the group of human activities dependent on words, pictures and messages -- education, entertainment, politics, commerce, i.e., the "service" industries -- joined farming, mining, transportation and manufacture in waiting for the deployment of "high tech."

- William Parker

[Columbia, pg. 266]

Science

"The twentieth century inherited from the nineteenth both the structures of acquired knowledge and the social forms and institutions by which that knowledge could be preserved, reproduced, and extended in the minds, thought patterns, and skills of succeeding generations of scientists, engineers, and industrial workers. Its industrial history may begin then with science, and more specifically with three sciences -- loose associations of organized thought and observation -- that had been moving toward maturity and coalescence from the late seventeenth century. By 1900 they were called physics, chemistry, and biology. Over the following sixty years, they were tumbled together like ice cubes in a shakers, melted down, and fused to one another. Something called science probed into the molecules of the elements that combined them, penetrating at last, in the 1930s and 1940s, under the hot lamps of wartime desperation, into the nuclei of the atoms, and by an incomparable engineering achievement confirmed the equations of the physicists in an explosive release of atomic energy, the harbinger of its risky harnessing for peaceful purposes."

- William Parker

[Columbia History of the 20th C., pg. 264]

Inventors

"With an inventive career extending into the twentieth century, Thomas Edison embodied the transition from the "great individualists" to the large-scale R&D laboratories, which he helped to establish. He made a host of inventions and took out more patents (1,093) than any other single individual in patenting history, but this was due, in part, to his setting up large contract research laboratories, first in Newark, new Jersey and later in Menlo Park, California. Among Edison's staff at these laboratories were some of the outstanding engineers and scientists who later helped

to build up corporate in-house R&D in Germany and in Britain, as well as in the United States.

By the first decade of the twentieth century, although Edison was still making inventions, the focus of inventive effort was shifting from the contract laboratory typified by Menlo Park, Nicol Tesla's laboratories, or that of Edward Weston to the in-house industrial laboratories established by such firms as Kodak (1895), General Electric (1900), or Du Pont (1902)."

- Christopher Freeman

[*Columbia History*, pg. 315]

"By 1914 it was clear that electricity had brought with it (as a result of numerous applications and innovations) a newfound flexibility in most industrial processes, together with far better working conditions."

- Christopher Freeman

[*Ibid.*, pg. 329]

BENCHMARKS

Culture

1872	Yellowstone Park est.
1878	Phonograph (Edison)
1888	George Eastman introduces roll film
1890	Yosemite
1896	Modern Olympics
1905	First nickelodeon theatre in Pittsburgh
1908	Grand Canyon set aside
1912	Picasso's synthetic cubism
1921	Mies van der Rohe's all-glass skyscraper
1922	Commercial radio broadcasting
1927	Talking films - "The Jazz Singer"?
1935	Color slide films
1940s	Jackson Pollock's action painting
1942	Color prints
1947	Polaroid Land instant photo camera
1950s	Francis Bacon's grotesquely distorted men paintings
1956-58	Seagram building in New York
1973	Hancock Tower in Boston

Equal rights

1896	<i>Plessy v. Ferguson</i>
1898	International Council of Women meets in London
by 1914	Over 1,000 suffragists had gone to prison
1925	A. Philip Randolph elected President of the Brotherhood of Sleeping Car Attendants
1954	<i>Brown v. Board of Ed.</i>
1963	Betty Friedan's <u>The Feminine Mystique</u>
1964	Civil Rights Act includes "sex"
1966	NOW organized

Technology, science, medicine

1876	Telephone
1882	Robert Koch's discovery of <i>Mycobacterium tuberculosis</i> -- rise of bacteriology
1885	AT&T formed as American Bell Company long-distance arm
mid-1880s	Louis Pasteur vaccine against rabies
1890	Antitoxin for diphtheria
1896	French discovery of radioactivity
1902	Rediscovery of Mendelian biology (Mendel 1822-1884) - est. Mathematical formulas predicting characteristics of organisms
1905	Relativity - motion @ constant velocity
1916	Einstein's general theory - throws in gravity, acceleration
1927	AT&T regular service NY to London, \$75/3 minute call

by 1931	50,020 miles of crude-carrying trunk pipelines
1939	Fission, fusion discovered
1946	ENIAC - 18,000 vacuum tubes and weighing 30 tons
1970	1st Earth Day
1973	Endangered Species Act
1977	Clean Air and Clear Water Acts
1977	Trans Alaska Pipeline System opened - \$7.7 billion cost

Transportation

12/17/1903	Kitty Hawk
1914	1st scheduled airline -- St. Petersburg-Tampa
1918	US Mail by airplane

END OF THE WORLD

“My figures coincide in setting 1950 as the year that the world must go smash.”

- Henry Adams

[*Time*, Oct. 15, 1992, pg. 90 (*Lexus copy*), Tab 1]

- A futurist in the 1890s predicted with scientific logic that New York City would be abandoned as unfit for habitation by the 1930s.

[*Joseph Hankin, speech, October 15, 1997, pg. 3 (Lexus), Tab 4*]

GOVERNMENT AND POLITICS

“In a few years, I believe many men who are now rather aimless, men who have disconsolately watched the collapse of the old Liberalism, will be clearly telling themselves and one another of their adhesion to this new ideal” -- *the ideal of a new economy intelligently organized and governed for the benefit of the many not the few.*

- H.G. Wells (italic comments Alan Brinkley)

[*Paper by Alan Brinkley, pg. 12, Tab 2*]

“There is a question as old as history itself, always disputed, never settled ... Is government by the people possible? ... And shall it prevail? ... Would that in the year 1999 or 2000 one could come back to earth, in order to hear the answer. May it be favorable to democracy. And may it be final!”

- Walter Besant

[*Ibid., pg. 12, Tab 2*]

“My contention is that the ideal government of the future will be a complex one -- that it will be plastic and will not have one rule applicable to all races.”

- David Goodman Croly, 1888

[*Ibid., pg. 13, Tab 2*]

“A simple and poor society can exist as a democracy on the bases of sheer individualism. But a rich and complex society cannot so exist.”

- Theodore Roosevelt

[*Ibid., pg. 14, Tab 2*]

“If I could only be President and Congress too for just ten minutes.”

- Theodore Roosevelt

[*Quotes, Tab 3*]

“Public rights come first ... private interests second.”

- Theodore Roosevelt

[*Quotes, Tab 3*]

“The government will grow more complex.”

- Ignatius Donnelly

[*“More Complex Political and Social Reform,” pg. 190, Tab 14*]

On two party governance --

“The friction between these two parties will be conducive to the national health. Sometimes the pendulum will swing one way and sometimes the other. But, in the long run, the average representing the extreme view in neither party will dominate the destinies of the nation.”

- Chauncey Mitchell Depew, U.S. Senator, 1893

[*“Two-Party System Remains Invigorating,” pg. 85, Tab 7*]

On *laissez-faire*

“The government will grow more complex perhaps in its details as increased numbers, greater area, and larger interests require more machinery -- but it will grow more simple in purpose. Instead of seeking to perform the work of the individual, it will content itself with “restraining men from injuring one another.” It will “leave them otherwise free to carry on their own pursuits of industry and improvement,” so far as they do not interfere with the equal rights of others.”

- William Jennings Bryan

[“*Government Nearer to the People*,” pg. 195, Tab 9]

Constitution

“Little indeed was the popular mind prepared for the extraordinary developments and the remarkable series of events that brought about in 1999 the creation of the United States of the Americas. In that memorable year all of the independent republics of Central and South America had joined our union and were governed under the great Constitution of 1776, which is and always will be, the most inspiring document that ever issued from the pen of man, one that will continue to bless mankind as long as the sun retains its power and the earth gives forth its fruits.”

- Bellamy, Looking Forward

[“*Looking Backward*,” pp. 11-12, Tab 5]

Patriotism

“As ‘new occasions teach new duties,’ this new peril demands a new patriotism -- not new in spirit, but in manifestation; one which is civil rather than military; one which devotes itself to the principle actually endangered; not a patriotism which constructs fortifications and builds navies, but one which purifies politics and substitutes statesmen for demagogues; not one which “rallies round the flag,” so much as one which rallies round the ballot-box; not one which charges into the deadly breach, but one which smashes the “machine”; not one which offers itself to die for the country, but one that is willing to live for it, which is as much more heroic as it is more difficult.”

- ?

[“*The Twentieth Century City*,” pg. 109, Tab 12]

THANKING THOSE BEFORE US

“But we have faith that we shall not prove false to the memories of the men of the mighty past. They did their work, and they left us the splendid heritage we now enjoy. We in our turn have an assured confidence that we shall be able to leave this heritage unwasted and enlarged to our children and our children’s children. To do so we must show, not merely in great crises, but in the everyday affairs of life, the qualities of practical intelligence, of courage, of men, of hardihood, and endurance, and above all the power of devotion to a lofty ideal, which made great the men who founded this Republic in the days of Washington, which made great the men who preserved this Republic in the days of Abraham Lincoln.”

- Theodore Roosevelt

[*Inaugural Address, March 4, 1905, Tab 3*]

INNOVATION

“Everything that can be invented already has been.”

- Charles Duell, Director, U.S. Patent Office, 1899

[*Joseph Hankin, speech, 10/15/97, pg. 3 (Lexus), Tab 4*]

“The chief discoveries will consist in producing fire out of water, silver out of clay, strong and permanent buildings out of paper, a locomotive force out of gravity, diamonds out of charcoal...”

- Van Buren Denslow

[*“Society Governed By Economic Laws,” pg. 82, Tab 11*]

“If the advent of cheap gs should enable us to utilize sixty per cent of that power instead of fifteen, it would put whip and spur to material development.”

- ?

[*“The Twentieth Century City,” pg. 155, Tab 12*]

Biotech

“It gives me much satisfaction to predict that a marked change will take place in the science of medicine. By 1993 doctors will prescribe no more than one-third of the drugs they now think necessary. The true relation of the muscular to the organic system, and their combined influence on the nervous system, will become more fully and generally understood. The combined action of the patient’s mind and muscles will be depended on instead of drugs to prevent, allay, and cure disease.”

- Edwin Checkley

[*“Marked Changes in Medicine, Theology, Education,” pg. 173, Tab 16*]

GENERAL

“In today, already walks tomorrow.”

- Samuel Coleridge (British poet)

[*Joseph Hankin, speech, 10/15/97, pg. 3 (Lexus), Tab 4*]

“For students 18 to 21 years of age, who maybe in our classrooms this coming Fall, half of the nations on Earth did not exist in their present form when they were born.”

- Joseph Hankin

[*Ibid., Tab 4*]

“We stand on the threshold of a new Century, a century big with fate of the great nations of the earth. It rests with us to decide whether in the opening years of that century we shall march forward to fresh triumphs, or whether at the outset we shall deliberately cripple ourselves for the contest.”

- Theodore Roosevelt

[*Nomination of McKinley, 6/1900, Tab 3*]

“Yet there are others whose review of that pilgrimage convinces them that though the ascent of man may be slow it is also sure; that if we compare each age with those which preceded it we find that the ground which seems for a time to have been lost is ultimately recovered, we see human nature growing gradually more refined, institutions better fitted to secure justice, the opportunities and capacities for happiness larger and more varied, so that the error of those who formed ideals never yet attained lay only in their forgetting how much time and effort and patience under repeated disappointment must go to that attainment.”

- James Bryce

[*Social Institutions, pg. 718, Tab 12*]

“Further, it is my hope, by 1993:

Government

- That politics will be understood to mean the science of pure and just government, and not the mere means of enriching base, unprincipled, incompetent, and corrupt men.

Crime

- That it will be possible for women to walk from house to house, in city or country, in safety; that girls may go to church or to school, or even take a harmless walk in the fields or woods, without danger of being waylaid and murdered by their “natural protectors.”

- That the persons who chance to witness a crime will not conceal and hush it up through fear of being put in jail at witnesses, while the culprit goes free on bail.

Economic

- That the worth of human beings will not be reckoned by their banks accounts.

Biotech

- That this country will cease to be the cesspool into which are drained the disease, criminality, and pauperism of all Europe ...

Constitution

- That all mature, rational, intelligent, and law-abiding persons will have an equal voice

in forming and administering the laws which they must obey.

Business

- The conscientious industry will win competence and comfort.

Biotech

- That health will be contagious, instead of disease.”

- ?

[“?”, pg. 100, *Tab 17*]

Arts

“Turning the calendar back to 1898, critic W.J. Henderson sang the same melody in The New York Times Illustrated Magazine:

First of all abolish the music halls in which the vulgar tunes set to still more vulgar words provide the musical milk upon which the young of the masses are reared. Abolish the diabolical street pianos and hand organs which disseminate their vile tunes in all directions and which reduce the musical taste of the children in the residence streets to the level of that of the Australian bushman, who thinks noise and rhythm are music

St. Augustine said pretty much the same thing in the fifth century A.D. in his treatise *De Musica*. Elevated disgust with popular taste is constant; only the music changes.”

- Richard W. Bulliet

[*Columbia History of the 20th Century*, pg. 31]

ECONOMIC

- Bellamy predicts the elimination of private property, but doesn't see a welfare state -- instead "work is expected in the same way that good manners are. Freeloading is condemned by an enlightened society and punished by solitary confinement. Even the few insane and disabled want to do their part."

[*Intro to Looking Backward*, pp. 14-16, Tab 5]

"Society will be governed more by economic laws and less by judge-made and legislative law."

- Van Buren Denslow

[*"Society Governed by Economic Laws,"* pg. 80, Tab 11]

The New South

"In 1993 millions of dwelling houses will be artificially cooled in summer, as they are now heated in winter."

- Felix L. Oswald

[*"National Population Under 300 Million,"* pg. 66, Tab 12]

Equality of opportunity

"Mechanical power, on the other hand, can be indefinitely increased without any increase of population. With its advent, therefore, came the possibility of general comfort and the ultimate possibility of universal wealth. This possibility has awakened hope, and men begin to believe that no class has been doomed to perpetual want and ignorance. Suffering is no longer deemed necessary, but rather abnormal, and social reformers feel bound to find and remove its causes."

- ?

[*"The Twentieth Century City,"* pg. 120, Tab 13]

Global - NAFTA

"There will be free trade throughout the North American continent and possibly free trade with all the world."

- Asa C. Matthews

[*"The United States of the Americas,"* Pg. 50, Tab 15]

THE PRESIDENCY

“I think the President of the United States will have much less work on his hands than he has now -- though the country will be twice as great and the government correspondingly larger. For long before that time Presidents will cease to give personal consideration to a myriad of matters which now consume their time and their energies. The President of the future will not, in my opinion, pay any attention to minor appointments.”

- Elijah Halford, personal secretary to
President Harrison

[*Essay, pg. 62, Tab 6*]

“In the Executive Mansion of 100 years hence, I think I can see the present building as the central part. There is no doubt that this building will soon have to be enlarged. There is not room enough in it for the family, for the office of the President, and for the social entertainments or public levees which tradition requires the President to give. But I do not think the people will ever consent to the destruction of this house. Too many memories cling about it; too many of the great men and great events of the country’s history have been associated with it.”

- Elijah Halford, personal secretary to
President Harrison

[*Ibid., pg. 62, Tab 6*]

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IMMIGRATION

“How well [Washington, Jefferson, etc.] built is told by the millions who came and are still coming. Our first national census in 1790 produced as recorded population just under 4 million. Three-fourths of them traced their ancestry to the British Isles, though most had considered themselves American for several generations. There was already talk about further immigration, proposing it should be selective and restrictive, but this was swept aside by the greatest mass movement of people in all human history.”

- Gerald Ford, 7/5/74

[*Ford, 7/5/74, Public Papers, item 649, Tab 8*]

“Immigrants came from almost everywhere, singly and in waves. Throughout our first century they brought the restless drive for better lives and rugged strength that cleared the wilderness, plowed the prairie, tamed the western plains, pushing into the Pacific and to Alaska. Like the Mayflower Pilgrims and the early Spanish settlers, these new Americans brought with them precious relics of the worlds they left behind -- a song, a story, a dance, a tool, a seed, a recipe, the name of a place, the rules of a game, a trick of the trade.”

- Gerald Ford

[*Ibid., Tab 8*]

TRANSPORTATION

Postal/Communications

“For letters there will be a postal telegraph, cheap and in almost universal use. There will also be electrical post lines, carrying mail matter across the continent at a speed of 200 or 300 miles an hour. Morning newspapers in all the large cities will be delivered at the breakfast tables of their readers by this means, within a radius of 500 miles of the office of publication.”

- Walter Wellman

[*“Revolutionary Improvements In Transportation,”* pg. 205, Tab 10]

Airplane

“Aerial navigation will come within the next century. It may not become universal or largely commercial, but it will be used for special travel, for exploration or for pleasure. It will be accomplished not by balloons -- since a balloon that floats in the air cannot be steered at will. Rather, it will be realized by the aeroplanes in combination with stored electric energy, operating through engines of marvelous power and lightness. Within 25 years, aerial navigation will solve the mysteries of the North Pole and the frozen ocean.”

- Walter Wellman

[*Ibid.,* pg. 205, Tab 10]

Urban Transportation

“The most important improvement in the means of travel -- the one that will work greatest good to mankind -- will be in metropolitan rapid transit ... The solution of the problem, in my opinion, will be found not in underground railways -- which are never likely to become popular in America. Rather, it will be found in elevated electric railways, enclosed with glass.”

- Walter Wellman

[*Ibid.,* pg. 206, Tab 10]

Table 22. Population of the 100 Largest Urban Places: 1990

Source: U.S. Bureau of the Census
 Internet Release date: June 15, 1998

Rank	Place	Population	Land area (sq. miles)	Density (average population per sq. mile)
1	New York city, NY *.....	7,322,564	308.9	23,705
2	Los Angeles city, CA.....	3,485,398	469.3	7,427
3	Chicago city, IL.....	2,783,726	227.2	12,252
4	Houston city, TX.....	1,630,553	539.9	3,020
5	Philadelphia city, PA....	1,585,577	135.1	11,736
6	San Diego city, CA *.....	1,110,549	324.0	3,428
7	Detroit city, MI.....	1,027,974	138.7	7,411
8	Dallas city, TX.....	1,006,877	342.4	2,941
9	Phoenix city, AZ *.....	983,403	419.9	2,342
10	San Antonio city, TX.....	935,933	333.0	2,811
11	San Jose city, CA.....	782,248	171.3	4,567
12	Baltimore city, MD.....	736,014	80.8	9,109
13	Indianapolis city, IN *..	731,327	361.7	2,022
14	San Francisco city, CA...	723,959	46.7	15,502
15	Jacksonville city, FL *..	635,230	758.7	837
16	Columbus city, OH.....	632,910	190.9	3,315
17	Milwaukee city, WI.....	628,088	96.1	6,536
18	Memphis city, TN *.....	610,337	256.0	2,384
19	Washington city, DC.....	606,900	61.4	9,884
20	Boston city, MA.....	574,283	48.4	11,865
21	Seattle city, WA.....	516,259	83.9	6,153
22	El Paso city, TX *.....	515,342	245.4	2,100
23	Cleveland city, OH.....	505,616	77.0	6,566
24	New Orleans city, LA *...	496,938	180.6	2,752
25	Nashville-Davidson, TN *	488,374	473.3	1,032
26	Denver city, CO *.....	467,610	153.3	3,050
27	Austin city, TX.....	465,622	217.8	2,138
28	Fort Worth city, TX *....	447,619	281.1	1,592
29	Oklahoma City city, OK *	444,719	608.2	731
30	Portland city, OR.....	437,319	124.7	3,507
31	Kansas City city, MO *...	435,146	311.5	1,397
32	Long Beach city, CA.....	429,433	50.0	8,589
33	Tucson city, AZ *.....	405,390	156.3	2,594
34	St. Louis city, MO.....	396,685	61.9	6,408
35	Charlotte city, NC.....	395,934	174.3	2,272
36	Atlanta city, GA.....	394,017	131.8	2,990
37	Virginia Beach city, VA *	393,069	248.3	1,583
38	Albuquerque city, NM.....	384,736	132.2	2,910
39	Oakland city, CA.....	372,242	56.1	6,635
40	Pittsburgh city, PA.....	369,879	55.6	6,653
41	Sacramento city, CA.....	369,365	96.3	3,836
42	Minneapolis city, MN.....	368,383	54.9	6,710
43	Tulsa city, OK.....	367,302	183.5	2,002
44	Honolulu CDP, HI *.....	365,272	82.8	4,411
45	Cincinnati city, OH.....	364,040	77.2	4,716
46	Miami city, FL.....	358,548	35.6	10,072
47	Fresno city, CA.....	354,202	99.1	3,574
48	Omaha city, NE.....	335,795	100.6	3,338
49	Toledo city, OH.....	332,943	80.6	4,131

50	Buffalo city, NY.....	328,123	40.6	8,082
51	Wichita city, KS.....	304,011	115.1	2,641
52	Santa Ana city, CA.....	293,742	27.1	10,839
53	Mesa city, AZ.....	288,091	108.6	2,653
54	Colorado Springs city, CO	281,140	183.2	1,535
55	Tampa city, FL.....	280,015	108.7	2,576
56	Newark city, NJ.....	275,221	23.8	11,564
57	St. Paul city, MN.....	272,235	52.8	5,156
58	Louisville city, KY.....	269,063	62.1	4,333
59	Anaheim city, CA.....	266,406	44.3	6,014
60	Birmingham city, AL *....	265,968	148.5	1,791
61	Arlington city, TX.....	261,721	93.0	2,814
62	Norfolk city, VA.....	261,229	53.8	4,856
63	Las Vegas city, NV *....	258,295	83.3	3,101
64	Corpus Christi city, TX..	257,453	135.0	1,907
65	St. Petersburg city, FL..	238,629	59.2	4,031
66	Rochester city, NY.....	231,636	35.8	6,470
67	Jersey City city, NJ.....	228,537	14.9	15,338
68	Riverside city, CA.....	226,505	77.7	2,915
69	Anchorage city, AK *....	226,338	1,697.6	133
70	Lexington-Fayette, KY *..	225,366	284.5	792
71	Akron city, OH.....	223,019	62.2	3,586
72	Aurora city, CO *.....	222,103	132.5	1,676
73	Baton Rouge city, LA.....	219,531	73.9	2,971
74	Stockton city, CA.....	210,943	52.6	4,010
75	Raleigh city, NC.....	207,951	88.1	2,360
76	Richmond city, VA.....	203,056	60.1	3,379
77	Shreveport city, LA.....	198,525	98.6	2,013
78	Jackson city, MS.....	196,637	109.0	1,804
79	Mobile city, AL.....	196,278	118.0	1,663
80	Des Moines city, IA.....	193,187	75.3	2,566
81	Lincoln city, NE.....	191,972	63.3	3,033
82	Madison city, WI.....	191,262	57.8	3,309
83	Grand Rapids city, MI....	189,126	44.3	4,269
84	Yonkers city, NY.....	188,082	18.1	10,391
85	Hialeah city, FL.....	188,004	19.2	9,792
86	Montgomery city, AL.....	187,106	135.0	1,386
87	Lubbock city, TX.....	186,206	104.1	1,789
88	Greensboro city, NC.....	183,521	79.8	2,300
89	Dayton city, OH.....	182,044	55.0	3,310
90	Huntington Beach city, CA	181,519	26.4	6,876
91	Garland city, TX.....	180,650	57.3	3,153
92	Glendale city, CA.....	180,038	30.6	5,884
93	Columbus city, GA *.....	178,681	216.1	827
94	Spokane city, WA.....	177,196	55.9	3,170
95	Tacoma city, WA.....	176,664	48.0	3,681
96	Little Rock city, AR.....	175,795	102.9	1,708
97	Bakersfield city, CA *...	174,820	91.8	1,904
98	Fremont city, CA *.....	173,339	77.0	2,251
99	Fort Wayne city, IN.....	173,072	62.7	2,760
100	Arlington CDP, VA *.....	170,936	25.9	6,600

*See Notes for Individual Places.

Table 12. Population of the 100 Largest Urban Places: 1890

Source: U.S. Bureau of the Census
 Internet Release date: June 15, 1998

Rank	Place	Population	Rank	Place
1	New York city, NY *	1,515,301	51	Lynn city, MA.....
2	Chicago city, IL.....	1,099,850	52	Lincoln city, NE....
3	Philadelphia city, PA.....	1,046,964	53	Charleston city, SC.
4	Brooklyn city, NY *	806,343	54	Hartford city, CT...
5	St. Louis city, MO.....	451,770	55	St. Joseph city, MO.
6	Boston city, MA.....	448,477	56	Evansville city, IN.
7	Baltimore city, MD.....	434,439	57	Los Angeles city, CA
8	San Francisco city, CA.....	298,997	58	Des Moines city, IA.
9	Cincinnati city, OH.....	296,908	59	Bridgeport city, CT.
10	Cleveland city, OH.....	261,353	60	Oakland city, CA....
11	Buffalo city, NY.....	255,664	61	Portland city, OR...
12	New Orleans city, LA.....	242,039	62	Saginaw city, MI....
13	Pittsburgh city, PA *	238,617	63	Salt Lake City city,
14	Washington city, DC *	230,392	64	Lawrence city, MA...
15	Detroit city, MI.....	205,876	65	Springfield city, MA
16	Milwaukee city, WI.....	204,468	66	Manchester city, NH.
17	Newark city, NJ.....	181,830	67	Utica city, NY.....
18	Minneapolis city, MN.....	164,738	68	Hoboken city, NJ....
19	Jersey City city, NJ.....	163,003	69	Savannah city, GA...
20	Louisville city, KY.....	161,129	70	Seattle city, WA....
21	Omaha city, NE.....	140,452	71	Peoria city, IL.....
22	Rochester city, NY.....	133,896	72	New Bedford city, MA
23	St. Paul city, MN.....	133,156	73	Erie city, PA.....
24	Kansas City city, MO.....	132,716	74	Somerville city, MA.
25	Providence city, RI.....	132,146	75	Harrisburg city, PA.
26	Denver city, CO.....	106,713	76	Kansas City city, KS
27	Indianapolis city, IN.....	105,436	77	Dallas city, TX.....
28	Allegheny city, PA *	105,287	78	Sioux City city, IA.
29	Albany city, NY.....	94,923	79	Elizabeth city, NJ..
30	Columbus city, OH.....	88,150	80	Wilkes-Barre city, P
31	Syracuse city, NY.....	88,143	81	San Antonio city, TX
32	New Haven city, CT.....	86,045	82	Covington city, KY..
33	Worcester city, MA.....	84,655	83	Portland city, ME....
34	Toledo city, OH.....	81,434	84	Tacoma city, WA.....
35	Richmond city, VA.....	81,388	85	Holyoke city, MA....
36	Paterson city, NJ.....	78,347	86	Fort Wayne city, IN.
37	Lowell city, MA.....	77,696	87	Binghamton city, NY.
38	Nashville city, TN.....	76,168	88	Norfolk city, VA....
39	Scranton city, PA.....	75,215	89	Wheeling city, WV...
40	Fall River city, MA.....	74,398	90	Augusta city, GA....
41	Cambridge city, MA.....	70,028	91	Youngstown city, OH.
42	Atlanta city, GA.....	65,533	92	Duluth city, MN.....
43	Memphis city, TN.....	64,495	93	Yonkers city, NY....
44	Wilmington city, DE.....	61,431	94	Lancaster city, PA..
45	Dayton city, OH.....	61,220	95	Springfield city, OH
46	Troy city, NY.....	60,956	96	Quincy city, IL.....
47	Grand Rapids city, MI.....	60,278	97	Mobile city, AL.....
48	Reading city, PA.....	58,661	98	Topeka city, KS.....
49	Camden city, NJ.....	58,313	99	Elmira city, NY.....
50	Trenton city, NJ.....	57,458	100	Salem city, MA.....

* See Notes for Individual Places.

PUBLIC OCCURRENCES That are Making HISTORY

The Newest Developments in the Railroads of the World

A nation is known by its transportation facilities. However abundant may be its natural resources, however great its fertility, it can not figure in the wealth of the world unless it has good railroads. That is one reason why the United States so successfully leads. According to Muthall, the British statistician, the wealth of this country exceeds that of Great Britain about thirty-five per cent, and in the survey of mankind he found nothing to compare with the United States. It is not too much to say that the lion's share of the credit belongs to the transportation chapters of our history. If the railroads are prosperous the country prospers.

There is no greater mistake than the popular idea that very low rates are a good thing. When a railroad does business below cost it does more to disorganize trade than any other malign influence, and in the end the cost to the people is larger than if the rates had been excessive. A great difficulty in the past has been to get the railroads to keep their agreements with one another. Legislation against pools was caused not so much by the fact of the pool itself, but because in almost every instance it was a scheme that was used dishonestly. Congress undertook to settle the matter by the absolute prohibition of such an arrangement. But the brilliant intellects that run railroads have undoubtedly reached some sort of working plan. They were enabled to do this mainly by the few great corporations getting control of the railroad situation of the country. One of the announcements in the increase in railroad rates. The railroads defend themselves on the score, that everything else has been going up, and that they have a right to get their share of the new prosperity. It remains to be seen whether or not the Interstate Commerce Commission will interfere.

Not for many years have there been so few receiverships as during 1899, and it is significant that the only important one came from rate-cutting. The managers of that road set out to get business whether it paid or not, and regardless of the bad effects their action might have on other properties. The consequence was that they soon reached the end of their folly, and the courts had to intervene. The rate-cutter is always the bringer of the business.

Another significant development of the year is something which the greatest prophet of a decade ago would never have foretold. It has always been a principle of our transportation writers that a ton of freight could be moved on water seven times more cheaply than on land, and this idea has prevailed in the public mind for several generations. Now the railroad people openly claim that the railroads are beating the canals, and such men as President Hill of the Great Northern and Callaway of the New York Central, have gone so far as to state that the lake-and-canal route from the Great Lakes to the Atlantic can no longer compete with the railroads—that is to say, the railroads can carry freight from Chicago to New York cheaper than it can be carried by water.

In the matter of speed the developments during the year have not been unusual. The late George H. Roberts, President of the Pennsylvania Railroad, used to say that what the railroads needed was not so much one hundred miles an hour as to make fifty miles an hour and keep it up. This is at present the settled policy of the great transportation companies.

Distributing Surplus Population
A very interesting movement is under way in Russia. The railroad across Siberia goes through an immense country practically without population, but the fact that the railroad is there has increased the value of the land from ten to a hundred fold. It has been found that various enterprises can be profitably conducted, and unquestionably the railroad needs towns and cities and settled districts to yield it an income for support. The Russians, who have awakened with rare zeal to modern conditions, have solved the dilemma by a bold policy. It is nothing more or less than transplanting people from the crowded districts of the Russian Empire to desirable places along the new railroad. In other cases the railroad went to the people; in this case the people are being taken to the railroad. The new settlers are not only being given free passes and free land, but free tools and the various necessities for beginning a new life in a new country. Russia grants all this with a generous and almost prodigal hand. Of course, when everything gets in operation the tax assessor will do the rest.

This is another way of accomplishing the results that have made this country so great and so strong. Once it was necessary for the East to send food to aid the new settlers of the West; now the West is not only helping to support the East and filling its banks, but is feeding the world.

The Trolley and Its Numerous Fallings

While the modern railroad has achieved almost perfection in its comforts and conveniences, the modern trolley distinctly falls in nearly everything in which it ought to be complete. In the first place, it costs a great deal less for operation and its percentage of profit is a great deal more. Hundreds of millions of dollars have been made simply by manipulating and combining the stocks and franchises. The Niagara of speculation has poured almost endless water into the capital on which the public must pay interest. There are literally millions of working people in the United States who give to these corporations from five to twenty per cent of their daily wage. In many cities the charges are far beyond all reason in comparison with the services rendered. When a person appreciates that he is paying more for the privilege of standing up and being trampled upon in a trolley than for riding comfortably in a modern railroad car, while the cost of the trolley is fully one-half less than that of the railroad, he will see how far the injustice goes. But, like all corporations which have become suddenly rich, and into whose pockets millions are flowing weekly, they have little concern for the public. It is only that the Americans are the most patient people on earth that these things are tolerated.

The average trolley car is in itself a cheap, inadequate thing. Nine times out of ten it is too small, and generally, even in the bleakest weather, it is unheated. There is no regard for the passengers' well-being. And yet, these same trolley cars are the largest money-makers in the country. Great is the forbearance of the American! What a lovely angel he will make!

The Future of the Automobile

But, after all, let us indulge the feeling that the present trolley system is only temporary. It is out of all reason that anything so unsatisfactory should endure the processes of progress, and we see the coming of a better day, when we may sit down and feel that we are getting the worth of our money. The era of the automobile means a revolution in city and suburban transportation. It is not a speculation or a promise, but something close at hand. When we stop to think that there are nearly a hundred manufacturing companies with a capital of almost five hundred million dollars already in the field to make automobiles we know at once that the automobile has arrived at our doors. Every day we see more of them on the streets; every day they come within the reach of the people. Then as the thoroughfares are better paved, and as the improvement which is one of the certainties of municipal growth goes on, we can look forward to the time when the track "will be removed from the streets, and when we shall glide along comfortably and cheaply on rubber-tires. The street railway magnates should not be alarmed over this, for they ought to be satisfied with the wealth which they now possess. In the meanwhile, they should remember that what the people want is not so much cheaper fares, although such a thing as an extra charge for a transfer should not exist in any American city, but better service and more comfortable accommodations. The American is seldom unreasonable. We are all willing to pay our five cents if we get a nickel's worth, but there is a feeling that we do not get it.

The Romances of Transportation
Were all the romances of literature to die, new ones could be built from the facts of transportation. The best man wins. The influence of the transportation interests upon the character of the country has been incalculable. Those who anticipated the great developments of the country, such as James J. Hill in railroad building and P. A. B. Widener in Philadelphi, have profited enormously. Though transportation has made many millions at the expense of the public, it has also made thousands of better men for the good of the public. That should be remembered.



The Going Away and Getting Back Habit

A few days ago at a Southern way-station, which was not of enough importance for a ticket-seller, a typical negro entered the train. There was upon his face the unworldly happiness which springs from a mind that cannot tell the difference between an almanac and the Constitution of his country, and that is thoroughly convinced that Abraham Lincoln is still President. Of course he has a vote, but that is another matter. In this case he had something more substantial to him than any slip of paper with a lot of names on it—a little wad of bills and some silver change which he held with a conspicuous grip.

The conductor asked: "Where do you want to go?" The ebony citizen grinned and released his hold on his fortune. Then he said: "Boss, I wanta ter go as far as dis'll take me on fetch me back ergin—all avair! a quarter ter spend when I git off." The conductor made the calculation, and all but twenty-five cents went to the soulless corporation whose business it is to take people somewhere and then take them back again. Here we have a humble manifestation of the restlessness of the human race. More or less acutely it possesses all of us. It has been the feeling almost from the beginning, and it is somewhat strange that in the episode in the Garden of Eden some one has not suggested that the first temptation may have been a round-trip excursion ticket.

Going away and getting back is the greatest fact in the daily life of the world. Whether it be a voyage around the earth, or a trip on the trolley to a bargain sale, or to the business office, it all goes to make up the wonderful movement which keeps the people constantly changing positions, and which forms in its machinery the most stupendous operation of civilization can show. It uses more money than any other department of human endeavor, and it marshals in its service armies greater than those of the nations.

Pullmans to the Pyramids and Beyond

In the same part of the country where our colored fellow-citizens took his outing one of the first railroads existed just about half a century ago. The rail was a piece of wood with an iron strip nailed along the top. Occasionally this strip would curl up and throw the engine off the track, or bob up suddenly through the bottom of the flimsy passenger coach. A distance of 140 miles was made in about thirty-three hours, and when it was announced that the schedule would be cut down to twenty-four hours the public remonstrated. Then the directors talked over a plan to put bales of cotton along the sides of the cars, so that if there were accidents the passengers would have soft landing places.

All this seems ridiculous, and it seems equally incredible that the sleeping-car is less than half a century old, and that the first vestibule train appeared in June, 1846. It was not until even later than this that the modern air-brake was generally applied. The whole record of railroading is wonderful history. Now instead of cotton bales to fall upon we have trains that are practically indestructible, cars that match kings' palaces in luxury and excel them in comfort, engines that travel faster than the wind, and schedules that are more certain than the breakfast-gongs in our own homes. In this country, which leads the world, there are already nearly two million miles of railway.

But this is only a part of the story. In other quarters of the world the work is going on. Russia is already transporting passengers most of the way over Siberia, and her railroad will soon be at the Pacific. And it will not be long before the whistle of the engine will be heard at Peking. At this time personally conducted excursions from Cairo to Khartoum are being advertised, and the traveler may sit in the Pullman enjoying all the comforts of home with the delights of Egyptian scenery. There will doubtless come a time when the line will run all the way to the Cape of Good Hope. Then after that there will be a railroad along the tablelands of the Andes throughout the length of South America. China is awakening to the necessity of railroads, and they will be built. Persia is now entertaining the Czar's scheme for a railroad through her territory to the Indian Ocean.

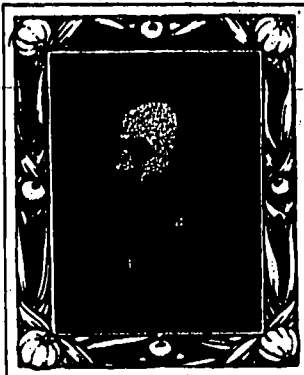


PHOTO BY H. A. SCHMIDT, ST. PAUL, MINN. Courtesy of the New York Tribune

JAMES J. HILL



PHOTO BY H. A. SCHMIDT, PHILADELPHIA

P. A. B. WIDENER

THE CIVIL-SERVICE FABLE.

We are always glad when we see an Imperialist resorting to argument, based either on the facts of history or on principles of human nature, in lieu of boastings about the greatness and glory of the United States, the readiness of the American people "to take responsibility," and the folly of the Filipinos in allowing themselves to be shot down like game sooner than submit. When driven to the wall by real Americans, and forced to concoct some theory for the benefit of those who are horrified by these massacres, Jingoism some months ago got up a very ridiculous story that, by subduing and annexing the Philippines, we should get civil-service reform, which we had found out we were unable to get at home because the wise McKinley did not think it would be good for us. Within a few days we have discovered that the fiction has effected a certain lodgment in the minds of many plain people whose consciences had been sufficiently pricked by the "duck-hunting" of "the niggers" in the Philippines, to long to be able to tell of some good thing coming for us white Protestant Christians as a result of our war. They have accordingly taken up the professorial story that, by conquering the Philippines, we shall have civil-service reform here at home, inasmuch as it was only by conquering India that the British got it in England.

This invention has been the more inexcusable because the whole story of the way in which the British got their civil-service reform has been told with great lucidity, if with some prolixity, by an American author, Mr. Dorman B. Eaton. He shows, with abundant quotation from historical and legal documents, that the reform of the civil service in England was simply one of the many reforms on which the British public entered eagerly after the reform of the franchise which admitted the middle classes to a share in the government. In fact, the passion for better administration was one which took firm hold of the British mind after the Revolution of 1688, and began to show itself with vigor and persistence after the American war. So early as 1784 it had appeared in legislation arresting the frightful corruption of the directors of the East India Company in their newly acquired Eastern possessions. They were using for the government of these possessions a horde of drunken, rascally, and broken-down relatives and dependents of their own, who were making their fortunes out of the wretched natives by every species of speculation and extortion. The English people, not the warriors, not the Hindus, not the quarrelsome "strenuous people," determined that this should cease, and that the men who left England for the government of these distant possessions, which were still owned by the East India Company, should be men of decent

character, who, when they came home as "Nabobs," should be required to show where they got the money. These possessions were then six months distant. There were no newspapers to speak of, no correspondents; and little or nothing was known of what was going on in India. But the English people determined that the directors of the Company should not be allowed to send out social rubbish, even for the government of territory of which they knew so little, and in which they had so little interest. It was an English reform, made by Englishmen, on English soil.

Reform began in England by Burke's speech on the "Economical Reformation" of the Civil and Other Establishments toward the end of the American war in 1780. The plan was pursued under Pitt until the outbreak of the French war in 1792. It was necessarily suspended during the war, but resumed in 1819. It was continued steadily until the middle classes broke into the aristocratic government circle by the Reform Bill of 1832. It was continued more vigorously than ever by the new reform Parliament. Their first work was the reform of the new municipalities, a great undertaking. We suppose some Jingo will some day maintain that this was not done till the English people had news of the reform in the Government of Seringapatam, Benares, and Delhi. Other minor reforms followed rapidly. Discontent with the condition of the civil service, as being what John Bright called at that time "a system of outdoor relief for the pauper members of the aristocracy," grew steadily. After the great reforms in the revenue system begun by Sir Robert Peel and continued by Mr. Gladstone, the reformers at last laid hold of the Government patronage in 1853.

They first reorganized the customs service. They then obtained a report on the plan of throwing open the public service to competitive examination, by two English statesmen, Sir Stafford Northcote, afterwards Lord Iddesleigh, and Mr. C. E. Trevelyan. The Government then submitted this report to forty-one Englishmen of the highest standing in the public service and in the various professions—the masters of the leading public schools, the leading professors at Oxford and Cambridge, the heads of the different departments of the public service, men eminent as writers on economical and social questions, such as John Stuart Mill and Dr. Lyon Playfair, afterwards Lord Playfair. Each of these men handed in a written comment on the report to the Government. We have been carefully through them all. Three or four doubted the practicability of the new scheme. Three or four more defended the existing system, against the attacks made on it. One only made any reference to India, namely, Sir Thomas Redington, the Permanent Secretary of

the then Indian Board of Control. What he said was that a system of reform which was adapted to England would not suit India. Accordingly, two different bills, one for India and one for England, were passed the same year, 1853. The Indian bill left large powers of arbitrary appointment to the Governors and Commissioners, as the circumstances of the country made necessary. But it provided that the Englishmen who left England to govern India, should have their capacity ascertained by tests which would send most American Jingoos to the lunatic asylum. In the same year, as we have said, the bill reforming the English civil service was passed. Both were the product of the determination of Englishmen in England to amend the English service at home and abroad, beginning in England itself. The whole story that England waited to hear from India in order to amend her own institutions, is a ridiculous Jingo invention, concocted to furnish a ridiculous excuse for McKinley's Philippine war.

Jingoism must swallow the truth, however unpalatable it may be, that the growth of great nations whose greatness is to be permanent, is endogenous. To be great, a nation has to have enough manly determination, capacity, and love of country to reform its own institutions wherever it sees reform is needed, instead of boasting and blowing and "taking responsibility," and then falling back to making money, and turning the whole matter over to the President. This is not the way to become great. England's success at home and abroad comes not from talking about reform, not from perambulating the country and blathering about "the home and the flag," but from having a good administration and being governed cautiously by her very best men. The idea that her notions of what her administration should be were wafted to her from her colonies on the other side of the globe, in the shape of "shame," resembles the plan of making children behave themselves at kindergarten by putting fool's-caps on them. As a suggestion of how a great work of government by a manly people came to be done, it simply illustrates the childish and shallow character of the Jingo mind.

DISFRANCHISING THE NEGRO.

A few years ago the State of Mississippi adopted a new constitution embracing provisions for keeping the Negro voters away from the polls. These consisted of two parts. The first was a poll-tax of two dollars per head, which was made an indispensable requirement for the suffrage. The tax might be increased to three dollars by the action of the local authorities, but it could not exceed that sum. It applied to whites and blacks alike. The second requirement was that every voter should be able to read any

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section of the Constitution of the State, or be able to understand the same when read to him, or, to give a reasonable interpretation thereof. This also was applicable to whites and blacks alike, and was held to be valid by the Supreme Court of the United States for that reason. In effect it put so many discouragements in the way of the negroes that they have not offered to vote in any large numbers since the Constitution took effect. As a general rule they do not care to pay the poll-tax, since the paying of it does not insure the right to vote, but merely brings them to the educational test which most of them would fail to pass.

Now, a bill is before the Legislature of Georgia, still more drastic in its provisions. It is known as the Hardwick bill, and it proposes an amendment of the State Constitution in these terms:

"That no person shall be a competent voter unless he shall be able to read and write any paragraph of the Constitution of this State, and he shall be able to understand any paragraph of such Constitution, and to give a reasonable interpretation thereof; provided, however, that no male person who was on January 1, 1867, or at any time prior thereto, entitled to vote under the laws of the State wherein he then resided, and no lineal descendant of such person, shall be denied the right to register or vote at any election in this State by reason of his failure to possess the educational qualifications provided for in this paragraph."

This provision differs from that of Mississippi in two ways. The latter is alternative, using the word "or" in prescribing the educational test. If the voter can read any section of the Constitution of the State, or can understand it when read to him, he is entitled to vote, provided he has paid his poll-tax. Ability to read the English language is not an unreasonable requirement for voting. It would be well if such a requirement were universal. The Georgia bill, however, makes the requirements of reading and understanding not alternative, but joint, and then puts in a third—that of giving a "reasonable interpretation" to the clauses in question.

This provision puts it in the power of the election officers, or a majority of them, to reject any vote if they say that the voter does not understand some particular clause of the State Constitution, or if his interpretation of it is not satisfactory to them. The election officers themselves may be unable to understand or rightly interpret the clause in question. Their interpretation may be entirely wrong, they may not agree among themselves as to the true interpretation, but that makes no difference as regards the voter. If a majority of them think that his interpretation of it is inadequate, he loses the right to vote. Take, for example, this clause of the United States Constitution, which is repeated in some of the State Constitutions:

"No attainer of treason shall work corruption of blood or forfeiture except during the life of the person attainted."

What is the meaning of attainder of treason? What is the meaning of corruption of blood? What is forfeiture? What is the condition, or thing, that is limited to the lifetime of the person attainted? Is it the forfeiture or the corruption of blood? Suppose that a negro offers to vote and is asked to read and write that clause of the Constitution and give a reasonable interpretation of it. Even if he were learned in English history, and had familiarized himself with the law of attainder as it existed in the seventeenth century, he would be helpless unless the election officers were equally well instructed, and unless they were honorable men and lovers of truth. His vote would be lost.

This is called an educational test by its framers, but such a character is taken from it by the second clause, which says that persons who were voters in any State on the 1st of January, 1867, and their lineal descendants, shall not be subject to this clause; that is, their votes shall not be rejected for inability to read, or write, or understand, or interpret any or all clauses of the Constitution. As all white men were voters then, and very few if any black men were, the Hardwick bill, if adopted, would amount to disfranchisement of the negroes at every place where a majority of the election officers were of the opinion that the negroes did not understand all parts of the Constitution of the State. It should be remarked that if the negro should happen to understand rightly the clause first propounded to him, the election officers can put another one before him and go through with the whole instrument before allowing him to vote.

If we can imagine an honest administration of the proposed law, it would result in making the negroes, in the course of a few years, a race of jurisconsults, while the mass of whites would be as densely ignorant of constitutional law as the plantation negroes are now. The incentive to education which the exercise of the suffrage would impel the blacks to acquire, would gradually lift them to the superior place in point of intelligence. But nobody imagines that the proposed law would be honestly administered. Everybody knows that its purpose is to enable the election officers to reject negro votes wholesale under the pretence of an educational test.

Although the bill has received the votes of a majority of the committee of the House, there is a strong minority opposed to it, and throughout the State it has evoked vigorous opposition among the whites. Among the opponents is the present Governor of the State, Allen D. Candler. Gov. Candler is in favor of leaving the suffrage as it now stands, and of promoting measures of conciliation and friendship between the two races. Booker Washington has been interviewed on the subject by the Atlanta

Constitution, a paper which seems to have no liking for the bill. He holds the South to its responsibility to render political justice to the blacks, now that its hands are free from any federal control.

The most ominous and deplorable feature of the bill is the schooling in dishonesty which it will give to the whites themselves. The ballot-stuffing processes which were invented to cheat the negroes were turned by the whites against each other, after they had served their original purpose, and it is quite certain that any form of swindling which the public are led to sanction, and with which they familiarize themselves, will return before long to plague the inventors in some unexpected way.

COURSE OF THE BOER WAR.

It is now about six weeks since hostilities began in South Africa, and we are in a position to estimate the plan of campaign, on either side, with its measure of success or failure up to date. Gen. Lord Wolseley reminded his audience the other evening that war is not a game of chess, in which the more powerful intellect wins from the very first. It is rather a "game of ups and downs," and the really weaker player may secure an advantage at the start by reason of superior position. The Boers had all their chessmen on the board at the opening, while the British had only about a third of theirs ready. Yet, from a military point of view, the British have practically won the game by the very fact of not being at once swept off the board.

That the Dutch forces planned and expected to drive the inferior English army before them, and promptly occupy the whole of Natal, is abundantly evident. Their sudden ultimatum, their swift taking of the aggressive and march over the border, were else pure folly. The mass of the Boers undoubtedly thought that they would whip the English easily. "We gave you several good thrashings there once," said a Boer officer to an English military man at Laing's Nek in 1890; "you will need another thrashing by-and-by, and we will give it to you." And an English newspaper correspondent who was in Gen. Joubert's camp at Sandpruit as late as October 12, reports that the confidence of the Boers in the certainty of their success was "unbounded."

"They never doubted for a moment that, having once crossed Laing's Nek, they would march straight down to Durban, destroying the mere handful of British in their path. As for Cape Colony, that would rise on every side to welcome them. Only a very few of the more educated among the Pretorians contemplated the possibility of defeat, and even they, after a week in the camp,"

This was not mere vain-glory. The Boers knew their own strength better than the British did. Lord Wolseley has

June 1899

Harper's Monthly Magazine

THE CENTURY'S PROGRESS IN SCIENTIFIC MEDICINE.

BY HENRY SMITH WILLIAMS, M.D.

I.

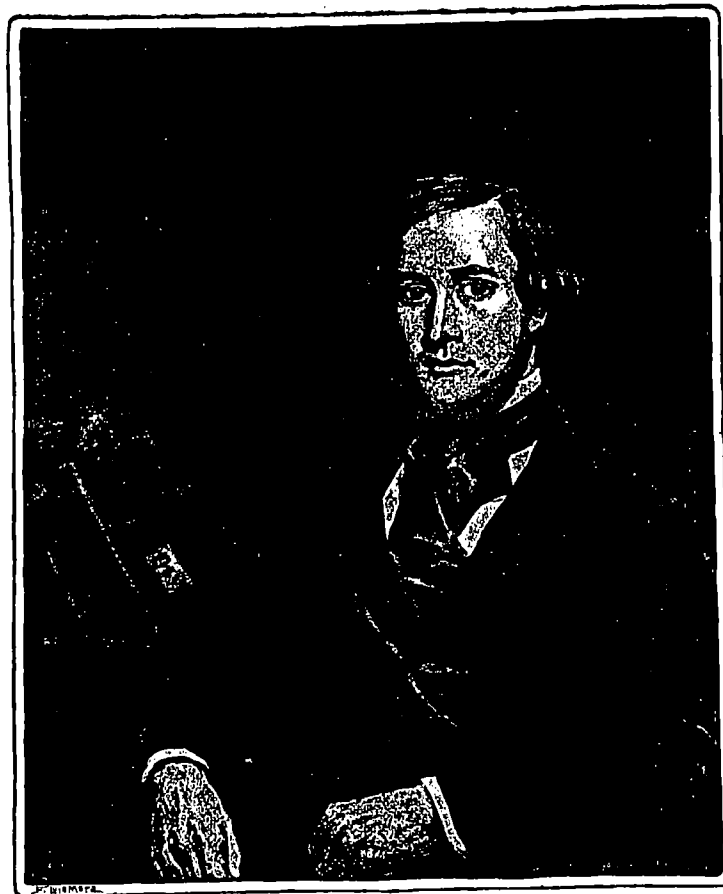
ALTHOUGH Napoleon Bonaparte, First Consul, was not lacking in self-appreciation, he probably did not realize that in selecting a physician for his own needs he was markedly influencing the progress of medical science as a whole. Yet so strangely are cause and effect adjusted in human affairs that this simple act of the First Consul had that very unexpected effect. For the man chosen was the envoy of a new method in medical practice, and the fame which came to him through being physician to the First Consul, and subsequently to the Emperor, enabled him to promulgate the method in a way otherwise impracticable. Hence the indirect but telling value to medical science of Napoleon's selection.

The physician in question was Jean Nicolas de Corvisart. His novel method was nothing more startling than the now familiar procedure of tapping the chest of a patient to elicit sounds indicative of diseased tissues within. Every one has seen this done commonly enough in our day, but at the beginning of the century Corvisart, and perhaps some of his pupils, were probably the only physicians in the world who resorted to this simple and useful procedure. Hence Napoleon's surprise when, on calling in Corvisart, after becoming somewhat dissatisfied with his other physicians, Pinel and Portal, his physical condition was interrogated in this strange manner. With characteristic shrewdness Bonaparte saw the utility of the method, and the physician who thus attempted to substitute scientific method for guess-work in the diagnosis of disease at once found favor in his eyes, and was installed as his regular medical adviser.

For fifteen years before this Corvisart had practised percussion, as the chest-tapping method is called, without succeeding in convincing the profession of its value. The method itself, it should be added, had not originated with Corvisart, nor did the French physician for a moment claim it as his own. The true

originator of the practice was the German physician Avenbrugger, who published a book about it as early as 1761. This book had even been translated into French, then the language of international communication everywhere, by Rozière de la Chassagne, of Montpellier, in 1770; but no one other than Corvisart appears to have paid any attention to either original or translation. It was far otherwise, however, when Corvisart translated Avenbrugger's work anew, with important additions of his own, in 1808. By this time a reaction had set in against the metaphysical methods in medicine that had previously been so alluring; the scientific spirit of the time was making itself felt in medical practice; and this, combined with Corvisart's fame, brought the method of percussion into immediate and well-deserved popularity. Thus was laid the foundation for the method of so-called physical diagnosis, which is one of the corner-stones of modern medicine.

The method of physical diagnosis as practised in our day was by no means completed, however, with the work of Corvisart. Percussion alone tells much less than half the story that may be elicited from the organs of the chest by proper interrogation. The remainder of the story can only be learned by applying the ear itself to the chest, directly or indirectly. Simple as this seems, no one thought of practising it for some years after Corvisart had shown the value of percussion. Then, in 1815, another Paris physician, René Théophile Hyacinthe Laënnec, discovered, almost by accident, that the sound of the heart-beat could be heard surprisingly through a cylinder of paper held to the ear and against the patient's chest. Acting on the hint thus received, Laënnec substituted a hollow cylinder of wood for the paper, and found himself provided with an instrument through which not merely heart sounds, but murmurs of the lungs in respiration, could be heard with almost startling distinctness.



WILLIAM J. MORTON.

The possibility of associating the varying chest sounds with diseased conditions of the organs within appealed to the fertile mind of Laënnec as opening new vistas in therapeutics, which he determined to enter to the fullest extent practicable. His connection with the hospitals of Paris gave him full opportunity in this direction, and his labors of the next few years served not merely to establish the value of the new method as an aid to diagnosis, but laid the foundation also for the science of morbid anatomy. In 1819 Laënnec published the results of his labors in a work called *Traité d'Auscultation Médiate*, a work which forms one of the landmarks of scientific medicine. By mediate auscultation is meant of course the interrogation of the chest with the aid of the little instrument already referred to, an instru-

ment which its originator thought hardly worth naming until various barbarous appellations were applied to it by others, after which Laënnec decided to call it the stethoscope, a name which it has ever since retained.

In subsequent years the form of the stethoscope, as usually employed, was modified, and its value augmented by a binauricular attachment; and in very recent years a further improvement has been made through application of the principle of the telephone; but the essentials of auscultation with the stethoscope were established in much detail by Laënnec, and the honor must always be his of thus taking one of the longest single steps by which practical medicine has in our century acquired the right to be considered a rational science. Laënnec's efforts cost him his life, for he died in 1826

of a lung disease acquired in the course of his hospital practice; but even before this his fame was universal, and the value of his method had been recognized all over the world. Not long after, in 1828, yet another French physician, Piorry, perfected the method of percussion by introducing the custom of tapping, not the chest directly, but the finger or a small metal or hard rubber plate held against the chest—mediate percussion, in short. This perfected the methods of physical diagnosis of diseases of the chest in all essentials; and from that day till this percussion and auscultation have held an unquestioned place in the regular armamentarium of the physician.

Coupled with the new method of physical diagnosis in the effort to substitute knowledge for guess-work came the studies of the experimental physiologists—in particular, Marshall Hall in England, and François Magendie in France; and the joint efforts of these various workers led presently to the abandonment of those severe and often irrational depletive methods—blood-letting and the like—that had previously dominated medical practice. To this end also the "statistical method," introduced by Louis and his followers, largely contributed; and by the close of the first third of our century the idea was gaining ground that the province of therapeutics is to aid nature in combating disease, and that this may often be better accomplished by simple means than by the heroic measures hitherto thought necessary. In a word, scientific empiricism was beginning to gain a hearing in medicine, as against the metaphysical preconceptions of the earlier generations.

II.

I have just adverted to the fact that Napoleon Bonaparte, as First Consul and as Emperor, was the victim of a malady which caused him to seek the advice of the most distinguished physicians of Paris. It is a little shocking to modern sensibilities to read that these physicians, except Corvisart, diagnosed the distinguished patient's malady as "gale répercutée"—that is to say, in idiomatic English, the itch "struck in." It is hardly necessary to say that no physician of to-day would make so inconsiderate a diagnosis in the case of a royal patient. If by any chance a distinguished patient were afflicted with the itch, the sagacious physician would carefully hide the fact behind circumlocutions, and proceed to eradicate the disease with all despatch. That the physicians of Napoleon did otherwise is evidence that at the beginning of the century the disease in question enjoyed a very different status. At that



RUDOLF VIRCHOW.

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time, itch, instead of being a most plebeian malady, was, so to say, a court disease. It enjoyed a circulation, in high circles and in low, that modern therapeutics has quite denied it; and the physicians of the time gave it a fictitious added importance by ascribing to its influence the existence of almost any obscure malady that came under their observation. Long after Napoleon's time, gale continued to hold this proud distinction. For example, the imaginative Dr. Hahnemann did not hesitate to affirm, as a positive maxim, that three-fourths of all the ills that flesh is heir to were in reality nothing but various forms of "gale répercutée."

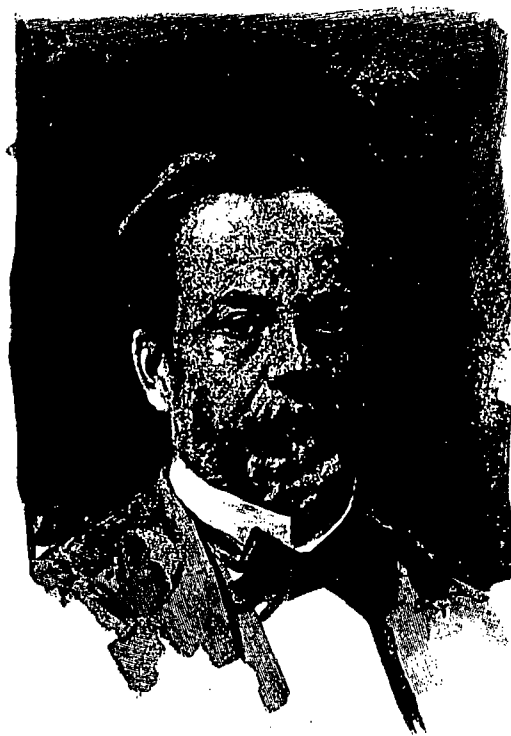
All of which goes to show how easy it may be for a masked pretender to impose

purely local disease of the skin, due to a perfectly definite cause, and the dire internal conditions formerly ascribed to it have really no causal connection with it whatever. This definite cause, as every one nowadays knows, is nothing more or less than a microscopic insect which has found lodgment on the skin, and has burrowed and made itself at home there. Kill that insect, and the disease is no more; hence it has come to be an axiom with the modern physician that the itch is one of the three or four diseases that he positively is able to cure, and that very speedily. But it was far otherwise with the physicians of the first third of our century, because to them the cause of the disease was an absolute mystery.

It is true that here and there a physician had claimed to find an insect lodged in the skin of a sufferer from itch, and two or three times the claim had been made that this was the cause of the malady, but such views were quite ignored by the general profession, and in 1833 it was stated in an authoritative medical treatise that the "cause of gale is absolutely unknown." But even at this time, as it curiously happened, there were certain ignorant laymen who had attained to a bit of medical knowledge that was withheld from the inner circles of the profession. As the peasantry of England before Jenner had known of the curative value of cow-pox over small-pox, so the peasant women of Poland had learned that the annoying skin disease from which they suffered was caused by an almost invisible insect, and, furthermore, had acquired the trick of dislodging the pestiferous little creature with the point of a needle. From them a youth of the country, F. Renucci by name, learned the open secret. He conveyed it to Paris when he went there to study medicine, and in 1834 demonstrated it to his master, Alibert. This physi-

cian, at first sceptical, soon was convinced, and gave out the discovery to the medical world with an authority that led to early acceptance.

Now the importance of all this, in the present connection, is not at all that it gave the clew to the method of cure of a



LOUIS PASTEUR.

on credulous humanity; for nothing is more clearly established in modern knowledge than the fact that "gale répercutée" was simply a name to hide a profound ignorance; no such disease exists, or ever did exist. Gale itself is a sufficiently tangible reality, to be sure; but it is a

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single disease. What makes the discovery epochal is the fact that it dropped a brand-new idea into the medical ranks—an idea destined, in the long-run, to prove itself a veritable bomb—the idea, namely, that a minute and quite unsuspected animal parasite may be the cause of a well-known, widely prevalent, and important human disease. Of course the full force of this idea could only be appreciated in the light of later knowledge; but even at the time of its coming it sufficed to give a great impetus to that new medical knowledge, based on microscopical studies, which had but recently been made accessible by the inventions of the lens-makers. The new knowledge clarified one very turbid medical pool, and pointed the way to the clarification of many others.

Almost at the same time that the Polish medical student was demonstrating the itch mite in Paris, it chanced, curiously enough, that another medical student, this time an Englishman, made an analogous discovery, of perhaps even greater importance. Indeed, this English discovery in its initial stages slightly antedated the other, for it was in 1833 that the student in question, James Paget, interne in Saint Bartholomew's Hospital, London, while dissecting the muscular tissues of a human subject, found little specks of extraneous matter, which, when taken to the professor of comparative anatomy, Richard Owen, were ascertained, with the aid of the microscope, to be the cocoon of a minute and hitherto unknown insect. Owen named the insect

Trichina spiralis. After the discovery was published, it transpired that similar specks had been observed by several earlier investigators, but no one had previously suspected, or, at any rate, demonstrated their nature. Nor was the full



CRAWFORD W. LONG.

After a crayon portrait taken at the time of his discovery of the anæsthetic properties of sulphuric ether.

story of the trichina made out for a long time after Owen's discovery. It was not till 1847 that the American anatomist Dr. Joseph Leidy found the cysts of trichina in the tissues of pork; and another decade or so elapsed after that before German workers, chief among whom were Leuckart, Virchow, and Zenker, proved that the parasite gets into the human system through ingestion of infected pork, and that it causes a definite set of symptoms of disease, which hitherto had been mistaken for rheumatism, ty-

phoid fever, and other maladies. Then the medical world was agog for a time over the subject of trichinosis; government inspection of pork was established in some parts of Germany; American pork was excluded altogether from France; and the whole subject thus came prominently to public attention. But important as the trichina parasite proved on its own account in the end, its greatest importance, after all, was in the share it played in directing attention at the time of its discovery in 1833 to the subject of microscopic parasites in general.

The decade that followed that discovery was a time of great activity in the study of microscopic organisms and microscopic tissues, and such men as Ehrenberg and Henle and Bory Saint Vincent and Kölliker and Rokitansky and Remak and Dujardin were widening the bounds of knowledge of this new subject with details that cannot be more than referred to here. But the crowning achievement of the period in this direction was the discovery made by the German J. L. Schoenlein in 1839, that a very common and most distressing disease of the scalp, known as favus, is really due to the presence and growth on the scalp of a vegetable organism of microscopic size. Thus it was made clear that not merely animal but also vegetable organisms of obscure, microscopic species have causal relations to the diseases with which mankind is afflicted. This knowledge of the parasites was another long step in the direction of scientific medical knowledge; but the heights to which this knowledge led were not to be scaled, or even recognized, until another generation of workers had entered the field.

III.

Meantime, in quite another field of medicine, events were developing which led presently to a revelation of greater immediate importance to humanity than any other discovery that had come in the century, perhaps in any field of science whatever. ~~This was the discovery of the pain-dispelling power of the vapor of sulphuric ether, inhaled by a patient undergoing a surgical operation.~~ This discovery came solely out of America, and it stands curiously isolated, since apparently no minds in any other country were trending toward it even vaguely. Davy, in England, had indeed originated the method

of medication by inhalation, and carried out some most interesting experiments fifty years earlier, and it was doubtless his experiments with nitrous oxide gas that gave the clew to one of the American investigators; but this was the sole contribution of preceding generations to the subject, and since the beginning of the century, when Davy turned his attention to other matters, no one had made the slightest advance along the same line until an American dentist renewed the investigation. Moreover, there had been nothing in Davy's experiments to lead any one to suspect the possibility that a surgical operation might be rendered painless in this way; and, indeed, the surgeons of Europe had acknowledged with one accord that all hope of finding a means to secure this most desirable end must be utterly abandoned—that the surgeon's knife must ever remain a synonym for slow and indescribable torture. By an odd coincidence it chanced that Sir Benjamin Brodie, the acknowledged leader of English surgeons, had publicly expressed this as his deliberate though regretted opinion at a time when the quest which he considered futile had already led to the most brilliant success in America, and while the announcement of the discovery, which then had no transatlantic cable to convey it, was actually on its way to the Old World.

The American dentist just referred to, who was, with one exception to be noted presently, the first man in the world to conceive that the administration of a definite drug might render a surgical operation painless, and to give the belief application, was Dr. Charles W. Wells, of Hartford, Connecticut. The drug with which he experimented was nitrous oxide; the operation which he rendered painless was no more important than the extraction of a tooth—yet it sufficed to mark a principle; the year of the experiment was 1844.

The experiments of Dr. Wells, however, though important, were not sufficiently demonstrative to bring the matter prominently to the attention of the medical world. The drug with which he experimented proved not always reliable, and he himself seems ultimately to have given the matter up, or at least to have relaxed his efforts. But meantime a friend, to whom he had communicated his belief and expectations, took the mat-

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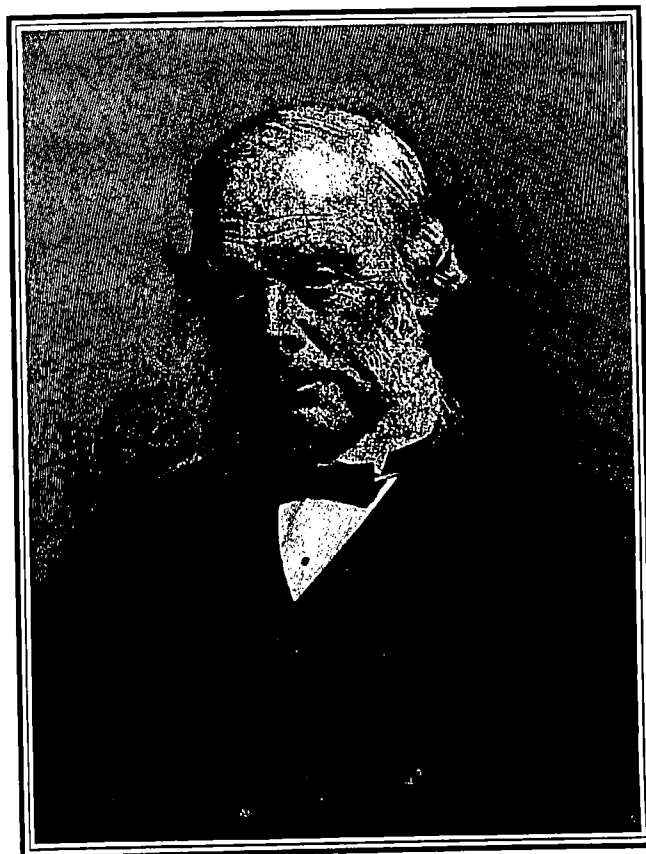
ter up, and with unremitting zeal carried forward experiments that were destined to lead to more tangible results. This friend was another dentist, Dr. William J. Morton, of Boston, then a young man, full of youthful energy and enthusiasm. He seems to have felt that the drug with which Wells had experimented was not the most practicable one for the purpose, and so for several months he experimented with other allied drugs, until finally he hit upon sulphuric ether, and with this was able to make experiments upon animals, and then upon patients in the dental chair, that seemed to him absolutely demonstrative.

Full of eager enthusiasm, and absolutely confident of his results, he at once went to Dr. J. C. Warren, one of the foremost surgeons of Boston, and asked permission to test his discovery decisively on one of the patients at the Boston Hospital during a severe operation. The request was granted; the test was made in September, 1846, in the presence of several of the foremost surgeons of the city and of a body of medical students. The patient slept quietly while the sur-

geon's knife was plied, and awoke to astonished comprehension that the ordeal was over. The impossible, the miraculous, had been accomplished.

Swiftly as steam could carry it—slowly enough we should think it to-day—the news was heralded to all the world. It was received in Europe with incredulity, which vanished before repeated experiments. Surgeons were loath to believe that ether, a drug that had long held a place in the subordinate armamentarium

of the physician, could accomplish such a miracle. But scepticism vanished before the tests which any surgeon might make, and which surgeons all over the world did make within the next few weeks. Then there came a lingering outcry from a few surgeons, notably some of the Parisians, that the shock of pain was bene-



SIR JOSEPH LISTER.

ficial to the patient, hence that anæsthesia—as Dr. Oliver Wendell Holmes had christened the new method—was a procedure not to be advised. Then, too, there came a hue-and-cry from many a pulpit that pain was God-given, and hence, on moral grounds, to be clung to rather than renounced. But the outcry of the antediluvians of both hospital and pulpit quickly received its quietus; for soon it was clear that the patient who did not suffer the shock of pain during an operation

rallied better than the one who did so suffer, while all humanity outside the pulpit cried shame to the spirit that would doom mankind to suffer needless agony. And so within a few months after that initial operation at the Boston

Alabama. As to Dr. Jackson, it is sufficient to say that he seems to have had some vague inkling of the peculiar properties of ether before Morton's discovery. He even suggested the use of this drug to Morton, not knowing that Morton had already tried it; but this is the full measure of his association with the discovery. Hence it is clear that Jackson's claim to equal share with Morton in the discovery was unwarranted, not to say absurd.

Dr. Long's association with the matter was far different, and altogether honorable. By one of those coincidences so common in the history of discovery, he was experimenting with ether as a pain-destroyer simultaneously with Morton, though neither so much as knew of the existence of the other. While a medical student he had once inhaled ether for the intoxicant effects, as other medical students were wont to do, and when partially under influence of the drug he had noticed that a chance blow to his shins was painless. This gave him the idea that ether might be used in surgical operations; and in subse-



THEODOR SCHWANN.

Hospital in 1846, ether had made good its conquest of pain throughout the civilized world. Only by the most active use of the imagination can we of this present day realize the full meaning of that victory.

It remains to be added that in the subsequent bickerings over the discovery—such bickerings as follow every great advance—two other names came into prominent notice as sharers in the glory of the new method. Both these were Americans—the one, Dr. Charles T. Jackson, of Boston; the other, Dr. Crawford W. Long, of

qu Coast, in the course of his practice in a small Alabama town, he put the idea into successful execution. There appears to be no doubt whatever that he performed successful minor operations under ether some two or three years before Morton's final demonstration; hence that the merit of first using the drug, or indeed any drug, in this way belongs to him. But unfortunately Dr. Long did not quite trust the evidence of his own experiments. Just at that time the medical journals were full of accounts of experiments in which

painless operations were said to be performed through practice of hypnotism, and Dr. Long feared that his own success might be due to an incidental hypnotic influence rather than to the drug. Hence he delayed announcing his apparent discovery until he should have opportunity for further tests—and opportunities did not come every day to the country practitioner. And while he waited, Morton anticipated him, and the discovery was made known to the world without his aid. It was a true scientific caution that actuated Dr. Long to this delay, but the caution cost him the credit, which might otherwise have been his, of giving to the world one of the greatest blessings that science has ever conferred upon humanity.

A few months after the use of ether became general, the Scotch surgeon Sir J. Y. Simpson discovered that another drug, chloroform, could be administered with similar effects; that it would, indeed, in many cases produce anæsthesia more advantageously even than ether. From that day till this surgeons have been more or less divided in opinion as to the relative merits of the two drugs; but this fact, of course, has no bearing whatever upon the merit of the first discovery of the method of anæsthesia. Even had some other drug subsequently quite banished ether, the honor of the discovery of the beneficent method of anæsthesia would have been in no wise invalidated. And despite all cavillings, it is unequivocally established that the man who gave that method to the world was William Jennings Morton.

IV.

This discovery of the anæsthetic power of drugs was destined presently, in addition to its direct beneficences, to aid greatly in the progress of scientific medicine, by facilitating those experimental studies of animals from which, before the day of anæsthesia, many humane physicians were withheld, and which in recent years have led to discoveries of such inestimable value to humanity. But for the moment this possibility was quite overshadowed by the direct benefits of anæsthesia, and the long strides that were taken in scientific medicine during the first fifteen years after Morton's discovery were mainly independent of such aid. These steps were taken, indeed, in a field that at first glance

might seem to have a very slight connection with medicine. Moreover, the chief worker in the field was not himself a physician. He was a chemist, and the work in which he was now engaged was the study of alcoholic fermentation in vinous liquors. Yet these studies paved the way for the most important advances that medicine has made in any century toward the plane of true science; and to this man more than to any other single individual—it might almost be said more than to all other individuals—was due this wonderful advance. It is almost superfluous to add that the name of this marvellous chemist was Louis Pasteur.

The studies of fermentation which Pasteur entered upon in 1854 were aimed at the solution of a controversy that had been waging in the scientific world with varying degrees of activity for a quarter of a century. Back in the thirties, in the day of the early enthusiasm over the perfected microscope, there had arisen a new interest in the minute forms of life which Leeuwenhoek and some of the other early workers with the lens had first described, and which now were shown to be of almost universal prevalence. These minute organisms had been studied more or less by a host of observers, but in particular by the Frenchman Cagniard Latour and the German, of cell-theory fame, Theodor Schwann. These men, working independently, had reached the conclusion, about 1837, that the micro-organisms play a vastly more important rôle in the economy of nature than any one previously had supposed. They held, for example, that the minute specks which largely make up the substance of yeast are living vegetable organisms, and that the growth of these organisms is the cause of the important and familiar process of fermentation. They even came to hold, at least tentatively, the opinion that the somewhat similar micro-organisms to be found in all putrefying matter, animal or vegetable, had a causal relation to the process of putrefaction.

This view, particularly as to the nature of putrefaction, was expressed even more outspokenly a little later by the French botanist Turpin. Views so supported naturally gained a following; it was equally natural that so radical an innovation should be antagonized. In this case it chanced that one of the most dominating scientific minds of the time,

that of Liebig, took a firm and aggressive stand against the new doctrine. In 1839 he promulgated his famous doctrine of fermentation, in which he stood out firmly against any "vitalistic" explanation of the phenomena, alleging that the presence of micro-organisms in fermenting and putrefying substances was merely incidental, and in no sense causal. This opinion of the great German chemist was in a measure substantiated by experiments of his compatriot Helmholtz, whose earlier experiments confirmed, but later ones contradicted, the observations of Schwann, and this combined authority gave the vitalistic conception a blow from which it had not rallied at the time when Pasteur entered the field. Indeed, it was currently regarded as settled that the early students of the subject had vastly overestimated the importance of micro-organisms.

And so it came as a new revelation to the generality of scientists of the time, when, in 1857 and the succeeding half-decade, Pasteur published the results of his researches, in which the question had been put to a series of altogether new tests, and brought to unequivocal demonstration.

He proved that the micro-organisms do all that his most imaginative predecessors had suspected, and more. Without them, he proved, there would be no fermentation, no putrefaction—no decay of any tissues, except by the slow process of oxidation. It is the microscopic yeast plant which, by seizing on certain atoms of the molecule, liberates the remaining atoms in the form of carbonic acid and alcohol, thus effecting fermentation; it is another microscopic plant—a bacterium, as Devaine had christened it—which in a similar way effects the destruction of organic molecules, producing the condition which we call putrefaction. Pasteur showed, to the amazement of biologists, that there are certain forms of these bacteria which secure the oxygen which all organic life requires, not from the air, but by breaking up unstable molecules in which oxygen is combined; that putrefaction, in short, has its foundation in the activities of these so-called anaerobic bacteria.

In a word, Pasteur showed that all the many familiar processes of the decay of organic tissues are, in effect, forms of fermentation, and would not take place

at all except for the presence of the living micro-organisms. A piece of meat, for example, suspended in an atmosphere free from germs, will dry up gradually, without the slightest sign of putrefaction, regardless of the temperature or other conditions to which it may have been subjected.

There was nothing in these studies bearing directly upon the question of animal diseases, yet before they were finished they had stimulated progress in more than one field of pathology. At the very outset they sufficed to start afresh the inquiry as to the rôle played by micro-organisms in disease. In particular, they led the French physician Devaine to return to some interrupted studies which he had made ten years before, in reference to the animal disease called anthrax, or splenic fever, a disease that cost the farmers of Europe millions of francs annually through loss of sheep and cattle. In 1850, Devaine had seen multitudes of bacteria in the blood of animals who had died of anthrax, but he did not at that time think of them as having a causal relation to the disease. Now, however, in 1863, stimulated by Pasteur's new revelations regarding the power of bacteria, he returned to the subject, and soon became convinced, through experiments by means of inoculation, that the microscopic organisms he had discovered were the veritable and the sole cause of the infectious disease anthrax.

The publication of this belief in 1863 aroused a furor of controversy. That a microscopic vegetable could cause a virulent systemic disease was an idea altogether too startling to be accepted in a day, and the generality of biologists and physicians demanded more convincing proofs than Devaine as yet was able to offer.

Naturally a host of other investigators all over the world entered the field. Foremost among these was the German Dr. Robert Koch, who soon corroborated all that Devaine had observed, and carried the experiments further in the direction of the cultivation of successive generations of the bacteria in artificial media, inoculations being made from such pure cultures of the eighth generation, with the astonishing result that animals thus inoculated at once succumbed to the disease.

Such experiments seem demonstrative, yet the world was unconvinced, and in 1876, while the controversy was still at its height, Pasteur was prevailed upon to take the matter in hand. The great chemist was becoming more and more exclusively a biologist as the years passed, and in recent years his famous studies of the silk-worm diseases, which he proved due to bacterial infection, and of the question of spontaneous generation, had given him unequalled resources in microscopical technique. And so when, with the aid of his laboratory associates Duclaux and Chamberland and Roux, he took up the mooted anthrax question, the scientific world awaited the issue with bated breath. And when, in 1877, Pasteur was ready to report on his studies of anthrax, he came forward with such a wealth of demonstrative experiments—experiments the rigid accuracy of which no one would for a moment think of questioning—going to prove the bacterial origin of anthrax, that scepticism was at last quieted for all time to come.

Henceforth no one could doubt that the contagious disease anthrax is due exclusively to the introduction into an animal's system of a specific germ—a microscopic plant—which develops there. And no logical mind could have a reasonable doubt that what is proved true of one infectious disease would some day be proved true also of other, perhaps of all, forms of infectious maladies.

Hitherto the cause of contagion, by which certain maladies spread from individual to individual, had been a total mystery, quite unilluminated by the vague terms "miasm," "humor," "virus," and the like cloaks of ignorance. Here and there a prophet of science, as Schwann and Henle, had guessed the secret; but guessing, in science, is far enough from knowing. Now, for the first time, the world *knew*, and medicine had taken another gigantic stride toward the heights of exact science.

V.

Meantime in a different, though allied, field of medicine there had been a complementary growth that led to immediate results of even more practical importance. I mean the theory and practice of antisepsis in surgery. This advance, like the other, came as a direct outgrowth of Pasteur's fermentation studies of alco-

holic beverages, though not at the hands of Pasteur himself. Struck by the boundless implications of Pasteur's revelations regarding the bacteria, Dr. Joseph Lister (the present Lord Lister), then of Glasgow, set about as early as 1860 to make a wonderful application of these ideas. If putrefaction is always due to bacterial development, he argued, this must apply as well to living as to dead tissues; hence the putrefactive changes which occur in wounds and after operations on the human subject, from which blood-poisoning so often follows, might be absolutely prevented if the injured surfaces could be kept free from access of the germs of decay.

In the hope of accomplishing this result, Lister began experimenting with drugs that might kill the bacteria without injury to the patient, and with means to prevent further access of germs once a wound was freed from them. How well he succeeded, all the world knows; how bitterly he was antagonized for about a score of years, most of the world has already forgotten. As early as 1867, Lister was able to publish results pointing toward success in his great project; yet so incredulous were surgeons in general that even some years later the leading surgeons across the Channel had not so much as heard of his efforts. In 1870 the soldiers of Paris died, as of old, of hospital gangrene; and when in 1871 the French surgeon Alphonse Guérin, stimulated by Pasteur's studies, conceived the idea of dressing wounds with cotton in the hope of keeping germs from entering them, he was quite unaware that a British contemporary had preceded him by a full decade in this effort at prevention, and had made long strides toward complete success. Lister's priority, however, and the superiority of his method, were freely admitted by the French Academy of Science, which in 1881 officially crowned his achievement, as the Royal Society of London had done the year before.

By this time, to be sure, as everybody knows, Lister's new methods had made their way everywhere, revolutionizing the practice of surgery, and practically banishing from the earth maladies that hitherto had been the terror of the surgeon and the opprobrium of his art. And these bedside studies, conducted in the end by thousands of men who had no knowledge of microscopy, had a large

share in establishing the general belief in the causal relation that micro-organisms bear to disease, which by about the year 1880 had taken possession of the medical world. But they did more; they brought into equal prominence the idea that, the cause of a diseased condition being known, it may be possible as never before to grapple with and eradicate that condition.

The controversy over spontaneous generation, which, thanks to Pasteur and Tyndall, had just been brought to a termination, made it clear that no bacterium need be feared where an antecedent bacterium had not found lodgement; Listerism in surgery had now shown how much might be accomplished toward preventing the access of germs to abraded surfaces of the body, and destroying those that already had found lodgement there. As yet, however, there was no inkling of a way in which a corresponding onslaught might be made upon those other germs which find their way into the animal organism by way of the mouth and the nostrils, and which, as was now clear, are the cause of those contagious diseases which, first and last, claim so large a proportion of mankind for their victims. How such means might be found now became the anxious thought of every imaginative physician, of every working micro-biologist.

As it happened, the world was not kept long in suspense. Almost before the proposition had taken shape in the minds of the other leaders, Pasteur had found a solution. Guided by the empirical success of Jenner, he, like many others, had long practised inoculation experiments, and on the 9th of February, 1880, he announced to the French Academy of Science that he had found a method of so reducing the virulence of a disease germ that, when introduced into the system of a susceptible animal, it produced only a mild form of the disease, which, however, sufficed to protect against the usual virulent form exactly as vaccinia protects against small-pox. The particular disease experimented with was that infectious malady of poultry known familiarly as "chicken cholera." In October of the same year Pasteur announced the method by which this "attenuation of the virus," as he termed it, had been brought about—by cultivation of the disease germs in artificial media, exposed to

the air; and he did not hesitate to assert his belief that the method would prove "susceptible of generalization"—that is to say, of application to other diseases than the particular one in question.

Within a few months he made good this prophecy, for in February, 1881, he announced to the Academy that, with the aid, as before, of his associates MM. Chamberland and Roux, he had produced an attenuated virus of the anthrax microbe, by the use of which he could protect sheep, and presumably cattle, against that fatal malady.

This announcement was immediately challenged in a way that brought it to the attention of the entire world. The president of an agricultural society, realizing the enormous importance of the subject, proposed to Pasteur that his alleged discovery should be submitted to a decisive public test. He proposed to furnish a drove of fifty sheep, half of which were to be inoculated with the attenuated virus by Pasteur. Subsequently all the sheep were to be inoculated with virulent virus, all being kept together in one pen, under precisely the same conditions. The "protected" sheep were to remain healthy; the unprotected ones to die of anthrax; so read the terms of the proposition. Pasteur accepted the challenge; he even permitted a change in the programme by which two goats were substituted for two of the sheep, and ten cattle added; stipulating, however, that since his experiments had not yet been extended to cattle, these should not be regarded as falling rigidly within the terms of the test.

It was a test to try the soul of any man, for all the world looked on askance, prepared to deride the maker of so preposterous a claim as soon as his claim should be proved baseless. Not even the fame of Pasteur could make the public at large, lay or scientific, believe in the possibility of what he proposed to accomplish. There was time for all the world to be informed of the procedure, for the first "preventive" inoculation, or vaccination, as Pasteur termed it, was made on the 5th of May, the second on the 17th; and another interval of two weeks must elapse before the final inoculations with the unattenuated virus. Twenty-four sheep, one goat, and five cattle were submitted to the preliminary vaccinations. Then, on the 31st of May, all sixty of the animals were in-

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oculated, a protected and an unprotected
one alternately, with an extremely vir-
ulent culture of anthrax microbes that
had been in Pasteur's laboratory since
1877. This accomplished, the animals were
left together in one enclosure, to await
the issue.

Two days later, the 2d of June, at the
appointed hour of rendezvous, a vast
crowd, composed of veterinary surgeons,
newspaper correspondents, and farmers
from far and near, gathered to witness
the closing scenes of this scientific tour-
ney. What they saw was one of the
most dramatic scenes in the history of
peaceful science—a scene which, as Pas-
teur declared afterward, "amazed the as-
sembly." Scattered about the enclosure,
dead, dying, or manifestly sick unto death,
lay the unprotected animals, one and all;
while each and every "protected" animal
stalked unconcernedly about with every
appearance of perfect health. Twenty of
the sheep and the one goat were already
dead; two other sheep expired under the
eyes of the spectators; the remaining
victims lingered but a few hours longer.
Thus in a manner theatrical enough, not
to say tragic, was proclaimed the une-
quivocal victory of science. Naturally
enough, the unbelievers struck their col-
ors and surrendered without terms; the
principle of protective vaccination, with
a virus experimentally prepared in the
laboratory, was established beyond the
reach of controversy.

That memorable scientific battle marked
the beginning of a new era in medicine.
It was a foregone conclusion that the
principle thus established would be still
further generalized; that it would be ap-
plied to human maladies; that, in all
probability, it would grapple success-
fully, sooner or later, with many infectious
diseases. That expectation has advanced
rapidly toward realization. Pasteur him-
self made the application to the human
subject in the disease hydrophobia, in
1885, since which time that hitherto most
fatal of maladies has largely lost its ter-
rors. Thousands of persons, bitten by
mad dogs, have been snatched from the
fatal consequences of that mishap by this
method, at the Pasteur Institute in Paris,
and at the similar institutes, built on the
model of this parent one, that have been
established all over the world, in regions
as widely separated as New York and
Nha-Trang.

VI.

In the production of the rabies vaccine
Pasteur and his associates developed a
method of attenuation of a virus quite dif-
ferent from that which had been employed
in the case of the vaccines of chicken chol-
era and of anthrax. The rabies virus was
inoculated into the system of guinea-pigs
or rabbits, and, in effect, cultivated in the
systems of these animals. The spinal
cord of these infected animals was found
to be rich in the virus, which rapidly be-
came attenuated when the cord was dried
in the air. The preventive virus, of va-
rying strengths, was made by maceration
of these cords at varying stages of desic-
cation. This cultivation of a virus with-
in the animal organism, suggested, no
doubt, by the familiar Jennerian method
of securing small-pox vaccine, was at the
same time a step in the direction of a new
therapeutic procedure which was destined
presently to become of all-absorbing im-
portance—the method, namely, of so-called
serum-therapy, or the treatment of a dis-
ease with the blood serum of an animal
that has been subjected to protective in-
oculation against that disease.

The possibility of such a method was
suggested by the familiar observation,
made by Pasteur and numerous other
workers, that animals of different species
differ widely in their susceptibility to va-
rious maladies; and that the virus of a
given disease may become more and more
virulent when passed through the systems
of successive individuals of one species,
and, contrariwise, less and less virulent
when passed through the systems of succe-
ssive individuals of another species. These
facts suggested the theory that the blood
of resistant animals might contain some-
thing directly antagonistic to the virus,
and the hope that this something might
be transferred with curative effect to the
blood of an infected susceptible animal.
Numerous experimenters all over the
world made investigations along the line
of this alluring possibility, the leaders
perhaps being Drs. Behring and Kitasato,
closely followed by Dr. Roux and his as-
sociates of the Pasteur Institute of Paris.
Definite results were announced by Beh-
ring in 1892 regarding two important dis-
eases—tetanus and diphtheria—but the
method did not come into general notice
until 1894, when Dr. Roux read an epoch-
marking paper on the subject at the Con-
gress of Hygiene at Buda-Pesth.

In this paper, Dr. Roux, after adverting to the labors of Behring, Ehrlich, Boer, Kossel, and Wasserman, described in detail the methods that had been developed at the Pasteur Institute for the development of the curative serum, to which Behring had given the since familiar name antitoxine. The method consists, first, of the cultivation, for some months, of the diphtheria bacillus (called the Klebs-Loeffler bacillus, in honor of its discoverers) in an artificial bouillon, for the development of a powerful toxine capable of giving the disease in a virulent form.

This toxine, after certain details of mechanical treatment, is injected in small but increasing doses into the system of an animal, care being taken to graduate the amount so that the animal does not succumb to the disease. After a certain course of this treatment it is found that a portion of blood serum of the animal so treated will act in a curative way if injected into the blood of another animal, or a human patient, suffering with diphtheria. In other words, according to theory, an antitoxine has been developed in the system of the animal subjected to the progressive inoculations of the diphtheria toxine. In Dr. Roux's experience the animal best suited for the purpose is the horse, though almost any of the domesticated animals will serve the purpose.

But Dr. Roux's paper did not stop with the description of laboratory methods. It told also of the practical application of the serum to the treatment of numerous cases of diphtheria in the hospitals of Paris—applications that had met with a gratifying measure of success. He made it clear that a means had been found of coping successfully with what had been one of the most virulent and intractable of the diseases of childhood. Hence it was not strange that his paper made a sensation in all circles, medical and lay alike.

Physicians from all over the world flocked to Paris to learn the details of the open secret, and within a few months the new serum-therapy had an acknowledged standing with the medical profession ev-

erywhere. What it had accomplished was regarded as but an earnest of what the new method might accomplish presently when applied to the other infectious diseases.

Efforts at such applications were immediately begun in numberless directions—had, indeed, been under way in many a laboratory for some years before. It is too early yet to speak of the results in detail. But enough has been done to show that this method also is susceptible of the widest generalization. It is not easy at the present stage to sift that which is tentative from that which will be permanent; but so great an authority as Behring does not hesitate to affirm that to-day we possess, in addition to the diphtheria antitoxine, equally specific antitoxines of tetanus, cholera, typhus-fever, pneumonia, and tuberculosis—a set of diseases which in the aggregate account for a startling proportion of the general death-rate. Then it is known that Dr. Yersin, with the collaboration of his former colleagues of the Pasteur Institute, has developed, and has used with success, an antitoxine from the microbe of the plague which recently ravaged China.

Dr. Calmette, another graduate of the Pasteur Institute, has extended the range of the serum-therapy to include the prevention and treatment of poisoning by venoms, and has developed an antitoxine that has already given immunity from the lethal effects of snake bites to thousands of persons in India and Australia.

Just how much of present promise is tentative; just what are the limits of the methods—these are questions for the future to decide. But, in any event, there seems little question that the serum treatment will stand as the culminating achievement in therapeutics of our century. It is the logical outgrowth of those experimental studies with the microscope begun by our predecessors of the thirties, and it represents the present culmination of the rigidly experimental method which has brought medicine from a level of fanciful empiricism to the plane of a rational experimental science.

Employment—Industry and Occupation

415

No. 648. Occupations of the Employed, by Selected Characteristics: 1996

In thousands. Annual averages of monthly figures. For civilian noninstitutional population 25 to 64 years old. Based on Current Population Survey; see text, section 1, and Appendix III]

SEX, RACE, AND EDUCATIONAL ATTAINMENT	Total employed	Managerial/professional	Tech./sales/administrative	Service ¹	Precision production ²	Operators/fabricators	Farming, forestry, fishing
Male, total ⁴	58,297	17,155	10,845	4,719	10,881	10,640	2,057
Less than a high school diploma	6,580	347	476	881	1,782	2,442	671
High school graduates, no college	18,038	1,983	2,932	1,782	5,179	5,359	800
Less than a bachelor's degree	14,755	3,576	3,774	1,479	3,255	2,300	372
College graduates	16,925	11,249	3,664	577	684	539	213
Female, total	48,545	15,299	9,407	3,594	9,689	8,650	1,907
Less than a high school diploma	5,504	305	400	645	1,518	2,018	617
High school graduates, no college	15,444	1,792	2,535	1,307	4,684	4,393	734
Less than a bachelor's degree	12,862	3,195	3,241	1,166	2,898	1,812	351
College graduates	14,835	10,007	3,231	476	588	426	103
Black	5,357	996	896	883	835	1,644	43
Less than a high school diploma	810	24	50	178	172	345	45
High school graduates, no college	2,066	137	285	390	378	832	12
Less than a bachelor's degree	1,542	262	373	254	241	399	2
College graduates	940	572	188	64	46	68	2
White	48,084	16,210	19,135	7,382	1,076	3,751	530
Less than a high school diploma	3,953	230	789	1,574	203	1,035	121
High school graduates, no college	16,085	2,305	7,693	3,465	501	1,920	202
Less than a bachelor's degree	14,433	4,073	7,443	1,854	268	657	135
College graduates	13,614	9,602	3,211	487	103	140	72
Black	40,083	14,060	16,236	5,582	857	2,838	509
Less than a high school diploma	3,089	186	670	1,163	154	802	115
High school graduates, no college	13,503	2,050	6,787	2,608	405	1,459	183
Less than a bachelor's degree	11,905	3,512	6,134	1,430	219	476	133
College graduates	11,585	8,311	2,644	382	80	101	69
White	5,920	1,485	2,144	1,470	133	679	9
Less than a high school diploma	621	30	87	334	22	145	5
High school graduates, no college	2,064	203	706	719	63	368	3
Less than a bachelor's degree	2,027	448	1,041	358	37	142	1
College graduates	1,208	808	310	60	11	22	1

¹ Represents or rounds to zero. ² Includes private household workers. ³ Includes craft and repair. ⁴ Includes laborers.

⁵ Includes other races, not shown separately. Source: U.S. Bureau of Labor Statistics, unpublished data.

No. 649. Employment, by Industry: 1970 to 1996

(In thousands, except percent. See headline, table 627. Data from 1985 to 1990, and also beginning 1995, not strictly comparable with other years due to changes in industrial classification)

INDUSTRY	1970	1980	1990 ¹	1995 ¹	1996			
					Total	Percent		
						Female	Black	Hispanic ²
Total employed	78,878	99,303	118,793	124,900	126,708	46.2	10.7	9.2
Agriculture	3,463	3,364	3,223	3,440	3,443	25.3	2.9	17.7
Mining	516	979	724	627	569	13.2	4.8	6.6
Construction	4,818	6,215	7,764	7,668	7,943	10.0	6.6	10.4
Manufacturing	20,746	21,942	21,346	20,493	20,518	32.0	10.5	10.1
Transportation, communication, and other public utilities	5,320	6,525	8,168	8,709	8,817	28.6	14.8	8.2
Wholesale and retail trade	15,008	20,191	24,822	26,071	26,497	47.2	8.8	10.1
Wholesale trade	2,672	3,920	4,889	4,986	4,956	29.8	6.8	9.8
Retail trade	12,336	16,270	19,933	21,086	21,541	51.2	9.3	10.2
Finance, insurance, real estate	3,945	5,993	8,051	7,983	8,076	58.4	9.1	7.0
Services ³	20,385	28,752	39,267	43,953	45,043	61.9	12.1	8.3
Business and repair services ⁴	1,403	3,848	7,485	7,526	8,087	36.8	11.0	10.8
Advertising	147	191	277	287	276	55.1	4.1	8.1
Services to dwellings and buildings	(NA)	370	827	829	871	47.9	17.8	21.3
Personnel supply services	(NA)	235	710	853	866	58.4	19.8	11.1
Computer and data processing	(NA)	221	805	1,136	1,340	33.0	7.6	4.2
Detective/protective services	(NA)	213	378	506	540	22.7	22.6	8.2
Automobile services	600	952	1,457	1,459	1,630	14.5	9.3	15.3
Personal services	4,276	3,839	4,733	4,375	4,358	68.7	14.3	18.0
Private households	1,782	1,257	1,036	971	936	89.1	17.8	25.2
Hotels and lodging places	979	1,149	1,818	1,495	1,504	54.4	15.5	17.0
Entertainment and recreation	717	1,047	1,526	2,238	2,386	44.0	8.7	6.5
Professional and related services ⁵	12,904	19,853	25,351	29,661	30,085	69.2	12.3	6.7
Hospitals	2,843	4,036	4,700	4,961	5,041	76.1	16.5	6.4
Health services, except hospitals	1,628	3,345	4,673	5,967	6,158	79.2	13.8	7.5
Elementary, secondary schools	6,128	5,550	5,994	6,853	6,711	74.9	11.8	6.0
Colleges and universities	(⁶)	2,108	2,637	2,788	2,787	52.2	10.7	8.8
Social services	828	1,590	2,239	2,979	3,102	80.7	17.3	4.9
Legal services	429	776	1,215	1,335	1,303	56.0	4.9	6.6
Public administration	4,476	5,342	5,827	5,957	5,802	44.4	16.5	6.6

¹ See footnote 2, table 619. ² Persons of Hispanic origin may be of any race. ³ Includes industries not shown separately. ⁴ Included with elementary/secondary schools. ⁵ Includes workers involved in uniquely governmental activities, e.g., judicial and legislative. Source: U.S. Bureau of Labor Statistics, *Employment and Earnings*, monthly, January issues; and unpublished data.

Declining

any jobs, self-employed, occupational experience

PERCENT CHANGES 1994-2000

	Mod- erate	High
1.4	13.9	13.9
0	118.7	118.7
3	102.0	102.0
3	92.1	92.1
8	90.4	90.4
3	83.1	83.1
2	82.8	82.8
0	82.1	82.1
9	80.0	80.0
7	78.5	78.5
8	74.5	74.5
7	72.2	72.2
7	69.5	69.5
9	59.0	59.0
3	58.3	58.3
5	55.8	55.8
6	53.0	53.0
2	52.0	52.0
5	50.9	50.9
5	50.0	50.0
0	47.9	47.9
3	46.0	46.0
7	44.3	44.3
3	42.5	42.5
0	42.1	42.1
1	41.9	41.9
1	39.6	39.6
3	39.0	39.0
3	38.2	38.2
3	37.5	37.5
5	36.6	36.6
3	36.5	36.5
3	36.4	36.4
0	35.6	35.6
0	35.6	35.6
-71.3	-70.5	-70.5
-71.1	-70.2	-70.2
-70.4	-69.4	-69.4
-70.4	-69.2	-69.2
-70.3	-68.2	-68.2
-66.7	-66.1	-66.1
-66.6	-65.5	-65.5
-63.6	-63.8	-63.8
-55.0	-43.5	-43.5
-54.8	-52.3	-52.3
-49.2	-50.5	-50.5
-47.3	-48.0	-48.0
-40.4	-36.5	-36.5
-39.1	-37.1	-37.1
-37.7	-35.3	-35.3
-37.7	-35.5	-35.5
-37.5	-39.1	-39.1
-34.9	-29.6	-29.6
-34.8	-29.4	-29.4
-33.9	-27.8	-27.8
-32.8	-30.0	-30.0
-32.1	-30.5	-30.5
-31.9	-29.1	-29.1
-30.8	-26.1	-26.1
-30.6	-24.9	-24.9
-30.1	-25.3	-25.3
-29.7	-26.6	-26.6
-28.9	-22.8	-22.8
-27.8	-25.7	-25.7
-27.6	-19.4	-19.4
-27.3	-24.4	-24.4

ately. ³ Includes

Staff Contact: Samuel Berger

1:25 pm-
1:30 pm

PHOTO OPPORTUNITY
OVAL OFFICE
Staff Contact: Julia Payne
WHITE HOUSE PHOTO ONLY

1:35 pm-
1:45 pm

BRIEF MEETING/PHOTO OPPORTUNITY WITH U. S.
AMBASSADOR TO IRELAND MICHAEL SULLIVAN
OVAL OFFICE
Staff Contact: Samuel Berger
WHITE HOUSE PHOTO ONLY

1:45 pm-
2:15 pm

MEETING
OVAL OFFICE
Staff Contact: Samuel Berger

2:15 pm-
2:30 pm

BRIEFING
OVAL OFFICE
Staff Contact: Ann Lewis, Julianne Corbett

2:30 pm-
3:00 pm

TAPE RADIO ADDRESS
ROOSEVELT ROOM
Remarks: Jordan Tamagni
Staff Contact: Ann Lewis, Julianne Corbett

3:00 pm-
7:00 pm

PHONE AND OFFICE/ DOWN TIME
OVAL OFFICE/RESIDENCE

EVENING OFF

BC/HRC RON

THE WHITE HOUSE
WASHINGTON, DC

1995

Agr — ~~10~~ = 2%

Minim — = .5%

Const — → 6

Manf. — → 16

Transp/Comm → 7

Services 35%

Wholesale - Retail Trade - 21%

Finance/Real Estab, insurance - 6%

✓ 22. % of women working - 1900, 1998

✓ 23. # of daily newspapers - 1900, 1998

24. # doctors, # hospitals - 1900, 1998

- 1054

323
168, m. in 1996 of these 25 + over

18.3 % not U.S. grads

33.6 were U.S. grads

17.3 some college, no degree

7.2 Associates

15.8 Bachelors'

7.8 Advanced

Daily newspapers - 1996

Daily Newspapers - 1900

Morning - 686
Evening - 846

Morning + Evening = 2,226

Ranked, death rate, 1994

Heart disease 381.3 / 100,000

Cancer 205.2

Cerebrovascular diseases 58.9

Accidents 35.1

Motor vehicles 16.3

Chronic obstructive
pulmonary diseases 39.0

Diabetes 21.8

AIDS 16.2

Suicide 12.0

Homicide 9.6

1996

Ex - \$624,767,000,000 4

11213 \$791,364,000,000 10

7.636 Trillion

QuickFinder Search Results
12/14/98 1:07PM

Files Found: 12
Total Bytes: 223,681
File Pattern: g:\data\asdel98\ *.*
Search For: education
Search In: Directory
Date Range: 12/1/98 To 12/14/98
Relevance: Est. Count per 1000 Words

centam.d11	g:\data\asdel98	21,333	12
clnwtr.d03	g:\data\asdel98	28,393	10
cong.d02	g:\data\asdel98	9,004	36
dlcdin.d02	g:\data\asdel98	23,910	7
dnc2.d01	g:\data\asdel98	13,490	10
dncdin.d01	g:\data\asdel98	13,832	17
ecommerc.n30	g:\data\asdel98	25,982	6
environ.d03	g:\data\asdel98	28,393	10
goresr.d07	g:\data\asdel98	9,126	25
mideast.n30	g:\data\asdel98	17,363	21
pbor.d02	g:\data\asdel98	9,686	36
socsec.d08	g:\data\asdel98	23,169	7