

Commencement Address by President Ray Lyman Wilbur
at Graduation Exercises, Stanford University,
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WHEELS

One of my most vivid memories is the sudden contact with the past that came to me at one of the gates to Pompeii when I saw parallel ruts in the solid rock, several inches deep, worn there by the carts that had streamed through in long gone centuries. One could almost hear the rumble of the wheels and see the piled-up vegetables and meats on the wagons,--or again, perhaps, hear the chariots of the warriors rolling proudly through to battle.

From that day to this I have always been interested in the relationship of the wheel to the advance of civilization and the rise of man from the state of savagery. There has been a good deal of exploration as to where the wheel was discovered and how it first was used. It is suggested that it came from putting logs under heavy objects to roll them about, and then gradually went on to more refined uses, from transporting of objects and men to more creative or manufacturing uses, such as in the potter's wheel, the spinning wheel, and the mill wheel. Our own early American life and our spread across this continent owed much to the wheel, and it now plays a predominant role in our economic structure.

We know that the Eskimos have been able to build up a fairly satisfactory culture without the use of the wheel; what they do, though, is of a very simple character, and their snowy environment has not been conducive to the use of wheels. But upon nearly every civilization of the world wheels have had a profound influence. Few of us pause to realize the power of wheels in our daily life, whirling about us everywhere in the civilization which the y have

played such a large part in creating. Literally, "Wheels That Make the World Go Round," and "Wheels Within Wheels." Not just the obvious wheels we all see rolling under us on trains, automobiles, or bicycles. There are the tiny wheels tucked away in watches to tyrannize over us in the matter of time. There are the wheels in typewriters and presses, in engines and machines and other devices about us everywhere. Steamships, airplanes, the tractor and the armored tank alike are impotent without them. Wheels have done much in building up and bringing together man's world; mis-used, they can the more rapidly destroy it.

Perhaps the most significant effect of the development of the wheel was that it gave mobility to man and increased his range of activities. This mobility has been vastly increased by the steam and now the gas engine in conjunction with wheels, tracks, roads, or water. Wheels mean movement. Movement means danger, unless that movement is controlled. Wheels have made possible a military attack which is unprecedented and which, as we have recently watched it develop on this earth, may bring about revolutionary changes in all human affairs. The menace of the rapidly moving airplane and tank has made it possible through murder and mendacity to threaten the fate of mankind. Just as wheels took the carrying of burdens off the backs of men and increased many-fold the results of human labor through machines, so now racing wheels, wrongly directed, may bring back mass slavery. That is, if we think of slavery as the exact opposite of freedom of action, freedom of thought, freedom of the press, freedom of religious beliefs, and freedom to follow the human mind as far as it will go into the new and the unknown.

For a considerable period in Europe the wheel was a torture instrument associated with religious and other forms of intolerance. Individuals were "broken on the wheel" by being tied to it and then having their limbs broken by blows from a hammer, ended perhaps by the final coup de grace. One cannot look at the European situation today without feeling that civilization itself is now being "broken on the wheel." The greatest devices created by the human mind in the field of manufacture and transportation have suddenly been diverted to the most frightful destruction. We can in no way blame this havoc on the machine itself; for the machine is the creature of man. A motor has no instinct such as a horse might have. The responsibility of this Frankenstein rests entirely upon man, its creator and its operator.

Perhaps the most outstanding effect of the wheel upon society is that it has compelled cooperation. It has made larger units of government possible. It may yet be one of the compelling forces that will bring about the unification of all of the peoples of the earth. Through all of the applications of the wheel all of us now, whether we like it or not, must play a part in the world's activities. The factory is a unit brought about through the spinning of wheels. The supplies coming to the factory come in on wheels. Through the control of movement lies the only way we can bring about physical controls in this world of ours. The problem of the wheel and its relation to the future of human beings is a human problem, to be solved by ourselves and not by the machines. It is not how much we learn, how fast we can spin the wheels, or how fast we can move about, as it is what we are doing through the use of the wheel. We know now

that its abuse can be perilous almost beyond conception in military affairs. Brought into use in great social movements, with powerful unscrupulous men operating the forces, we can literally blow up society. Social experiments, backed by such forces as we can turn loose at the present time, can be a menace when those who are putting them through have fixed ideas, insane ideas, or dominating ideas associated with almost unlimited physical and governmental powers.

There are certain possessions that when they once come into the hands of man belong to everybody. The wheel is one of those possessions. Some of us through trained men ^{and} the knowledge of mathematics and physics, have gone much further than others in taking advantage of what the wheel offers to us. Unfortunately the use of the machine leads to a certain amount of standardization, both of product and of labor, and of the social institutions that develop cooperative programs. This standardization must not extend to persons or mean regimentation, or life itself may be moulded so that no personality, no human dignity, is left.

The thing that we have called "democracy" has always sought for control and freedom combined, for responsibility and freedom, and for an order beginning at the bottom and working up to the top,-- rather than one beginning at the top and becoming compulsory at the bottom. With larger and larger units almost inevitable, either we are going to have the world organized by powerful units that dominate, or organized by intelligent people who seek to play fairly with each other and to give the human being freedom instead of compulsion. Freedoms can be sustained only by protection of them, by agreements,

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by cooperation, and by a desire for justice between men and groups of men. The finest product of the social striving of man is this conception we know as democracy. Our own republic with its representative government is one of the best examples of it in all human history. We sometimes forget just what opportunities are open to us here in the United States, what magnificent use we have made of science, what outstanding successes have come to us through the use of the wheel and of our own ingenuity. Inevitably we think of life and progress as going together. It is hard for us in America to think of the world as we know it as in any way finished or complete,-- we are so conscious of change, so aware of what has taken place here in a few decades. Faith in our community and in our own forms of government, elastic as they are, must be a dominating factor if we are to continue to have this sense of progress and the satisfactions that go with it.

When I say "we" I do not mean merely the people of the United States; for we cannot think of ourselves at present without at least thinking of the Western Hemisphere; and if we then have any vision at all we soon see that we have embraced the whole world in our thoughts. We cannot think inclusively even in national or racial terms now; for we have now mixed up races and peoples inextricably. Nor can we confine our thought to the more obvious physical factors of geography or our own environment. Certain psychological factors have also become of the utmost significance. They are intangible in some ways, but in others they are the most real of all that faces us. We roughly classify them as the moral, the religious, the temperamental and the intelligence factors. Our present civilization gives high place to that superior intelligence possessed by only a minority. In the moral

sense lies that prime psychological factor which leads to the survival at least of national groups. From this same moral factor comes the sense of obligation and duty and of what we call conscience. This has become of the utmost significance in all human actions and has much to do with our capacity to work together and to survive. If these moral and religious factors are replaced with sinister considerations and distorted conceptions in the minds of a few who gain control of what we call "government" there is the possibility of an almost complete check upon human progress as we have liked to think of it,--while at the same time there may be enormous changes in our environment through control of the many by one or more persons with the will to power.

Individuals succeed in life by developing certain inhibitions so that they control their own actions in relationship to others. When they fail to do so they make trouble for themselves and for the others. If governments having charge of masses of individuals do not recognize such inhibitions, and the people do not have at least a collective conscience, then we may expect fearful experiences in the life of the race.

There is something about war that has made it one of the most significant features of human history. We talk of brotherhood. War becomes a strange mixture of cooperation and brotherhood in each army and the people back of the army during the period of strain when there is an effort to destroy another army and another people. If there were some way for us to avoid the conflict and yet increase the cooperation and the sense of brotherhood, and make it world-wide, our moral instincts could give us an entirely different sort of association than we have in this world today. We have reached

among certain peoples over considerable periods of time certain peaceful adjustments. The abolition of dueling in our own culture shows that we can change our methods of settling conflict and can, if we choose, avoid organized murder. It takes great coordination to make the wheels of commerce or of war go round. If we could get this coordination largely freed from boundaries and national spirit, the job would be pretty well done.

Perhaps we can learn only through great and tragic disaster. At any rate for the moment we have to obey the old adage of "putting our shoulders to the wheel," and play our part and the part of our country in the emergencies that surround us. There is a place for each individual in a well organized society. There is a significant place either of help or of harm for each person when society strips for war. The telescoping of the individual is the greatest calamity that comes from warfare. Freedom during that period is necessarily limited.

The desire for freedom to follow one's own mind as far as we can go without harm to others is the outstanding characteristic of civilized man. This quality has given us research and the firm knowledge of dependable and universal laws. It is vital for each one to feel of significance and importance and not to be a mere cog in the machinery turned by someone else. One learns in Chanticleer that the great disappointment of the cock came when he found that the sun had risen although he had not been there to herald its advent. All of us like to feel important; and one of the outstanding advantages of democracy is that it makes the individual feel significant, even if he goes no further than to vote for someone else. I like to tell the story of the mountaineer whose country had been occupied by

foreigners and was under the charge of enemies. He came down too late to celebrate his country's natal day with his neighbors; but in order to express himself he sought out the local office of the representative of the invading nation and yelled, "Long live my nation!" At once the mountaineer was arrested. It was feared that an insurrection was to be started, and he was put under close examination to learn why he had behaved so and who had told him to express his national fervor in that way. His only answer was, "Whom does the cock ask when it wishes to crow?"

That need of human beings for expression is favored in our kind of democracy. We have a very great country, and in all human history no people has been so favored as our own. This has not come by chance but because of harsh experience, much thought, and wise and courageous action by our forefathers. Few Americans of today realize what we owe to George Washington.

We must preserve in the world our kind of thinking and our freedoms. We need to set all of our wheels of industry to going to build up defenses against the abuse elsewhere of science and invention in the service of man. The world is speeding down the hill. The wheels of the world are racing wildly. We here in our country must do our full share to put sand on the tracks.

by President Ray Lyman Wilbur
Graduating Classes, Stanford University,
June 16, 1940.

TO STUDENTS

It is said that we must be more or less discontented if we are to keep in action. Certainly a great many sinister efforts have been made to keep the young people of the world discontented and disturbed during recent years. Unfortunately, if there is true discontent, then our democracy fails; for without some feeling of faith and of confidence the kind of government that we live under cannot survive. We must seek constantly to make our representative government work, not try to handicap or upset it.

I have bad news for you:- The doctors have gone far enough with their work so that you will have to live with yourself about twenty years more than was expected when you were born. This has made it all the more important for you to get an education, in order that you can use your mind both in caring for yourself and in advancing the interests of others and of society in general. One of our graduates who has been spending six months in bed with infantile paralysis, has written to me in a recent letter that "Education is a great refuge in time of adversity. My Stanford days gave me much that keeps me busy reading and studying now."

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In the use of your mind it is important to know that it is working on something worth while. There is so much trash around us that can be used for time-consumption that it is vital to make choices at a very early period as to how you anticipate spending that part of your time which is not definitely engrossed in making a living. I hope one of the first things you do will be to pick out some public interest or political party, or some charity, and make it a part of your regular activities. Whatever this organization may be, I hope that it will not be of that ancient and ubiquitous order of gripers that seems to occupy such a considerable part in present-day interests.

I am expected to give you a final word or two of admonition. While experience may be a pleasant thing there are some things that are not worth while doing. I enjoy the story of the seasoned soldier who objected when he was asked to come out for parachute practice. His officer said, "You are a good soldier. Why do you object to practicing a parachute jump?" The soldier answered, "What's the use of practicing something you have got to get right the first time?" There are a lot of things you have to get right the first time, or the penalties are very great.

Every year I have to sign many statements regarding Stanford men and women, graduates and undergraduates. I find that there is an increased interest in the possession of a diploma, particularly of a diploma which comes from advanced degrees. There is a general feeling that this means that there has been a period of training in the life of the student; that he has learned at least something of punctuality, of regularity, and of making good. More and more, though, the constantly recurring question is that of personality: What kind of a person is he? Where does he stand in relationship to his fellows? Can he face competition?

In spite of a lot of exaggerated gibberish about "repressions" and "frustrations" - based largely on clinical studies of city weaklings - it is surprising how much good manners and good habits consist in not doing certain things as well as in doing certain things. This goes back to what I have just said in my main address that a developed control of our inhibitions is a significant part of character. Self-management, self-control, with a good spinning propeller, will make your diploma an asset to you, to Stanford, and to those among whom
you live.

