"Head and Hand: Education’s Working Partners,” Commencement Address, Utah Technical College, Provo, Utah

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COMMENCEMENT
ADDRESS FOR
UTAH TECHNICAL COLLEGE AT PROVO
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"HEAD AND HAND: EDUCATION'S WORKING PARTNERS"

by
President David P. Gardner
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I appreciate the invitation to address a commencement at a sister institution in our system of higher education. We do not acknowledge our family relationship often enough. Like those famous sisters Mary and Martha in the New Testament, we play different roles, but roles equally worthy, let us hope, in the sight of those we serve. Our institutions serve different purposes but the same society, the way head and hand serve the same body. At the U of U our function is critical inquiry and the transmission and furthering of knowledge; your function at Utah Technical College is to be more applied and practical. The one cannot flourish, of course, without the other. We are not all theory and you all practice; we are not all intellect and inquiry and you all machinery and application. We appreciate the arts and crafts that teach us respect for materials as I trust you appreciate the disciplines that teach respect for ideas. Whether liberal or technical, all education is an art, and I remind you that the Greek root of the word "technical" is technikos, from techne, an art.

It has always been the genius of American education, of American experience, to unite theory and practice, the ideal and the attainable, head and hand for both personal development and the general welfare. The Yankee as thinker and tinker is a familiar figure in our heritage, more typical than Captain John Smith's gentlemen
in Jamestown who starved in the midst of plenty because they could not help themselves. The South persisted as a tragic example in our history of the cost of the continuing division between the elite and the exploited, of an aristocratic class, the head, and the slaves, quite literally the hands. Slavery, in a kind of poetic justice, schooled the Black people in survival, taught them skills on which the superstructure absolutely depended and without which, as we know too well, it collapsed. In education as in life, what is lop-sided is bound to topple.

Benjamin Franklin's famous "Petition of the Left Hand to Those Who Have the Superintendency of Education" may be taken as a parable warning us that we must not neglect a significant half of any enterprise. Franklin humorously has the left hand complain that her sister the right gets all the attention and care:

"From my infancy," she says, "I have been led to consider my sister as a being of a more elevated rank. I was suffered to grow up without the least instruction, while nothing was spared in her education. She had masters to teach her writing, drawing, music, and other accomplishments; but if by chance I touched a pencil, a pen, or a needle, I was bitterly rebuked; and more than once have I been beaten for being awkward and wanting a graceful manner." Then Franklin has the left hand
sound an alarm: "If any indisposition should attack my sister—and I mention it in confidence upon this occasion that she is subject to the gout, the rheumatism, and cramp, without making mention of other accidents—what would be the fate of our poor family?...It would not be in my power even to scrawl a supplicant petition for relief, having been obliged to employ the hand of another in transcribing the request which I have now the honor to prefer to you. Condescend, sirs, to make my parents sensible of the injustice...and of the necessity of distributing their care and affection among all their children equally. I am, with a profound respect, sirs, your obedient servant, The Left Hand."

We can apply this complaint about the favoritism shown the right hand at the expense of the left to a wider exclusion in our own time, the separation of head and hand—both hands. In a society as complex, as horizontally and vertically mobile, as technological and constantly changing as ours, we neglect either theory or practice, professional or vocational training, head or hand at our peril. White collar or blue, we have become so dependent on industrial goods and highly technical services that the need for skill and intelligence, for vocational training in an enlightened context, is more acute than ever. Communications and transportation, for example, are so finely calibrated in our highly
electronic age that whole networks can be put out of
kilter through a single human error, like the musician
off beat or sounding the wrong note in a symphony orches-
tra. The folktale about the horse that lost its shoe
for want of a nail and the rider that lost the kingdom
for want of his horse is truer today than ever. Things
have become too complicated for the rough and ready
attention we could give our daily affairs in days not
long ago when farmers, as the saying had it, could fix
their Fords with baling wire.

Today's technical college is society's partial answer
to this increasing complexity, providing a wide range
of choices, of skills intelligently applied, so that
basic needs will be met. It is our equivalent of the
apprentice system that flourished in Franklin's day.
The array of courses in your catalog reflects how far
we have come since then, when choosing a vocation was
a simpler, less bewildering task. In his Autobiography
Franklin remembers how his father used to take him around
the shops and worksteads to see what trade or craft he
might like to follow. His father was a tallow chandler,
a candlemaker, and Franklin worked in his father's busi-
ness as a boy of ten, but he didn't like it. "There
was every appearance," he says, "that I was destined to
supply his place and be a tallow chandler. But my dis-
like to the trade continuing, my father had apprehensions
that if he did not put me to one more agreeable, I should break loose and go to sea, as my brother Josiah had done, to his great vexation. In consequence," says Franklin, "he sometimes took me to walk with him and see joiners, bricklayers, turners, braziers, etc., at their work that he might observe my inclination and endeavour to fix it on some trade that would keep me on land. It has ever since been a pleasure to me," Franklin tells us, "to see good workmen handle their tools; and it has been useful to me to have learned so much by it as to be able to do little jobs myself in my house, when a workman could not readily be got, and to construct little machines for my experiments when the intention of making these was warm in my mind." (The average American householder still, I think, including me, finds a similar satisfaction in being able to do those "little jobs" around the house.) Franklin tried the cutler's trade for a few days, "But the sum...exacted as a fee for my apprenticeship," he says, "displeased my father, and I was taken home again." We know how finally he settled on printing and became his brother's apprentice, eventually moving from Boston to Philadelphia to set up his own press and through it become a great influence in the colonies. All his life, though he won many other honors and appointments, he prided himself on being "Benjamin Franklin, Printer."
Beyond this, we remember Franklin's practical inventions: bifocal spectacles, the lightning rod, the Franklin stove (which enclosed the open fireplace and made use of circulating air). These are physical improvements; he invented intellectual and social ones too, like the circulating library and the volunteer fire company—early urban improvements by a civic-minded citizen.

Thomas Jefferson was another intellectual fond of making practical applications of his ideas. He was what we call an encyclopedist, at home in every branch of learning in a time when it was still possible to unify and master nearly all knowledge. His beautiful home at Monticello, which he designed (as he designed the University of Virginia and the Declaration of Independence), is full of practical conveniences for housekeeping. Every time the front door opens, for example, it helps wind up the great clock in the entry.

Franklin and Jefferson, from our perspective, led balanced lives, equally at ease in the library and the workshop, in sunny command of their powers, both mental and manual. Their example could be multiplied many times over in pre-industrial America. They illustrate the happy union of theory and practice in a simpler age, the fruition of thought in action which Emerson prized so much in his definition of self-reliance. The great challenge of our times is to develop the mechanics and technicians
on whom our lives depend without dehumanizing them, without making them interchangeable parts of a system in which the production of abundant goods is the goal rather than the production of abundant lives. A technician may earn more than a teacher, a carpenter or computer programmer more than a concert pianist, but that is small gain if their lives are not uplifted. Eric Hoffer, please note, is both longshoreman and philosopher.

In the United States it is our traditional belief that what defines a person is not social position nor wealth nor the kind of job he or she has but the kind of job he or she does—one’s skill and achievement. Robert Frost dignifies Silas the wornout farmhand in his moving poem "The Death of the Hired Man" and saves Silas' self-respect by having Warren, the farmer who has employed him summer after summer, praise his skill in haying:

"...that's Silas' one accomplishment. He bundles every forkful in its place, And tags and numbers it for future reference, So he can find and easily dislodge it In the unloading. Silas does that well. He takes it out in bunches like big birds' nests. You never see him standing on the hay He's trying to lift, straining to lift himself."

Elsewhere, in "Two Tramps in Mud Time," Frost describes
two unemployed and hungry lumberjacks who come out of the woods seeking work from a farmer who is out in the yard chopping wood. Frost has the farmer say:

"They thought all chopping was theirs of right. Men of the woods and lumberjacks, They judged me by their appropriate tool. Except as a fellow handled an ax, They had no way of knowing a fool."

That is the judgment we must all live by in our vocations: our essential self, what is most us, is intimately bound up with the work we do: "Except as a fellow handled an ax, /They had no way of knowing a fool." It's "where we live," as the saying goes. That's what we mean by the dignity of labor, by professional pride, whatever our vocation. Our skills define us, and as you have learned them at Utah Technical College, I am sure your teachers are no less demanding than I trust our teachers are at the University.

In the intricate exchange of goods and services which form the web of modern living, we are at each other's mercy. In a society as interdependent as ours has become, competence—the mastery of one's subject or skill—is at a premium. We must, beginning in the grades and at home, be taught to cross our t's and dot our i's so that the devotion to standards and the attention to detail on which our very survival depends will
become a habit rather than a conscious exception. It is not enough to just get by in the shop, the lab, the lecture room. Faulty mathematics will not build good bridges, faulty medicine will not save lives, faulty history will not enlighten us about the past, faulty English will ultimately corrupt us. Whatever your calling, communication is central to it, and I am sure you are as aroused about it as we are.

Make no mistake about it: there are labors of the head as of the hand. Writing and thinking are hard work. Just as the intellectual needs occasionally to feel the heft of a ball hammer or the fit of a saw handle, so the artisan needs the challenge of reflection, the mental thrust that enables him to see beyond the immediate product to the ultimate one, the whole life he is attempting to build. We need to read *The Atlantic Monthly* or *Scientific American* as well as *Popular Mechanics*. We all know the story about the three medieval stonemasons who were asked what they were doing: one replied that he was cutting stone, another that he was earning a daily wage, the third that he was building a cathedral.

Skills of head and hand are more closely wedded than we sometimes realize: I think of the manual dexterity and control of nerve required of the surgeon, the strength of wrist required of the sculptor, the amazing coordination required of the harpist or cellist. Sports come as
close as any of our activities, perhaps, to that ideal coordination of head and hand I have been describing: the alert quarterback calling a play, the doubles partner in tennis knowing when to rush forward, when to hold back, the rhythm of the pole vaulter or high hurdler, the incredible pattern, defying even the computer, woven in any given game of basketball. In such situations head and hand are beautifully and unconsciously alive and interdependent, joyful in their unison, without worry about what is first and what second-class activity. As Yeats once asked: "Who can tell the dancer from the dance?" That is the interplay we seek in a society where working and thinking, hoping and doing become one, where work and leisure, vocation and avocation are in meaningful and suggestive relation. It delights me that among our faculty at the University we have those who weave on handlooms, throw pots, repair cars, train horses, build houses, raise flowers. One of our recent PhDs in English, a candidate from India, takes as much pride, I am told, in the fact he has finished his own basement as in having written a dissertation (which, incidentally, was good enough to be published). He has symbolically combined his achievements: he has hung his diploma on the fine wood paneling he installed in his study.

Besides head and hand working together, of course,
we need heart, the will to direct our skills to human
good, lest technology become merely improved means to
unimproved ends, as Thoreau feared. The cunning of one's
craft can, even worse, be perverted into a craft of
cunning. Intelligence may be misdirected, as in Water-
gate. Good will and high purpose seem right now in
short supply. Commencements this year are taking place
in a mood of national discouragement—in the midst of
a moral as well as an economic recession, when the wages
of sin, as our cartoonists have been quick to note,
seem to be cash. You may feel yourselves in double
jeopardy: doubtful that there are real opportunities
and spiritless about honest effort in seizing any that
do come along. What justification is there, indeed,
you may ask, to prepare for a future so unable to guaran-
tee you a place in the sun? I can only answer that you
should not now abandon the faith that brought you here
for training that has already increased your options
and enriched your lives and futures. Opportunity,
when it comes, comes C.O.D., and you are better prepared
than before you came here to pay on delivery. Oppor-
tunity knocks, not only once, but as often as you are
prepared to recognize it and are able to open the door.
Opportunity, in other words, is readiness. "I will study
and prepare myself," said Lincoln, "and some day my chance
will come." I don't believe Lincoln meant waiting for
that one and only ship of a lifetime to come in. In a very real sense we create the opportunities through our preparation. "Chance," said Pasteur, "favors the prepared mind."

A commencement is at once an end and a beginning. If the door now closes on your formal education, another may open onto informal and continuing education, as indeed it must in a society as evolving as ours and a future as unformed as your own. Doors open and paths lead to friendship, love, work, service, belief, the callings of citizenship and adult responsibility. If your education has been liberal, which is to say liberating, no matter what your vocation, you will not cease to grow. Business, the farm, the workshop, the office, the home are paths as narrow or broad as the spirit you bring to them. The Greek word for beauty and a synonym for order is cosmos: that is the human endeavor, to bring order or cosmos out of chaos or disorder. You can do that within yourselves and in your immediate surroundings whatever your vocation.

America has been described by some as a "throwaway society." There is much you can do within your own sphere to reverse the trend and with courage resolve to use your skills of head and hand with a right heart. You can refuse to be satisfied with shoddy goods or shabby workmanship as you perform the tasks you have prepared
for. You can refuse to become another statistic in consumer reports that nowadays lament the loss of quality and craft in what we produce and repair. Resolve never to "rip off," as your generation so colorfully puts it, either your employer or your customers or yourselves. Be judged as Frost's lumberjacks would judge, by how you handle your particular ax.

Wallace Stegner remembers a boyhood in Saskatchewan. "In the old days," he says, "in blizzardy weather, we used to tie a string of lariats from house to barn so as to make it from shelter to responsibility and back again. With personal, family, and cultural chores to do," he says, "I think we had better rig up such a line between past and present." With your skills learned here, you can move, as mankind has always done, from past to present in the light of old values and from the present into the future in the light of continuing discoveries and applications. Lord Eric Ashby maintains that we must "educate for insecurity." We must be ready to "innovate, improvise, solve problems with no precedent." I believe you would rather have opportunity than guaranteed security, and you have equipped yourselves for it. What you have learned here will be your personal string of lariats helping you to make it from shelter to responsibility and back again as you venture out into the blizzardy weather of our times.
I congratulate you and your teachers, your family who sustained you and on this occasion wish you well and a future filled with productive work and happy days.