

RAND GRADUATE INSTITUTE
COMMENCEMENT EXERCISES
November 16, 1985

William R. Hewlett
Charles J. Hitch
Edwin E. Huddleson, Jr.
Donald B. Rice
Thomas C. Schelling
Charles Wolf, Jr.

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PREFACE

On November 16, 1985, The Rand Graduate Institute held its fifth commencement exercises in Santa Monica, California. This paper contains the commencement address given by Professor Thomas C. Schelling, the Lucius N. Littauer Professor of Political Economy at Harvard University, as well as remarks made at the exercises by the three recipients of the Institute's honorary doctoral degree, William R. Hewlett, Charles J. Hitch, and Edwin E. Huddleson, Jr.; by Rand's President, Donald B. Rice; and by me.

Charles Wolf, Jr.

Dean

RAND GRADUATE INSTITUTE COMMENCEMENT

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REMARKS BY CHARLES WOLF, JR. AT THE
RAND GRADUATE INSTITUTE COMMENCEMENT EXERCISES

Ladies and gentlemen, graduating fellows, honorees, trustees of The Rand Corporation, Institute faculty, and Rand colleagues, good morning!

It is a great pleasure to welcome you to these fifth commencement exercises of The Rand Graduate Institute. It is a special pleasure to welcome my good friend, Dr. Thomas Schelling, your commencement speaker, from whom we will be hearing later.

This memorable occasion provides an appropriate setting for a brief report on Rand's Graduate Institute. I am pleased to tell you the Institute is healthy and flourishing.

These fifth commencement exercises occur early in the Institute's sixteenth year. Today's class of 15 doctoral degree recipients raises the total number of Institute graduates to 42. This graduating class thus numbers more than half as many as the total number of all graduates in the Institute's preceding four graduation classes.

At the risk of inflating some new doctoral egos, I think it fair to say that the quality of the Institute's current graduating class has risen no less than its size. The analytic, technical, and problem-solving skills of these 15 graduates are generally sharper and more extensive than were those of their predecessors. Moreover, their skills in problem-definition and problem-formulation--skills which are in even scarcer supply than problem-solving ones--have increased at a rate commensurate with their problem-solving abilities.

For the 11 admissions to the Institute's newly admitted 1985 class, we had 91 applicants compared with 54 applicants for the 9 admitted to the 1983 class following our fourth commencement exercises. RGI's current annual rate of doctoral degree completions is 6--representing probably the largest annual rate of any public policy graduate school in the country.

To keep the picture in balance, I should note that most of the graduate degrees in public policy awarded each year are master's rather than doctoral degrees. Whereas about 40 or 45 doctoral degrees in

public policy analysis are awarded each year at the major graduate schools, several hundred master's degrees are conferred.

Graduates of RGI have taken jobs at the Office of Management and Budget, the Congressional Budget Office, the Senate Staff--on both sides of the aisle--the Department of Defense and the Intelligence community, in the legislative analysts' offices of state government in California and in Virginia, and in university appointments at Cornell, Columbia, UCLA, and Duke.

One of the interesting developments of the last three or four years that was not foreseen at the time the major public policy graduate programs were originally established is the increasing proportion of RGI graduates, as well as those from other major public policy schools, who have taken jobs in the private sector--in both profit and nonprofit corporations--that interface closely with the policy community. This includes firms in the electronics, communications, and utilities industries, in the aerospace industry, in management consulting, and in policy research institutions.

Let me make a few additional comments about several current RGI activities, and others we are exploring for the future.

The Institute has been active, along with a number of the other principal public policy graduate programs, in the founding of the Association for Public Policy and Management (APPAM) four years ago, as well as the Association's *Journal*. We continue to provide active institutional support for the Association. At the present time the Association has nearly a thousand individual members and 32 institutional members, compared with about 700 individual members and 20 institutional members in 1983 at the time of RGI's fourth commencement exercises.

Our faculty members and students have been active in the Association's annual meetings, and in contributing to the Association's *Journal*. I hope this participation will grow in the future.

Over the past four years, RGI has also conducted a summer institute for a growing number of minority college graduates already admitted to one or another of the public policy master's degree programs. The purpose of these summer institutes is to strengthen the skills in economics, quantitative methods, and communications of these new college

graduates prior to the start of their graduate careers, thereby enhancing their prospects for success both in their academic and professional careers. This summer program has been supported by the Sloan Foundation and is sponsored by the Association for Public Policy Analysis and Management.

RGI has also participated actively in the development of two important new specialized programs in health policy and in Soviet studies, through the Rand/UCLA Center for Health Policy Study and the Rand/UCLA Center for the Study of Soviet International Behavior. Each of these programs provides support for research and for graduate fellowships, some awarded to doctoral students attending RGI, and some to graduate students attending UCLA.

Finally, I should briefly mention a few other issues and plans we are considering at the present time.

One of these involves the preliminary exploration of a Rand-wide course in policy analysis--a latter day incarnation of the noteworthy systems analysis courses developed at Rand by Charlie Hitch and Ed Quade and other renowned Rand alumni in the 1950s and 1960s.

Another possible future development may involve bringing to the Institute, on a visiting basis of perhaps a year or two at a time, distinguished faculty members from other institutions who would combine teaching in the Institute with research at Rand.

We are also thinking again about something we have discussed in the past: developing short courses or executive seminars for various senior groups in the public policy community, and in some parts of the private business community that are in close touch with the public policy domain.

In closing, let me say that the reason this brief report is so gratifyingly upbeat is that a lot of people have contributed abundantly to make it so. The Institute's faculty and students are, of course, at the core of these efforts. They are an integral part of the Rand environment, and they contribute measurably to enhancing the quality of that environment.

Through the Rand Advisory Board, consisting of both faculty and student members, and through the elected Faculty Committee on Curriculum and Appointments, governance of the Institute has become more informed,

more open, more informal, and I hope more effective, in keeping with Rand's broad intellectual traditions.

In the development and management of RGI's activities, the Institute has been greatly assisted by the wise counsel provided by the ten members of our outside Academic Advisory Board under the able chairmanship of Professor Robert Solow of MIT. Through its semiannual meetings, the Academic Advisory Board has been an invaluable source both of independent ideas and of reactions to our own ideas on curricular matters as well as on matters relating to many of the outside activities I mentioned earlier.

I want also to take particular note of the Trustees' Committee for The Rand Graduate Institute established four years ago under the chairmanship of Dr. Michael May. This committee has helped greatly in maintaining close and regular contact between the Institute and the Rand Board of Trustees.

Finally, let me express both an institutional and personal acknowledgment to Rand's president, Donald Rice, for the contributions he has made to RGI's development over the last decade. Don has brought a special combination of understanding, pragmatism, and good humor to his interest in RGI, through contacts with students, faculty, the various boards and committees that I have mentioned, and even with the Dean.

Ladies and gentlemen, it is a pleasure to call upon Don Rice to make a few general remarks, and to introduce our commencement speaker.

REMARKS BY DONALD B. RICE AT THE
RAND GRADUATE INSTITUTE COMMENCEMENT EXERCISES

Graduating fellows, honorees, Professor Schelling, Dean Wolf, Rand colleagues and guests--Welcome on this proud and happy occasion: The fifth graduation ceremony of The Rand Graduate Institute.

We are proud of these graduates, and of the Institute, and happy for their achievements. And we are delighted to salute the largest RGI graduating class to date.

You who are the families and friends of the graduating fellows deserve a special note of appreciation today for your years of understanding and support. I join you in congratulating the new Ph.D.s.

When The Rand Corporation was founded back in 1948, the Articles of Incorporation stressed that it was formed "to further and promote scientific, educational, and charitable purposes." I emphasize "educational" here, for in the RGI--and now in the two study centers operated jointly by Rand and UCLA--we see practical evidence of the working out of this important purpose. We see graduate education a strong and vital part of Rand.

The RGI is now in its 16th year--a vigorous teenager that is redefining the old relationship between town and gown. For the RGI does not exist as a separate campus, walled away from the world; it is an integral part of the Rand research environment. As such, it draws upon Rand's departments for its faculty; it turns to our programs and projects for its on-the-job training efforts; and it benefits from the advice and guidance of key Rand boards and committees, including the Trustees Committee for the RGI. And under Dean Wolf's leadership, the Institute occupies a position in the first rank of public policy education programs across the country.

The RGI actively shares Rand's insistence on objective, independent, quantitatively supported research. On-the-job training is the crucial item here, providing fellows with hands-on experience in policy analysis, dissertation topics, publishable research results, and funding support.

Rand's support systems--briefing aids, editorial and publications assistance, library resources, computer services--give the fellows a comparative advantage. Our technical review program is tough, fair, and objective--good preparation for later professional publishing efforts. Fellows do not work in isolation with uncertain or casual support systems, as they often do at a university.

Of course, we're talking about a two-way street. Rand benefits enormously, in turn, from the stimulating presence, as well as the research contributions, of the RGI fellows.

I mentioned the two study centers operated by Rand and UCLA. Both programs lead to a doctorate in policy analysis, awarded by either the RGI or the university. The Rand/UCLA Center for Health Policy Study was formed in 1982 with support from the Pew Memorial Trust of Philadelphia. The Rand/UCLA Center for the Study of Soviet International Behavior was founded in 1983 with a grant from the Rockefeller Foundation. Both offer five fellowships per year to new entrants.

In sum, graduate education at Rand goes far beyond the new "corporate campuses" that we have been reading about. It offers impressive advantages for the student, the faculty, the institution, the discipline, and the community.

I see only one difficulty: as our graduating ceremonies multiply in the future, we at Rand face the task of adapting to the concept of being an "alma mater"!

This year the Trustees are conferring--on behalf of The Rand Graduate Institute--the honorary degree of Doctor of Public Policy upon three persons whose careers are marked by outstanding accomplishments in the public interest and by dedicated services to The Rand Corporation. They are: William R. Hewlett, Charles Johnston Hitch, and Edwin Emmet Huddleson, Jr. (There is no significance to the fact that all three names start with an "H"!))

For Bill Hewlett, this will be (by the latest count available to us) his eighth honorary degree. Recognized worldwide as an exceptional innovator, business leader, and public servant, Bill is Vice Chairman of the Board of Hewlett-Packard Co., which he co-founded with Dave Packard in 1939, in a garage. Bill was a valued member of Rand's Board of Trustees from 1962 to 1972, during which time the RGI was founded.

This is also an eighth honorary degree for our second recipient, Charlie Hitch. Charlie came to Rand in 1948 from Oxford University, where he was a don at Queen's College. He headed our Economics Division until 1961, when he became Defense Department Comptroller. Later, as you know, he was President of the University of California (1968-75); thereafter he headed Resources for the Future. His well-known book *The Economics of Defense in the Nuclear Age* (1960) was written (with Rol McKean) at Rand.

Our third honoree, Ed Huddleson, was termed "Rand's record-setting Trustee" when he retired from the Board after 27 years of service as Trustee and 31 years as corporate counsel. These years have spanned most of our corporate history, and so Ed holds a special place in Rand's story. Yet this is only one of the roles in which he has served the community, for no one else has done more to nurture institutions that provide special professional support for national security efforts. Ed is a Partner with Cooley, Godward, Castro, Huddleson & Tatum, in San Francisco.

These gentlemen embody the highest principles and standards of public service. We are most pleased to honor them today.

Back in 1958-59, when our commencement speaker, Tom Schelling, was a senior member of Rand's Economics staff--until he left for Harvard and we lost his full-time involvement--he was known for his sharp crew cut, his sharp tennis game (at the Rustic Canyon courts), and his equally sharp and incisive thrusts into the areas of bargaining and conflict management. Today, as Lucius N. Littauer Professor of Political Economy at Harvard University, he returns to Rand on this occasion of the RGI's fifth commencement.

Professor Schelling took his B.A. at the University of California at Berkeley, and his Master's and Ph.D. in economics at Harvard University. He held the position of Professor of Economics at Yale University from 1953 to 1958, then, after the year at Rand, returned to the East Coast to take up the professorship at Harvard that he holds today.

Among his published work are five books, including the seminal *Strategy of Conflict* (1960). His areas of special interest extend to nuclear strategy and arms control, crime and extortion, business ethics, independent choice, economic warfare, trade controls, international cost sharing, and military alliances.

Professor Schelling brings to his professional writing a unique originality and style, marked by examples and incidents drawn from common experience that lead in an easy manner to broad hypotheses and deeper truths. He is going to speak to us today on "Strategy and Self-Command."

Friends and colleagues, your commencement speaker, Professor Thomas Schelling.

STRATEGY AND SELF-COMMAND

Commencement Address by Thomas C. Schelling

I did my graduate work at Rand more than twenty-five years ago, when Charlie Hitch was my Dean. How I felt about that experience is recorded in the preface to a book I published a year later:

During the year before this book went to press I was uniquely located to receive stimulation, provocation, advice, comment, disagreement, encouragement, and education. I spent the year with The Rand Corporation in Santa Monica. As a collection of people, Rand is superb, and I have mentioned above only the few whose intellectual impact on me was powerful and persistent; many others, truly too numerous to list here, have as individuals affected the final shape of this book. But Rand is more than a collection of people; it is a social organism characterized by intellect, imagination, and good humor.

Not a bad place to establish a graduate institute. So when your president surprised me with an invitation to speak at your commencement I did not hesitate.

I should have. That was one of those weeks when Garry Trudeau, creator of Doonesbury, ran out of material and, as he had done before, took a few days' time out making fun of commencement speakers. It was plain that the commencement address was an art form better suited to cartoonists than to aging academics. As if that were not enough discouragement, I came across six rules to govern advice to people a generation younger than oneself. The first was, "Don't." Intimidated,

I decided the best I could do was to talk about something that interests me in the hope that it interests you.

Some of you may have heard that I direct an Institute for the Study of Smoking Behavior, and wonder how somebody can jump from nuclear command and control to self command and control in twenty-five years. Actually it is not much of a jump. Even when I was writing, at Rand, parts of the book from which I read you a bit of the preface, I noticed that if I were designing safeguards against firing a weapon in panic or falling asleep on watch it wouldn't matter much whether it was I or somebody else who might fire a weapon or fall asleep.

Arranging not to lose one's temper, not to drive after too many drinks, or not to scratch an infected wound while asleep calls for the same kinds of tactics whether we do it for ourselves or for somebody else. And often in strategic interaction with another person we try to commit ourselves to an action--carrying out a threat or fulfilling a promise; and the ways that I can commit my behavior for strategic advantage are not altogether different from the ways that I may commit my behavior for self-discipline.

There is a cocaine addiction clinic in Denver that uses self-blackmail as therapy. The patient is offered an opportunity to write a self-incriminating letter that will be delivered if and only if the patient, who is tested on a random schedule, is found to have used cocaine. A physician, for example, writes to the State Board of Medical Examiners confessing that he has violated state law and professional ethics in administering cocaine to himself and deserves to lose his license. That is a powerful deterrent. But notice that if I worked for that physician and had evidence of his cocaine abuse, and wanted to help him, I could write such a letter and threaten to mail it unless the physician stayed clean. Alternatively, I could threaten to mail it unless the physician doubled my salary. So it is the same tactic whether I use it selfishly to extort tribute, paternalistically to coerce someone for his own good, or sympathetically to allow someone to incur voluntarily a drastic change in his own incentives.

An increasingly familiar occurrence for obstetricians is being asked by patients to withhold anesthesia. The physician often proposes that a face mask be put beside the patient, who may inhale nitrous oxide

as she needs it, but some determined patients ask that no such opportunity be provided. If gas is available they will use it, and they want not to be able to. This example nicely illustrates that there are ethical, legal, and policy issues in the practice of self-denial, self-restraint, and self-command. The Constitution of the United States does not permit me to be voluntarily incarcerated in a sanitarium that will not let me out until I have lost thirty pounds or gone thirty days without smoking. No matter what the contract says and how badly I wanted it enforced when I entered, when my appetite for food or cigarettes overwhelms me and I ask to be let out, the law requires they let me out.

When self-command is discussed at all, it is usually in relation to appetites and temptations--food, sex, tobacco, gambling, alcohol, and addictive drugs. But the subject includes one's own behavior during rage, panic, and pain. Here is the first paragraph of the first chapter of my favorite book on baseball:

"Fear."

That's the paragraph.

The second paragraph says, "Fear is the fundamental factor in hitting, and hitting the ball with the bat is the fundamental act of baseball. This fact," the author says, "is the starting point for the game of baseball, and yet it is the fact least often mentioned by those who write about baseball."¹

A book on military tactics might well begin with the same first paragraph. "Fear," it might say, "is the fundamental factor in exposing oneself to enemy fire, and exposing oneself to enemy fire is the fundamental act of combat." I believe we could also add that next statement: this fact is the starting point for military combat, and yet it is the fact least often mentioned by those who write about combat.² General Rommel understood this. He advised his panzer divisions always to open fire before they were within range of the enemy: if the enemy

¹Leonard Koppett, *A Thinking Man's Guide to Baseball*, New York: E.P. Dutton & Co., Inc., 1967, p. 13.

²An exception that makes the point stunningly is John Keegan, *The Face of Battle*, New York: The Viking Press, 1976.

could be frightened enough before Rommel's tanks came within range, they would be hiding, and just as ineffectual as if dead.

Fear can be a collective as well as individual problem in self-command, and in Caesar's army any advancing legionnaire who held back was to be instantly killed by the comrades on either side of him, who, if they failed to kill the soldier who held back, were themselves to be instantly killed by the legionnaires next to them. New legionnaires quickly learned, of course, that the rule actually enhanced their security, especially when the enemy learned that advancing legionnaires could never be intimidated.

The need for anticipatory self-command arises not only for the individual or the squad but for government itself. The statutory debt ceiling, the proposed balanced budget amendment, and statutory efforts to make budget balancing automatic are well understood by families whose own efforts to live within their means leave behind a trail of good intentions and broken resolutions. Parents need, as the founding fathers needed, inhibition on cruel and unusual punishment when they lose their tempers; and the entire Bill of Rights was an effort of legislators to put some restraints on legislation beyond the reach of ordinary majority vote.

Albert Hirschman observed some years ago that technically backward countries are better at maintaining airlines than roadbeds. It is a matter of incentives: you can patch the road surface cheaply and over the years let the roadbed invisibly go to ruin, but airplanes don't go to ruin invisibly! Had he been observing advanced countries he might have made the same point about fire engines and sewers. Individuals display similar behavior: In a hurry, I shave rather than brush my teeth.

Rand people used to jog at noon and in the evening--probably still do--and many have discovered the buddy system: four people jogging together three times a week at the lunch hour may go on for years as a team, but jogging separately on different days they may all be early dropouts. S.L.A. Marshall observed that in all armies in World War II most soldiers never fired their rifles--no matter how brave they were, how long a battle lasted, or what targets presented themselves; but weapons that required joint action by two or three soldiers, like feeding a belt of ammunition, were regularly fired as intended.³

³S.L.A. Marshall, *Men Against Fire*, Washington: Combat Forces Press, 1947, pp. 50-84, especially pp. 75-76.

I mentioned that blackmail scheme. As long ago as 1957, in a classic work on game theory, Duncan Luce and Howard Raiffa pointed out that a person who wants to go on a diet but does not trust himself "announces his intention, or accepts a wager that he will not break his diet, so that later he will *not* be free to change his mind and to optimize his actions according to his tastes at *that* time."⁴ The same thing is accomplished by maneuver rather than by commitment when one deliberately embarks on a vacation deep in the wilds without cigarettes, or throws his car keys onto the lawn in the dark where he cannot find them till next morning in order not to be able, later when he loses control, to drive away in search of cigarettes, sex, liquor, or a gun.

We all know how to put the alarm clock across the room so that we cannot turn it off without getting out of bed; and executives in a corporation I have heard of may join a voluntary arrangement in the corporate dining room: they will be served at lunch only what they ordered by phone at 9:30 that morning. And I have often wished that hotels would, for a small extra fee, disable the television in my room before I arrived.

Sometimes the problem is action, not abstention. I have often wondered whether I would enjoy skydiving as a hobby and have wondered even more whether I would ever be able to initiate it. I recently saw Ambassador Rowney, the President's disarmament adviser, and recalled that the last time I had seen him he was getting ready to go command airborne troops. I had asked him whether he would have to jump, and he said yes; I asked whether he anticipated any difficulty in actually leaping out of an airplane, and he said he understood that the Army had a man who took care of that.

I do not know how they do it at civilian skydiving resorts. I am told that our constitutionally inalienable rights get in the way here, too, of any voluntary contract that will permit the skydiving crew to propel me out when I grab the door jamb and scream that I've changed my mind. Technology would probably help: a trap door and no communication

⁴R. Duncan Luce and Howard Raiffa, *Games and Decisions*, New York: John Wiley & Sons, Inc., 1957, p. 75.

between pilot and passenger might be legal, but would probably not pass safety inspection. A trap door that I could operate with my eyes shut might be easier to manage than diving head first with eyes open. Not only children but even adults find that they can better command their response to a four inch needle inserted in the knee to draw out fluid if they turn their heads so they can't see the needle. Acrophobes are advised not to look down if they climb and, if they do not have to perform any actions that require eyesight, can achieve control with a blindfold. Before flying became so common, many people found they could survive takeoff more comfortably if they had their two drinks before they got on the plane rather than after the plane reached cruise altitude. In many armies soldiers have been provided alcohol prior to combat.

There is some potential for high technology in helping us get ourselves under control. There is currently a device by which a prisoner, who might not otherwise be paroled, can submit to a curfew that is cheaply and remotely monitored. It is a transmitter that emits an encrypted signal that is picked up by a device attached to his telephone that can be interrogated at random from the local police station. The signal will be picked up only if he is within 100 feet of his telephone. It is attached to his ankle; he cannot remove it and leave it by his phone because removing it makes it inoperable; and he cannot buy a copy to leave by his telephone because he doesn't have the code. (The device is being miniaturized for comfort.) Wearing the device could be a *condition* of parole; but if he didn't altogether trust himself, and badly wanted not to violate parole and be sent back to prison, he might assume it *voluntarily*, just as a person might someday implant a measure of blood alcohol that would emit a signal, render a painful shock, or even electronically disable his auto ignition.

Policy issues arise from the likelihood that certain voluntary self-restraints or submissions to surveillance may be coerced. The polygraph is currently a controversial example.

The most controversial technology of all I think will ultimately be a diagnostic device implanted in the brain to measure the extent of damage caused by a nonfatal stroke; the device is programmed, above a certain threshold of damage, to make it fatal. This would be the

technological embodiment of the "living will." It would also be a technological alternative to the suicide that one might have hoped to commit in such circumstances but be unable to perform.

Technology can also be used to discipline speakers when the program must continue on schedule. It can even be used by a speaker to discipline himself. Some of you probably noticed that I set a timer and placed it on the podium in full view when I began this talk. Twenty-five years ago I attended an annual meeting of the Institute for Strategic Studies at Oxford, where the subject of discussion was nuclear deterrence. The chairman of the first morning's session grandly announced that he would hold all speakers to three minutes; and, just in case some speakers might think they could intimidate the chairman into relaxing the limit, he had brought to the occasion what he called "The Great Deterrent." This was a timer that would show a red light at two minutes and sound a harsh noise at three. He demonstrated the noise-- it was indeed a noise to deflate any speaker's dignity, truly a Great Deterrent. It worked, for a while. The first dozen speakers stayed well within the limit, hastening to conclude when they saw the red light. But eventually a most distinguished member of Parliament, a former cabinet minister, rose to take the floor, walked to the front of the hall near the chairman's table (which was raised on a dais) and began an unhurried disquisition that could not possibly fit within the three minutes. When he saw the red light he strolled to where the Great Deterrent rested about shoulder high on the raised table, disdainfully rested his elbow on the table and turned his back on both chairman and timer, continuing his talk uninterrupted. The chairman was seen to squirm even more nervously as the minute went by. Then, perfectly visible to most of the audience, the chairman's hand snaked out over the table top and turned off the timer.

Most of us learned more about the credibility of deterrent threats from that one talk than from all the rest of the conference. And that is why, when I set my timer 19 minutes ago, I made myself place it where you could see it.

REMARKS BY HONORARY DEGREE RECIPIENTS

William R. Hewlett
Charles J. Hitch
Edwin E. Huddleson, Jr.

Donald B. Rice

Thank you, Professor Schelling. I'm sure you've communicated more to our graduates by NOT giving a commencement address than they could have heard in any other way.

We now come to the part of our program where we award the honorary degrees. Let me begin that process by reading the text of the diploma itself for you. I only have to read it once that way.

The Rand Graduate Institute, Santa Monica, California. The Dean and the Faculty, with the concurrence of the President and Trustees of The Rand Corporation, have conferred on (the named recipient) The Honorary Degree of Doctor of Public Policy and have granted this diploma as evidence thereof. By authority duly committed to us we have hereunder placed our names and seals on this sixteenth day of November, one thousand nine hundred and eighty-five, and have affixed the seals of The Rand Graduate Institute and of The Rand Corporation, and have the signatures of the Dean and the President.

Now, let me ask Bill Hewlett to come up first, please. I'll take a moment to read you the citation. William R. Hewlett, Citation for Honorary Degree of Doctor of Public Policy, November 16, 1985:

"Gifted engineer and innovator in electronics technology, co-founder, leader and manager of one of America's most productive enterprises, William Hewlett is a great American success story, both in technology and in business accomplishments. He has worked not only to strengthen the entire electronics industry, but also as a presidential

advisor, an unselfish public servant, and an invaluable guide in Rand's early years as a member of its Board of Trustees."

With the concurrence of the President and the Trustees of The Rand Corporation, The Rand Graduate Institute is honored to confer upon William R. Hewlett the honorary degree of Doctor of Public Policy.

William R. Hewlett

Bearing in mind what I've heard about commencement speeches, it occurred to me as I listened to the names of the other recipients that they had finally gotten down to the H's. I expect they will have some trouble with the I's, and as this is the fifth commencement, they must have skipped some between A and H.

I would like to make just a couple of comments. I'm not going to comment on Rand itself because that's too well known. I'm not going to comment on what I might have contributed to Rand because I don't know what I contributed. But I would like to comment on what Rand contributed to me, which is a great deal. I made some very long and lasting friendships I still preserve and cherish. But perhaps equally important, it introduced me to many other operations that I would never have gotten into except for my experience here at Rand. And in those assignments I borrowed much from what I learned here, and so I'm very, very much indebted to my experience here at Rand. I consider it a great honor to receive this degree. Thank you very much.

Donald B. Rice

Could I ask Charlie Hitch to come up next, please. This citation reads: To Charles Johnston Hitch, Citation for the Honorary Degree of Doctor of Public Policy, November 16, 1985.

"Eminent scholar, educator and administrator, Charles Hitch has been deeply devoted to the search for wise answers to questions of public policy--as an Oxford Don, as a researcher and manager at Rand, as Comptroller of the Department of

Defense, as President of the University of California, and as President of Resources for the Future. Through his own work, and his stimulus to the work of others, he has helped all to understand better how to plan for the future in an uncertain world."

With the concurrence of the President and Trustees of The Rand Corporation, The Rand Graduate Institute is honored to confer upon Charles Johnston Hitch the honorary degree of Doctor of Public Policy.

Charles J. Hitch

You know, Don, after hearing a citation like that it takes me a few minutes to get my feet back on solid earth. But I have learned how to do it. All I have to do is look at the organizations that I have left, and observe how well they have performed after I left. I emphatically include The Rand Corporation in that category, and I am proud to again become a member of the Rand family.

Donald B. Rice

Now, may I ask Ed Huddleson to come forward, please. This citation reads: Edwin Emmet Huddleson, Jr., Citation for the Honorary Degree of Doctor of Public Policy, November 16, 1985.

"Distinguished lawyer and public servant, Edwin Huddleson has contributed to the nation through his work for the Defense Department, the State Department, and the Atomic Energy Commission. No one else has done so much to nurture institutions that provide independent professional support to the national security mission. Over decades of service as a Trustee and as Corporate Counsel, his wise and caring advice has helped guide Rand through critical periods of its history and helped insure Rand's independence and effectiveness as a national center of research for the public interest."

With the concurrence of the President and Trustees of The Rand Corporation, The Rand Graduate Institute is honored to confer upon Edwin Emmet Huddleson, Jr., the honorary degree of Doctor of Public Policy.

Edwin E. Huddleson, Jr.

Members and friends of the Rand family, you must be getting close to the last of the H's. I'm delighted to be here today to receive this honorary degree and to be in the same group of honorees as Bill Hewlett and Charlie Hitch. It's heartwarming to me to receive this degree from The Rand Graduate Institute. As some of you know, my association with Rand started back in 1949. When I first met the Rand staff, they seemed to me to have a passion to make a difference, and not only sought to put the right question and get a workable answer and deliver it on time, but they seemed willing to brief the subject, and to continue to brief it at all levels, until some workable change occurred in their clients' behavior. This extra dimension, this drive to make something useful happen, has always seemed to me to be a trademark of Rand. It would be remiss of me not to admit to you that Rand produced much of interest to me besides good research that made a difference. Over the years, from time to time, Rand has encountered problems with a legal dimension that would have delighted any law firm. Even an abbreviated list of these matters would have to include a novel joint venture with a major city, a client that wanted to protect us by hugging us too close, embattled city officials who helped us into and out of the briar patch of local politics, the creation of several new organizations with Rand sponsorship that breathe a successful life of their own and are still doing well, an intense but brief flurry of security problems, and innovative structures to handle national surveys in health insurance and housing allowances. Suffice it to say that Rand appeared to learn from each experience and surmounted each one capable of continuing to do good work in the public interest. I followed the work of The Rand Graduate Institute from a distance. The quality of the applicants, the choice jobs that are held by its graduates, speak of the health of the Institute. I think it has done a lot for Rand. Charlie and Don have already given you the details, and I won't belabor them. I hope these

brief remarks will give you some flavor of my abiding respect for Rand and my pleasure in being here today. Thank you.

REMARKS MADE PRIOR TO PRESENTING FELLOWS WITH DEGREES

Charles Wolf, Jr.

November 16, 1985

I want to turn now to the final and quintessential purpose of these exercises, namely, the award of the Institute's doctoral degree in Policy Analysis.

This degree is a distinctive one, and so it is appropriate to explain precisely what it signifies.

In a formal sense, the Institute's doctoral degree signifies that its recipients have previously received a Master's degree or equivalent post-Bachelor's training or experience, which is required for admission. The Institute's doctoral degree requires, further, that recipients have taken not less than 18 courses and policy-related workshops in the Institute, and that recipients of the degree have performed creditably in this course work. Incidentally, this minimum number has been raised in the last year to 20 courses, but this standard does not apply retroactively to those who will receive their degrees today.

The degree also means that those who receive it have performed satisfactorily in an exacting set of written and oral qualifying examinations extending over a 5-day period. The examinations are evaluated by a faculty committee that includes members not only of The Rand Graduate Institute faculty, but of other academic institutions as well.

Finally, the degree signifies that its recipient has written a dissertation relating to the Rand research that he or she has engaged in at Rand, that the dissertation is both relevant to policy and is a contribution to knowledge, and that it has been evaluated according to these criteria and approved by a faculty dissertation committee.

In sum, the process of meeting the requirements for the RGI degree is a demanding one. Its successful completion warrants respect, as well as the recognition that is embodied in the doctoral diploma.

The diploma which each graduating fellow will receive reads as follows:

"The Dean and the Faculty with the concurrence of the President and Trustees of The Rand Corporation have conferred on [named recipient], The Degree of Doctor of Philosophy in Public Policy Analysis and have granted this diploma as evidence thereof.

By authority duly committed to us we have hereunder placed our names and seals on this sixteenth day of November, one thousand nine hundred and eighty five."

This diploma is then signed by Don Rice as President of Rand and by me.

I will now read a very brief account of each graduating fellow, and will ask him or her to step forward to receive the diploma.

RAND/P-7185-RGI

RAND GRADUATE INSTITUTE FIFTH COMMENCEMENT EXERCISES

Charles Wolf, Jr.