

Aims of Education IV 1996

From Turbulence to Triumph: A Challenge to the Class of 2000

By Dr. Frank Frisch

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Preface: First presented three years ago, the annual Aims of Education Address is an academic tradition that symbolically opens the school year during Chapman University's new student orientation week. This year, I invited Frank Frisch, associate dean of the Wilkinson College of Letters and Sciences, to share with students and their parents his unique perspective on knowledge, learning and the role of the university. Dr. Frisch's speech was presented in Memorial Hall on August 21, 1996. Because of your commitment to higher education, I know you will appreciate Dr. Frisch's views on the turbulence and triumph inherent in the quest for knowledge. You are encouraged to share your comments with Dr. Frisch, or with me.  
-Dr. James L. Doti, president of Chapman University

I am privileged to present the Aims of Education talk to you today. When I came to Chapman in 1982, the faculty was talking about the graduating class of 2000 as a metaphor for our efforts to develop the union of quality teaching, research and technology. The class of 2000 was a metaphor for quality in both our faculty and students. Today the metaphor is seated before me, and I am grateful for the opportunity to address you. We have thought about you and prepared you for a long time – and we think about you in pretty strange circumstances.

I had occasion to go body surfing at the beach this summer. Running into the water from the hot sand (I have studied this technique from "Baywatch"), I swam through some small surf and prepared to catch a wave to shore. A swell that was larger than I really wanted to tackle – about four or five feet – rolled through and I took off. I caught the wave, but either miscalculated or had forgotten the force waves possess. I found myself looking down the face, lost control, fell head over heel into the trough as the wave rolled over me.

Many of you can empathize with me over what transpired next. I was submerged but did not know what direction was up, sand was forced into my eyes, I really could have used a breath of air – and did not know how long I would have to be scraped along the Pacific Coast before I got one. The rules of engagement in this sort of activity are to be calm and relax as much as possible. Waves that come to our shores are a result of profound and diverse forces of nature and travel thousands of miles. It wasn't long after that I was thoroughly vanquished, humbled and a little sore. And it was in this strange circumstance that I thought of you – the Class of 2000.

From your perspective right now, the university is probably nothing more than a dizzying array of activities. Departmental open houses, orientation this, orientation that, Freshman Seminar briefing, in some cases moving out of your parents' house, and faculty presentations about what college is – all conspire to disorient and confuse. In some significant ways, college at this point must seem like the indeterminate sludge I experienced this summer at the beach.

Welcome to the college experience.

It is one of the aims of education to enable you to understand the forces that will buffet you, and to render meaning out of the numerous forces you will encounter. Just as a body surfer is cognizant of the rudimentary physics of wave propagation, the orientation and genesis of the swells, and the necessary laws of motion to catch a wave and use its force, so you have started a path toward learning which will help you use the power of knowledge to propel you forward in life.

Organized Information is Knowledge: Knowledge is Power

Knowledge is not good or bad. It is like that roiling surf I encountered. Even while struggling with the surf tumbling over and over, I had no Hemingway-esque feelings about a malevolent sea – for I knew that there is no intrinsic goodness or badness about the ocean. As a scientist, I understand it exists as a collection of compounds and gasses (H<sub>2</sub>O, NaCl, K, minerals) which are brought together by the laws of science to produce a wave. The knowledge you will pursue here is also without intrinsic value. In itself it is neither good nor bad. One of the aims of a Chapman University education is to enable you to marshal the knowledge you acquire to perform at your highest potential. How you use your knowledge is as important as what you know. It is the difference between being cast about by waves or using the waves to body surf. You choose the directions, you choose the waves.

It is especially challenging to organize and transform information into knowledge when there is a seemingly limitless supply bombarding us, in print form, in the media, and over the Internet. I don't think faculty is going to hear excuses from their students anymore about the lack of information available as much as they are going to hear about the frustration of filtering and focusing the vast quantities of materials that are quite literally at our fingertips. Information is only a keystroke or a few steps away. Not only is our library a modern information hub, but each building has library nodes, and our campus information computer is available to anyone who can use a telephone. You will find that homework problems will be posted on the Internet, you will learn to use databases, download shareware from other universities, and obtain information from libraries in places as diverse as Lima and Tokyo.

In some ways you may already be ahead of your professors with respect to information acquisition – so listen carefully to your teachers who have learned from the best techniques available in the 20<sup>th</sup> century, and transpose these skills, as you become the first entrants into the 21<sup>st</sup> century workplace. Einstein suggested that our technology exceeded our humanity; but let us share an aim to harness the knowledge you learn at Chapman to do good works for your friends, your community – and to demonstrate that the application of knowledge, and the skills you acquire, are equaled by your thoughtfulness.

What is a “Good” Education?

We believe that a “good education” is one in which there is not only cognizance, but appreciation for the art of poetry and the poetry of art, elegance of chemistry, the harmonies in mathematics and the rhythms of economics. The

overarching aim of education at Chapman University is grounded in the notion that critical thinking is the most important element of your education. This theme is amplified by employers who are willing to spend modest resources on training if they can obtain an employee who is able to think and work independently and resourcefully. We believe that the development of your ability for independent thinking and judgment should always be placed foremost. And, if you master the fundamentals of your curriculum and learn to think and work independently, you will surely find your way and be able to adapt yourself to progress and changes that society demands.

You will also find that a central aim of a Chapman University education is that no major on campus can or will serve as a refuge from mathematics and science. Just as every graduating student on campus must demonstrate English competency, science and its language, mathematics, must be embraced and hopefully appreciated. I have heard on a number of occasions students proclaim with pride that they “don’t do science,” or that they are “really, really bad” at mathematics. Proclaim! Pride! Have you ever heard anyone say that they “don’t do English” or take pride in the notion that they cannot read? A good education includes a modest science literacy. And so will yours.

#### A Shameless Plug for Science Education

Just as you can imagine how disadvantaged you would be if you did not read or write, I have to tell you how enriching your life is when you are literate in science. Listen. Can you hear the Doppler shift of that passing siren outside? Do you have any idea of the changes in partial pressure necessary for you to ventilate now? And what is the concentration of oxygen in this room? You will never again casually turn on a light in a room without having a quiet appreciation for  $E=IR$ , hydrodynamic forces and environmental considerations. And when you leave this auditorium, please consider the physics of these support structures and those ways in which they relate to the structure of your bones.

It was Herbert Spencer (1820-1903) who remarked that science organized knowledge. In your science courses at Chapman you will be working with a technique that is used all over the world called the scientific method. And it is your intent that with this tool – and the lifelong love for learning we hope to engender – that you will better armed against the many ludicrous assertions and purveyors of misinformation that seem to thrive in our world. It is our hope at Chapman University that every student becomes an informed citizen, so that when voting on an issue the merits are considered in the context of a personal value system and not through a misunderstanding of the question.

At the start of this century electricity was a novelty, automobiles were built entirely by hand, and there was virtually no protection of children in the workforce, or rights for groups of people we have only recently in this century called “minorities.” The new century that you will herald holds promise that the class of 1900 could only imagine. You will deal with genetic manipulation, micromotor implants, new food technologies and a thousand other issues previously unimaginable.

The Most Important Production: You!

The theme for this orientation is Chapman Productions. How appropriate for a group of students who are products of the 20<sup>th</sup> century and who are among the first to fashion the 21<sup>st</sup> century. The hope of our faculty is that you will be well-equipped for the rapid changes that are sure to challenge you. It is also our hope that your pursuit of knowledge is sustained long after graduation and indeed last you a lifetime. This may be pursued formally in graduate school, or informally in what is mistakenly called “real life.” And while this may not seem especially critical to you as freshmen, it is our hope that you develop a love for learning, which will develop into wisdom.

Sometimes I tease the orientation staff members and tell them that the freshmen orientation week is carefully orchestrated production to make you so weary of the game playing, role playing, and just plain playing that you then are ready to aggressively pursue knowledge and learning. During this week be mindful that the faculty, administration, staff and entire production crew are not here for your entertainment: This is a production effort in which you have to take part, not simply as an actor, but as the director, screenwriter, camera person and set designer. You are the production; you are the final product.

It is a central aim of a Chapman education that students interact with faculty in a way that is often impossible at other institutions. We don't want you to simply sit in classes. Your college experience should not merely be a production that you watch, like a dinner theater or a Las Vegas show. You should attack each class, challenge each professor, question every idea and in as many ways as possible take part in the production. You made a choice to come to Chapman. You could have gone to State University Somewhere where there are also fine faculty and fine faculties. But by choosing Chapman, you have said, “This is an institution where I will not be anonymous, where I can be an active learner, and where my voice will be heard.” You not only have the privilege to challenge faculty and question ideas, but the responsibility to process information and use your knowledge in the context of your value system. By doing so, you will question and re-examine your value system.

There will be ideas and values in your Freshmen Seminar course that will be antithetical to those you have now. Don't shut them out. If you do not allow for the truthful consideration of your beliefs and provide time and energy for self-examination, then your education can never be complete. Rigidity in one's own beliefs and values can be an impediment to wisdom. And so it is the intent of the Freshman Seminar Program and the hope of this institution that you can develop the skill of challenging your own belief systems toward the goal of better understanding those around you.

### Creating Order Out of Turbulence

Like an accomplished and ever-optimistic body surfer, the enthusiastic student is always in search of the perfect wave, or in this case committed to the endless pursuit of knowledge. Just as a good body surfer makes use of the conditions and chooses the directions, you will chart the course of your education. Ultimately, you may decide to become a chemist, or teacher, pilot, actress or professional athlete. Even if your goal is to become a professional body surfer, we welcome you at Chapman and we promise to guide you when you become disoriented; to

resuscitate you when you stay under too long. But make your path a conscious “decision” and not simply a passive product of random forces buffering you through college and life.

We both have awesome responsibilities and possibilities. It is ours to provide the educational environment, and yours to use your knowledge wisely in the 21<sup>st</sup> century.

*Dr. Frank Frisch serves as the associate dean of Wilkinson College of Letters and Sciences, and as the chairman of the division of natural sciences. He teaches courses in physiology and nutrition and continues to serve as a full-time faculty member.*

*He is president of the board of directors for the Outdoor Science Foundation, a group that works with the Orange County Department of Education to bring science education to elementary and junior high schools. He also serves on the board of directors of the Boojum Foundation, a group dedicated to provide wilderness experiences to schools and corporations.*