

REMARKS BY ADMIRAL E. R. ZUMWALT, JR., USN (RET.), TO THE  
OST SEMINAR, NAVAL POSTGRADUATE SCHOOL, MONTEREY, CALIFORNIA,  
5 SEPTEMBER 1974

First, I am very glad to be back in the Navy again - after six or seven weeks away from it. From what I have heard of the course from you and from ADM Linder, it seems to me you're striking right along the lines of what I had hoped you would when I first heard about it and endorsed the idea. I think we have badly needed to emphasize the operational side at a more formal level than we have had in the past, and it seems to me that this course is on the way to doing that. I don't think I can make much more of a contribution than that unless you get some questions to throw at me as we go along.

I am going to speak just very briefly, for openers - to try and get you all limbered up - so you can fire away with your questions because I don't think that I should try to make a contribution to those areas in which you are probably well ahead of me, but rather limit myself to

worrying about ASW over these last four years. I think that is the area of my confidence, and would be of more interest to you than for me to sit here and try to pretend that I am an expert, anymore, in the field of Anti-Submarine Warfare.

The tough problem that I felt we were facing as we went through the program planning process was how much to bet on each of the four missions of the Navy in the light of the uncertainties - which would be the likely one that we would use,

or how likely are we to use them.

These missions; Strategic Sea Control, Projection of Overseas Presence - as I like to break them down - are kind of interesting to play with in relationship to any given program, such as ASW. Obviously, from the standpoint of Overseas Presence, the least that we can do with any given platform the better off we are, almost.

The Soviets certainly seem to follow this route. They've got 2,054 ships as opposed to the 503 to which we've been driven. In part, the reason they have been able to do this is because they have stuck to much smaller, much more cost-effective platforms. They would never build a nuclear-propelled surface combatant. They are still building diesel-propelled submarines, as well as nuclear-propelled submarines. So they very clearly recognize that there is high payoff for numbers of platforms in the Overseas Presence role, showing the flag, the peacetime practice management kind of thing.

We, on the other hand, have found ourselves - through a combination of factors - driven to lesser and lesser platforms. One of the very strong thrusts in my four years was to try to abate, somewhat, the drive for ever increasing high, costly platforms, and I give myself about a 1.0 on that. The Sea Control Ship is dead, now. The Patrol Frigate program has been cut back. The nuclear-propulsion lobby is just going to make it very, very difficult to have the numbers of platforms

that one would want if one would want to view the world exclusively in terms, for example, of this Overseas Presence role.

So in a very real sense, in my judgment, we're about one-third responsible for our demise in maritime capability and the Russians are about two-thirds responsible, and They are investing larger sums of money to get that capability.

If you talk about projection capability in the pure you are completely out of ASW, and you are talking about amphibious ships and aircraft carriers, with their aircraft and naval gunfire . There one can make an argument for the more expensive platforms.

The importance to the country of being able to rapidly deploy in a crisis and be able to jump with power - hopefully, therefore, to deter and not to have to project - is high payoff for having nuclear-propelled carrier task forces, including nuclear escorts. That's a thrust in the other direction, and we don't have to worry about our capability there for some time. That is the one area, in the four mission areas, where we have a clear advantage over the Soviets, and it will be a long time before they will get the carrier task forces to compete with us in applying pressure against Africa south of the Sahara or Latin America or Asia.

In the strategic area one worries about ASW, of course, from the other direction - what would the enemy be able to do

- to make vulnerable the most survivable of the triad,  
the submarine based missile. There, in looking  
at the problem of ASW and deciding how rapidly to go on with  
strategic investments I have to say that we are just kind  
of playing "hunch bridge" in deciding that we ought to go for the  
Trident program, because because you cannot, today, identify  
any real threat to the Poseidon system. In other words, clearly  
you are going to have to replace those hulls - the first  
one will be 18 years of age in 1978 and all 41 of them were  
built in a 7-year period. Therefore, if you are going to  
replace them before the eldest is 30, you've really got to  
get cracking on a program to replace in a 17-year period of  
time. That means two and a half a year, and we're not building that  
many. So we are going to have some very ancient strategic  
hulls, even at our present rate of expenditure.

Nevertheless, had it been just a judgment with regard to  
replacement, I think I would have been inclined to spend a  
little less in the Trident area, but it was also quite clear  
that you were going to have the President negotiating  
to get essential equivalence in another round with the Soviets.  
You had to have Trident coming along at a pretty impressive  
rate. So we fought very hard to get the 1,3,3,3 program,  
(which is now down to 1,2,2,2,1) for the additional negotiating  
leverage.

But you have to worry about your expenditures in the strategic  
field in another sense with regard to ASW - and that is, every

dollar you spend in the strategic field is a dollar that you are not going to spend in the ASW field. The way in which that cuts in my mind, worried as I am about our ability in the conventional field - I would almost welcome an ASW breakthrough which would drive strategic expenditures ashore and going for mobile missile systems - because I am now satisfied, after four years of trying to move the bureaucracy in program management, that there would be a sufficient hysteresis in the system that the Navy budget wouldn't be cut in full proportion with the shift and you would have more money available to spend for projection kinds of capability and for conventional maritime capability.

Now, finally in the field of Sea Control is where you run right up against this problem of ASW - in that field we might face our greatest vulnerability. I have testified in front of the Congressional committees each year - I think I kept it off the record for the first three years and then actually got it into the classified record the fourth year - as to what I felt our odds were. I categorize myself to the President and the Secretary of Defense and the men of Congress as their "Jimmy the Greek" for naval odds-making. I described the analyses we went through and the judgment that had to be put into it and the reviews of fleet exercises I had made and concluded that, as of the day I took over, the odds were about 55% that we could prevail, for a reasonable range of assumptions, conventional war with the Soviet Union. About a year later

I thought they were about 45%. At the end of my second year I thought they were about 35%. For the last couple of years, I think they have been running at about 30%. I was suggesting that we could be able to bring that up and by 1980, be back above the line if we got the ships funded at the rate that the President's budget called for.

The Congress, if they made cuts, would hold us down to the 30% level, and I see no reason to change that in the light of what the Congress has just done to the Navy budget.

In the field of Sea Control, if one examines how you would optimize, again, you run into this problem of numbers of platforms versus high unit cost. The Navy now sees it quite clear

as a result of the fleet escort study that the numbers of platforms, to oversimplify, have greater payoff than high-unit, propulsive performance.

When one looks at the situation, like we had the Eastern Mediterranean during the Yom Kippur War of October 1973, when the Soviets were able to bring 98 ships to bear against our 65; when one looks at the fact that we had not a single land-based airplane available to assist us against the land-based air in the Crimea and access to the fields of Syria and Egypt; you found yourself wishing that we had a hell of a lot more ships and a hell of a lot less nuclear propulsion coming along.

Again, I want to make it clear that I, on the margin, come down in favor of nuclear propulsion for the carriers and for a few nuclear

escorts, but we've gone way too far. For the price that the Navy's paying, we're just not going to have enough ASW platforms. The calculations are quite clear that you can get by with a lower number of AAW platforms than ASW platforms - that's the crunch point.

So the challenge, it seems to me, to you fellows, when you go back into operational jobs or to planning jobs in the management science, is to satisfy yourselves as to whether or not those biases of mine are right, and whether or not we don't need some continuing effort to throttle back the focus on nuclear propulsion at the cost of large numbers of ships. And, then, further beyond that operationally, to try to figure out what to do about a job that is getting increasingly difficult as Soviet capabilities grow and ours retrogress, relatively - to bring those odds back up.

Odds, after all, mean - 30% odds - means that if we fight three times we ought to win once. If you fellows do your job properly maybe we can win that once the first time.

I am ready for your questions.

QUESTIONS AND ANSWERS, OST SEMINAR, NAVAL POSTGRADUATE  
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QUESTION: Admiral, in looking at the Soviet capability, their large ASW cruisers, as they call them the Mosca, which they opened inside the Mediterranean, and now with their straight deck carriers they are building, there has been some talk that they have evolved in this Projection of Power ashore or whether it evolved for open ocean ASW. How do you think that they will be used? How do you feel that they're a threat?

ZUMWALT: I believe they are headed for projection capability. I think they are trying to vitiate this by a lot of talk about ASW capability partly as a way of misleading us with regard to expenditures, and partly because I think they figure they've got a better claim to use of the Bosphorus and Dardanelles ASW hulls rather than carriers.

It looks to me as though Gorshkov has done everything possible to bring on a Navy in the classic Mahon tradition. He started by building a submarine fleet 3 times the size of ours and then cutting it back to 2-5 times as he built nuclear powered attack submarines. He began next to put emphasis on large numbers of cruise missiles and the cheapest possible surface platforms to put them on and installed them on submarines and on aircraft. He's got the real estate permitting him to put land-based aircraft around the perimeter to facilitate air strikes, he developed the training concept so that they could have a conventional first strike to compensate for the power of our tactical air, and can outreach it by striking first.

So he's now at the point where the logical next thing for him is to have sea-based aviation to project. He can do everything else, today - he can cut our sea lines. It seems to me what he lacks is that capability to compete with us in a projection kind of game in Ceylon or Chile, and that's what he wants.

I believe that if I were Gorshkov that I would do exactly what he's doing, and that is to go in for the small carrier without the catapults and arresting gear first, and I would bet you that he's already in the process of designing the second generation carrier which will be with arresting gear and catapults, for sophisticated aircraft and with this first generation will be large numbers of cheaper platforms.

QUESTION: Admiral, who or what is the nuclear lobby - when you mention that as being the one, well we heard that here, but I don't know what it is?

ZUMWALT: It's Admiral Rickover.

QUESTION: I never got the impression he was going for everything nuclear. I worked for him but I never got that impression.

ZUMWALT: Was this position of what he says overtly or what he says covertly?

QUESTION: It's the material we get in the Congressional Record. He's for nuclear power, certainly, but I never got the impression he wanted that sacrificed to numbers. I was not aware of that. Is that...?

ZUMWALT: Admiral Rickover has been pragmatic about going at it a slice at a time. First, the battle was for carriers and a lot of us worked with him on that. Second, the battle was for some nuclear escorts and a lot of us worked with him on that. Now, his present position is to build no further guided missile ships unless they're nuclear propelled and - overtly, covertly - he's been on the Hill working against the Sea Control Ship and the Patrol Frigate.

QUESTION: Admiral, with the surface community, I wonder how you would feel and also how do you think the present administration would feel about building surface ships with no weapons - making them the platform strictly essential platform, give them the best sensors we've got, take the weapons off the thing and leave the weapons delivery capability in ASW to the air community, primarily S-3, P-3. I wonder how much money we'd save and whether that would be bought as a feasible way of going about the thing? Right now my feeling is that surface escorts versus submarines is suicide. You get close enough to deliver a weapon right now, and you might as well consider yourself dead and he wants you dead. He's not dead if he doesn't want to be, and it leaves you alone.

ZUMWALT: If you view the surface escort as part, as a fraction of the task force which is also going to have S-3s or P-3s, and which is going to have helicopter ASW, the escort, seems to me, does fulfill an important role because that escort has got to be there for AAW.

My submarine friends tell me it's always a threat - every time they stick their periscope up they worry about an escort, and don't worry if there's not an escort there. I think the future of the escort rests on the team play with air systems.

To get to the heart of your question, I would welcome a real in-depth look at that kind of thing. I would also like to see us examine whether or not to solve the ASW problem - which we clearly are not going to be able to solve in peacetime in the next five or seven years at the level of expenditures that we're going to be committed and being driven to optimize wrongly by the nuclear lobby - I would like to see whether we shouldn't be looking at installing the ASW capability as kits to go aboard merchant ships. Maybe we ought to be building our merchant ships with a helo platform and push/pull clip clip radar kind of a system that can go aboard in wartime and have the reserves be well trained in the operational maintenance of ASW weapons and sensors.

I think there are a number of interesting ways in which a Navy, which is now behind and has got to pull ahead, can begin to rethink its problem, and what we may need to do is consider that all of these fearfully costly ships are to be viewed as largely for the projection role, and concentrate on the reserve Navy, packaged systems and Air Force air to help us to do the job that we are no longer able to do.

QUESTION: I asked the question also - Admiral Seiberlich was one of the early visitors to this group and his idea was in protection of high-valued targets - and I assume still is - it was not necessary to kill submarines; just sufficient to either deceive them, get around them one way or another - you did not have to eliminate the threat in order to survive. That's why I asked the question - to build escorts without weapons but with very sophisticated sensor systems so that you could get localization prior to his knowing where you were and making the appropriate move to get out of the way. Now, I can also see the other half of the seapower problem where you'd want to eliminate his use of the seas. They may have to get - to me that implies destruction and then you've got to have a force of some kind to go ahead and do the destruction. But it's not clear in my mind that the surface escort is the guy that's going to do the destroying. That's why I asked the question.

ZUMWALT: There is a minimum number of surface escorts which you'd have to have even if you didn't put an ASW weapon on just to provide the AAW part of it.--- then, the ASW equipment - it's a very small, marginal cost. With the very high prices that we're going to be paying for escorts, having nuclear-propelled ones, I share your view we simply cannot have enough escorts to do the ASW job. So, the kinds of things you're suggesting are of great interest to me as a naval guy, but I wouldn't go so far as to say no weapons or sensors on them.

QUESTION: I think probably I'd be advocating a separate hull that was an AAW hull and then I think you'd put the guided missiles, you'd put the weapons on it. From a training standpoint it seems to me to be much simpler too. You build an AAW frigate and you put an AAW trained crew on it, and you build an ASW platform and that crew is strictly dedicated to ASW work. Coming from a general purpose destroyer, I can remember how frustrating it was to be on a ship which was tasked for EW, surface warfare, AAW and ASW - your primary job was ASW but you spent so much time on the communications circuits and all the rest of the stuff trying to keep track of the other pictures too that you didn't do the ASW job as well as at least I felt I could have if all I had to worry about was ASW. The radarman, for instance, had to be cross-trained in so many areas that they were "jack of all trades, master of none." So I think that the primary mission of the ASW escort was degraded by the fact that it was tasked with a certain amount AAW, a certain amount of surface warfare and a certain amount of EW, although I think EW goes with the ASW...I don't think you can get rid of that.

ZUMWALT: There's only two additional points as far as I'm concerned. One is that I don't think you can disregard the deterrent fact of having some ASW capability on an old hull. The submariner who feels he has a free ride is just delighted. Even seeing an old World War II hulk out there, my submarine friends tell me, begins to put some hazard in their mind.

Second, you're going to have ASW installed on nuclear escorts. Nonanalytically, viscerally and emotionally they are going to be there. You've got to think it out in the light of the fact that those are going to be there regardless of what else you do.

QUESTION: You mentioned the use of Air Force air in supplementing Sea Control . I'd like to know some more about this - about how much is the Air Force into ASW, into naval support?

ZUMWALT: Under General Brown the Air Force was very diffident about getting into this field. Times change. General Jones is much more bullish about it and is having discussions with the Secretary of Defense about how they can contribute to our mission.

Viewed from a narrow, partisan perspective, one always worries about seeing the Air Force get a piece of the action. Viewed from the national perspective, we're in such trouble that I believe we ought to welcome whatever help we can get. We have to be very careful that our masters don't get oversold on the Air Force contribution. I think that the B-1 bomber is going to carry a harpoon missile on it. We've got to know that it's available to us to sink that Soviet ship and that it's not going to be held back as an item of strategic reserve when you go to war, it's not worth very much to you.

So, we have to look at that very carefully. Clearly we should count most on P-3, S-3, kinds of weaponizing - before we count on what the Air Force can do for us. I think you're going to see a lot more action out of the Air Force in the next four years on getting into the Sea Control mission.

QUESTION: Rather interesting - a comment was made to us just the other day by Kennedy for the Dean of Research, here, he's in the Air Force. He said, to quote his own terms, that Rand had been going around to the various Air Force installations with and the theme of this was that the Navy was missing the boat and the Air Force should move in to take over her important role, here - that the Navy was directing its attention solely to defending at sea; convoys, high-valued targets, this type of thing and a major part of the ASW problem had to do with defending land installations. Therefore, the Air Force, and all portions of it, should dedicate themselves to this as one of their primary missions now.

ZUMWALT: Were they talking about defense against strategic submarines?

QUESTION: Yes.

ZUMWALT: This is one of the things we have been suggesting for a number of years - the vulnerability of land with strategic systems that the Soviet strategic submarines could do them in

So I guess they are now in the process of turning that around.

QUESTION: Admiral, perhaps a peripheral question to ASW, in your discussion of numbers of platforms versus nuclear power - and I think all us surface types would have to agree with you because that's more jobs for us - but there's the question; given the zero draft and given the fact that, as I understand it, the Navy has met or exceeded its recruiting quotas monthly, do you feel that if we were to get these numbers of rather simple platforms that you are advocating - could we man them in the future - given all the things that are given today in the ?

ZUMWALT: I think so, and I think we're going to have a much tougher job manning a smaller, nearly all nuclear Navy than we would have manning the equivalently effective or greater effective Navy if we didn't have so much nuclear propulsion.

The nuclear propulsion is the thing that really hurts with regard to getting enough highly qualified, technical people. One always has to qualify, you know how the economy is going to work out and how much pressure there will be from that to keep Navy recruiting quotas on the mark. Certainly as of today, the Air Force and the Navy are able to get adequate numbers of competent personnel, but the Navy is having trouble getting enough people who qualify to do nuclear side.

QUESTION: You recently have gone through ?

ZUMWALT: We fell a little short at the end.

QUESTION: I mean in the nuclear qualifications. I remember in our meeting on the nuclear part recently and they are now looking again at .

QUESTION: Looking at our escorts coming down the pike, here, Admiral, what would you consider to be the optimum weapons suit for ASW weapons for these platforms? Are we weapons?

ZUMWALT: I, personally, prefer to see us go in for helicopters for every escort with a helo-drop torpedo. I believe that there's more honey in that than there is in the ASROC.

It also gives you a quiet sensor platform that is very hard to pick up.

QUESTION: How about the blend of forces between VP, VS surface forces?

ZUMWALT: That's something that constantly needs evaluation. It seems to me that the VP and the VS tend to be almost exactly complementary - that is, in a battle for the Atlantic or a battle for the Pacific you tend to keep your VS in the middle, carriers running back and forth outside of the range of VP with BPs doing the escorting at either end of the basin

survive to threaten them. The trade-off with regard to escorts, in my mind, comes back to this question of how much you're going to pay for them. If they're going to be nuclear, I'd want to see damn few escorts and a hell of a lot more VP/VS. If you're going to be permitted to buy a special number of non-nuclear escorts, then I'd like to see more.

QUESTION: Admiral, getting back to the nuclear lobby, again, right now we've got something like about 85 million gallons of radio active the agency doesn't know what to do with, 22 million of which comes from nuclear weaponry.

How does the so-called nuclear lobby handle the subject of nuclear waste and the proliferation of it?

ZUMWALT: I can't answer that question.

QUESTION: Weapon propulsion had nothing to do - was not even in the same shop . (laughter)

Most of the radio active waste generated by nuclear submarines is solid, so far there's not that much. The liquid has been just a little bit more. That's normal. You're just going to keep guzzling now until you run out of water to dilute it, then it will be a problem.

ZUMWALT: Well, we should have it reconstituted, of course.

QUESTION: At one time we used to discard it at sea.

stopped and now that has to be handled - those are highly radio active and have to be handled very carefully. But in terms of cubic feet, that is not .

QUESTION: Admiral, you have some awfully strong arguments on your side but, obviously, Admiral Rickover has some stronger arguments on his side if we're going in the direction of less ships but more sophisticated power plants. What sort of arguments does he put forth to have us going in that direction?

ZUMWALT: He puts forth the strongest arguments that can be made which are persuasive to those who haven't really gone through the analysis. You know they're showmanship, beautifully written letters, exhibits, signed by Commanding Officers of nuclear frigates that they made a voyage from A to B that would require X number of tankers or X number of escorts to do the same job. He continually hammers away at the fact that

nuclear submarines are just the best thing since sliced bread, If you look at the ASW exercises, where he meticulously avoids any mention of the AAW problem, no submarine has ever shot down an airplane or a cruise missile.

He is a very, very clever salesman. He has a high degree of credibility among those with whom he has associated with for many years on the Hill.

QUESTION: It's been the same story, year after year, for 20 years.

ZUMWALT: That's right. It's carefully nestled in between a few paragraphs about how lousy the Naval Academy is and paragraphs about how ignorant line officers, in general, are.

QUESTION: Those people on the Hill, as you say, that go along with - that become convinced by him, do they recognize what we've been talking about as a problem? Do they recognize we've, in effect, lost control of the seas? And if they do, what do they plan to do about it?

ZUMWALT: I think that there are only two or three people in Congress who really understand to a level of detail necessary what the true situation is with regard to the maritime balance. Most of them just do not take the time or cannot take the time to really understand the problem. In the Senate I can only think of one man in whom I have confidence that he really understands our problem, and that's Senator Jackson. The rest of the members of the Senate Armed Services Committee just simply couldn't run through the details of the problem after listening to testimony for

20 years.

On the House side, in the House Armed Services Committee, there are just three or four who really understand it. But those people have terribly busy jobs - they have to stretch across a very wide spectrum of matters; they tend to rely on their staffs. It's just the damned tough problem of educating them. This is one of the reasons why, over the years, Admiral Rickover has had so much success because he's a known quantity, and those people with whom he's been dealing for 15 or 20 years will accept what he says, if he says black or white.

QUESTION: He's been very effective in dealing with the staffs. That's part of his secret.

ZUMWALT: That's right.

QUESTION: His staff stays from year to year...

ZUMWALT: If you look at the real reason for success - it's continuity. Continuity not only on his part but on the part of those who are with him. If you were able to keep the same Deputy Chief of Naval Operations for Air for 15 years, you'd have the same kind of success. There's a tremendous amount of business that gets done on the Hill that's done because of this old boy relationship.

QUESTION: Along the same line, we had a speaker come in and talk to us who has been associated with the forces in exercise telling how bad we were in . He advocated part of the problem was that first of all we would take a very defensive posture in any conventional war; Russia would take the first blow. He blatantly advocated that one of the

solutions to the problem was for us, as naval officers, to go out and scare the hell out of our wives, our kids and our folks with matters that bordered on national security. In essence he's saying go out and educate the populace on how just how serious the problem is, and don't be afraid to tell them a few secrets. I wonder if maybe that might be a solution to educating more than just three people on the Hill if there are enough people in the general community that do the voting. It's will against might - all my training says keep the secrets secret and don't even tell your wife any of your little secrets, but this guy is saying go out and tell them just how serious the problem is and go ahead and let the national security go by the board. So that, you know, get this problem reversed and is an attitude that maybe we ought to take the first blow because that's the only way we're going to beat them.

ZUMWALT: Let me comment on that in the following way. I believe that I came pretty close, during my last year, to doing what he advocated. I was saying publicly that, in my judgment, we would lose - the odds were - a conventional war. You can't reveal any greater secret than that. I can tell you the pressures on me to "shut up" were almost unbelievable. The thing wrong with that is that the public just doesn't believe a military man when he says it. Until you have a Secretary of Defense as the one that said it - this is the one thing that Admiral Rickover and I always agreed on; we

- both were quite convinced that we're falling behind the Soviet capability - but until you get a Secretary of Defense who is willing to say it - he says it in private, he can't say it in public or couldn't under the previous President - until you get a President who is willing to say it, the people are just not going to believe it.

QUESTION: What are our chances right now, sir, with Ford?

Is he willing to say it?

ZUMWALT: I hope so, I hope so. His first weapon has got to be to defeat inflation before he talks about anything else. Second, he's got to get reelected. I can tell you that Mr. Nixon's strategy before Watergate was first to try to negotiate superiority or parity in the strategic field; second to get us out of the war in Southeast Asia; third to get reelected; and fourth, in his second term, to start telling it like it is. By the time he had been reelected, Watergate hit the fan and he couldn't start telling it like it is to get the defense budgets that he knew we needed, to reverse the situation.

QUESTION: Admiral, do you relate this to education

- how essential education or how much of our critical dollar we should spend on education? On one hand, people advocate that they are not throwers at military people, on the other hand, what I've been listening to is the need for people who can go and deal with highly complex subjects and communicate ashore. And then the other half of that is the technical education that a naval officer might need in the operating forces in order to justly use his weaponry. Can you

give us your opinions about that?

ZUMWALT: I think the way I'd come out is that we have to have a spectrum of types; that we can't have a norm. You simply can't afford, in the naval service, to educate everybody to the level that would be ideal. Nor is there time to do so - to get people accelerated up through certainly the operational side.

So there (lost in tape change). But in any increases in effort that we do make, we should never think of as being applicable to everybody in the Navy.

Ten years ago, selection boards tended to kind of denigrate the guy who had a Ph.D. Today, selection boards are very respectful of the guy who got a Ph.D. Ten years from now, the guy who's got the Ph.D. is probably going to get the nod a hell of a lot faster, but it's never going to be an all or nothing kind of thing.

QUESTION: There's so many dimensions to this that it's difficult to get into it. You give it a high priority related on expanded efforts from where we stand now, but I gather that you would advocate selective resource people - select people that will be out amongst others who don't have access to resource... ?

ZUMWALT: Yes. I think that I would put education and my attitude toward education as a subset of the broader problem, and that's my attitude towards specialization in general.

My own theory - although I was completely a generalist as I came along and never went back to anything except, I guess, a second tour in Personnel - my own view now is that a man who gets some education in a field should repeat in the field, and a man who hasn't had education in a field should repeat it. If it's strategic planning, he ought to go back to it, and that every time he's ashore, he ought to repeat. We've gotten... information is going in the military of anything else

QUESTION: If you follow that theory, Admiral, then where do you draw your CNO's from?

ZUMWALT: I think, in the future, we'll draw them from the guy who has done the best in a series of competitive subspecializations.

I have said a number of times when I was CNO that I suspected that my successor would be a generalist but I would bet pretty heavily that his would have been a subspecialist in some field. Actually, in a sense, you could call Admiral Holloway a subspecialist in the nuclear propulsion field, although he's really a generalist.

QUESTION: He's more of a generalist?

ZUMWALT: Yes, but his successor, I'll bet you, is going to have to have repetitive tours in some kind of subspecialization.

QUESTION: Admiral, a different sort of question maybe - our first group of officers will be leaving the area in six months or so, another group a year later; how do you think we gentle-

men can make the greatest impact in the Navy with what we've got, the sort of jobs would be ideal...? First, this is a loaded question, Admiral, because BUPERS hasn't quite decided this question...?

ZUMWALT: The first point I'd like to make, sort of a general one - how I think you ought to face every job you go in - and that is I think you ought to face each job as though it's your last and not let your concerns or your relationships with others prevent you from charging into what you think is right.

Now obviously everything like that has to be tempered - you can't be a total fanatic. If anything, the average naval officer - the average outstanding naval officer - bears in favor of caution. I think it is important to really press your views right up until the point where the decision is made and not be excessively cautious.

However, with regard to the education that you're getting, I'm not sure that I'm competent to do more than to make the general obvious points that I would sure as heck hope that the Bureau does use you in jobs that are directly related to the kind of education you're getting here, rather than to consider it just another ticket - to consider you available for assignments unrelated to what you've been learning.

QUESTION: That's another half of the question. How do you get this accomplished? Do you always worry about the utilization of those who have had special education - or this is more of a generalist-type, except it has a high-technical flavor.

You know, how do you figure that this comes about within the Navy?

ZUMWALT: No. Although I think we've made greater progress under Admiral David Bagley than we have for a long time because he's pressed very hard for this OTORS concept - for getting people more subspecialized. One thing that I think is probably unique about this course is that almost more than any other I can think of, you're not only getting training for that ASW-related job but also for command jobs.

So, if I were a LT assignment officer or a LCDR assignment officer, I would be looking to get graduates from this school into ASW-associated jobs; weapons officers, executive officers of ASW-type ships, skippers of ASW-type ships, in the right rate of progression.

I think that as you get more and more computerized and better able to identify the subspecialization of officers and the requirements for subspecialties - the billets - that the detailers are going to be doing better and better.

One of the great frustrations of my four years was that we never quite got the personnel system computerized enough to be able to fit every square hole with every square peg. Admiral Bagley is confident that within another year or two they will be there.

QUESTION: Well, associated with that too is this decoding of the billets and so forth, and I've seen how it came about in the original days and how it would be useful in apparently

maintaining it apparent in Congress that these people had special education or' but it isn't always working out that way, and particularly in this kind of program where we're really in at the URL of the . There's a major problem in that the billets at sea. I can understand why - officers there are not interested in quoting these billets. The difficulty then is, even if the person is used in a good billet, the visibility of this doesn't show. Now what do we do on that one?

ZUMWALT: I would hope that the Chiefs of Naval Personnel would continue to drive until they get them decoded.

QUESTION: Admiral Moorer's working for us in one - but it's a problem.

QUESTION: You wouldn't have anything against, then, decoding some billets aboard ship?

ZUMWALT: Not at all.

QUESTION: They are able to do this, weapons officers of ALGs and also some DLGs, some CLGs and CVAs - those billets are now people are about to be

ZUMWALT: There we've always done it in "jack-leg" style. When I was a detailer we knew where those P code billets were, we just didn't call them P code billets, and they went to a special kind of guy. This is the point where its got to be a more official

QUESTION: Do you buy the concept that there are two major and at least equally important payoffs in this kind of

educational program; one very specific with, say, technical expertise or expertise in a field like ASW, and the other is something more related to the quality or performance of an officer - his ability to handle the unknown, to think on his feet, to handle the tasks undefined that are going to be there five years out?

ZUMWALT: Yes, I do for the most part.

QUESTION: Yet, our system doesn't recognize but only one of those and it has to do with whether or not instead of going to a p Code job, they send you to be a skipper, a problem solver or something.

ZUMWALT: No the system doesn't check. Looking back to my own case, the fact that I had done some very special work in CIC, I think did more to facilitate my subsequent jobs, whether it was the navigation of a battleship or command of ships, than anything else that happened to me.

There ought to be some way to crank that into the system. It's a simple thing to do.

QUESTION: Do you think that maybe it might be a good answer, or do you think that we'll ever get into the situation like most of the other Navies, I think, in the world do where you have a guy onboard at sea who is the engineer who can never attain command because engineering is his specialty, and break it down in that category. Along those same lines, Admiral Rickover, I think, made a statement very recently that he let me know that he insists that all of his commanding

officers came up through the engineering training because he says you shouldn't be driving one of those ships around if you haven't had that training. I, personally, disagree with that. I think it's not that necessary - what do you think?

ZUMWALT: I share your view. I believe that if we had time and if a career could be 50 years, that it would be important for a man to have an engineering billet enroute to command. I have had, in my three commands, the problem of training all the way from taking, as a chief engineer, a man who came out of OCS school as a brand new ENS, a week after I lost my last chief engineer, to having one who was a LCDR ED, and I can tell you that the skipper who has that expert engineering duty chief engineer has one heck of a lot easier ride.

I believe, myself, there is no reason why the skipper must have had engineering experience. He's a better skipper for having had it but he's a worse skipper for what gunnery operations he failed to get by virtue of having had the engineering experience. Our engineering plants are getting so complex that it really increasingly, I think, takes specialization to handle it. I learned pretty hard on the system to increase the number of 1400s who were chief engineers. I'd have gone even further, if possible, with a combination of factors. I guess by about that time I finally learned what Admiral Arleigh Burke meant when he said to me when I took this job - when you make a decision be sure you look up the action officer and convince him it's a good idea if you want to get anything done.

QUESTION: Admiral, sort of coming full circle now, in, again, this number of small, relatively inexpensive hulls versus the nuclear power plants that you advocate - what sort of engineering plant are you going to put on them; 1200 pounds? I don't think any of us think is the way - steam propulsion, perhaps at all isn't. Are we far enough along with the gas turbine or the hydrofoil concept, or something like that? What are your views on that?

ZUMWALT: I was a great believer in the gas turbine as something that is a lot simpler to learn and to maintain. This 1200-pound plant is at least; I've had one, and it did well but it was because we had that chief engineer who was on top of it.

QUESTION: Not all skippers in CRUDESPEC at the present time agree with that conception.. Some have been asking type commanders who had their engineering duty officers or chief engineers replaced by young LTs

ZUMWALT: Well, I suppose we're all victims of our own experience and I had a hell of a good ED who was my chief engineer. But I had some very good line chief engineers; guys who went on to be very outstanding exec's and skippers and they couldn't hold a candle to the guy who was highly trained.

QUESTION: Admiral, relative to the other services and as we talk about specialization or keeping a unique generalist concept that the naval officer has and the policies in sup-

port of that, do you see us driving so that the Navy policies become one of just specialization vice this unique generalization .

ZUMWALT: I do. I think increasing

QUESTION: Any time projections on that? Sometimes we use those arguments to retain the way we do business.

ZUMWALT: Anybody is foolish to peer too far into the crystal ball. But I would say that over time, you'll see first, the engineering department advocated by that general line officer in some technical area. Maybe that's five years away, maybe it's ten years away.

I would say that by ten years from now we're just bound to require every officer to have some area of subspecialization. Not only is this teaching developing too fast for the human mind to keep up with enough as a generalist It's going to have to go the other way - of taking the best subspecialists to do the generalists' jobs.

QUESTION: In the far end of that spectrum is the restricted liner who has taken a subspecialty and made that his specialty.

ZUMWALT: That's right.

QUESTION: So you have really the complete pattern

And that seems to be consistent with less mobility that's being forced on from a personal side. (ZUMWALT: Yes.)

QUESTION: Admiral, if we go to specialization, particularly engineering, then how do we handle the problem of a skipper unknowledgeable in engineering making severe demands on his

chief engineer

?

ZUMWALT: I think that we have to credit our skippers with having enough "horse sense" to follow recommendations in view of where they are not knowledgeable. I have seen very good skippers, who never had a day of duty in an engineering department, who learned enough as they went along about nursing engineering plants to be very responsive to the needs of their chief engineer.

I don't think it's any different than the fellow who is not an aviator and has a helicopter flying off his destroyer who listens very carefully to the counsel of his pilot.

QUESTION: Does that mean that we're going to have to take some specific steps to get more of the people who have that capacity? To retain - to stay longer in naval careers?

ZUMWALT: I think what you'll do is you'll make damn sure that PCL and the XO courses give the skipper the general knowledge they need to know about how to relate to being in engineering departments and not expect them to acquire this through service in the department.

QUESTION: Sir, if what you just said is true, why would it not follow then that an 1110 could be qualified to be CO of an aircraft carrier?

ZUMWALT: No reason in the world why it shouldn't. The law should have been repealed 15 years ago. This is why we had the law - but there was no logic to that.

QUESTION: We're going to have to invite Admiral Holloway to come out.

ZUMWALT: The British terrier skippers are not, of course, aviators and they did very well. Everything else being equal the aviator who commands a terrier obviously is going to know a heck of a lot more about the requirements, the length of the deck and so forth. But we've had, in recent years, trouble with aviators who have had so little command experience - sea-going experience - that they had difficulty with the seamanship aspects. It's just a question of balance. I don't think the law will ever be repealed.

QUESTION: Because of the pilot lobby?

ZUMWALT: I don't have any particular name to bring .

QUESTION: Is the Mark 48 torpedo still alive?

ZUMWALT: Yes, as of the 30th of June it was alive and well. It was having another series of tests to eliminate some bugs but it was still clearly the first thing we've had, in my lifetime, that could do the job that everybody associated with it is delighted to have it. It costs more than we like, but it, for the first time, justifies the billions we've been spending for the submarines to put it on.

QUESTION: Earlier you mentioned that the Sea Control Ship was dead, that the Patrol Frigate was dead.

ZUMWALT: No, the Patrol Frigate has been cut back.

QUESTION: Cut back. I guess it's the Sea Control Ship that you said was dead. I want you to elaborate on that - I mean it's dead this year maybe, but is it really for the

future? What does Admiral Holloway say?

ZUMWALT: It's very hard, of course, but the Congress has eliminated the funds completely for it, and therefore, I have not talked to him and don't know what his plans are.

But traditionally, once Congress legislates a decision like that, the thing is gone. Now, unless there are words in the legislative history that say come back and rejustify it, they are going to have to come up with some other kind of a concept.

Now, here's the problem. With the Sea Control Ship dead - and the reason for it being that they think it ought to be larger and have some catapults; the minute you start doing that, Admiral Rickover is going to insist that it be nuclear-propelled, and then you're back up to a billion dollars and you're not going to get the numbers that you need. It's just as simple as that. It's the difference between analysis and the facts of life.

QUESTION: He doesn't believe in small carriers anyway.

ZUMWALT: No. He doesn't believe in them because they are too small to be nuclear-propelled.

QUESTION: Even a middle-size ship. Not one of these - a 40,000 toner or a 50,000 toner is too small?

ZUMWALT: That's right, for the same reasons.

We're at a point where it's a very, very serious issue as to what one ought to do now about a carrier Navy. You have always been giving up - to get two nuclear-propelled carriers, you've

- been giving up a carrier because they're up - two for the price of three. That made sense as long as you can aspire to get air-power at sea in another kind of a platform. Now with the Sea Control Ship dead, if I'm right, you are going to have to think in terms of whether you can afford to nuclear-propel the larger carriers. That gets you into a whole new tiff with Admiral Rickover, again.

QUESTION: Admiral, when Admiral Gorshkov speaks of control of the seas as saying it's only necessary to control that area of sea long enough to do a mission, and then forget about control of the seas. Do you see the possible projection ashore of their carriers or our strategy with our carriers and convoying units as a similar-type concept of only controlling that portion of the sea for a certain length of time? Or, do you see our feeling totally different?

ZUMWALT: I think we have to have a different view. I think what he says makes sense for the Russian purpose. They can defeat their principal enemies - the European NATO nations and the Chinese - over land lines; they can support their principal allies - the Warsaw Pact - over land lines. They don't need oil over the seas; they don't have anything that must come in on the surface of the seas so that all they have got to do is use the seas to project for a period of time against a third nation. Other than that, their job is to cut our sea lines.

We've got to keep the seas open permanently, anymore, if we're going to bring in the oil to fuel our economy: 15% today, 50% by 1980. 69 of the 72 resources that the Depart-

ment of Commerce calls critical are already coming in on the surface of the seas.

So there's no answer for us except to keep them open, if we're going to keep our economy going anymore.

QUESTION: Do you see this as totally open - any ship being able to sail unescorted or do you see this as open? Could we convoy sufficient ships to get back here?

ZUMWALT: It's . We ought to be doing a lot of strategic stockpiling. The Nixon administration went absolutely the wrong way. It was a disastrous strategic decision. It can only make sense in the light of something unknown to me. We ought to be stockpiling; we ought to be increasing the amount of oil storage we've got; we ought to be developing the Alaskan oil reserve so that we can turn on the pipes and get it - tankers start getting knocked off and we have to convoy and expect losses; we have to have extra numbers of ships to take those losses and so on.

QUESTION: Would it be permitted to ask the limits of the specialty to what you see as the technologies coming down the stream that offer the greatest promise for countering this recent submarine threat the Russians seem to be building up for us - fighter submarines, or effective actions , and it's getting tougher and tougher. For instance, we hear different evaluations as to whether we could push the button. For instance, do our sensors accurate enough to put the weapon close enough? What is the present capabilities to carry out the kill?

I talked to ADM - he was saying . I said what is your actual mission up here? Well, he says to kill submarines.

He says actually there's no way of knowing whether we can do this because we've never tried. Certainly, if the increasing capabilities of the Russian submarines make it look more and more difficult. What kind of technologies and areas of investigation should we be paying attention to potential?

ZUMWALT: I don't think that I can give you a very intelligent answer on that. I was satisfied that our ASW program was a balanced one with regard to the power and the effort going on and considering the fact that we didn't have enough to do anything well; we were pretty well optimising our shortages.

I think we feel that those areas that are potentially lucrative we've had potentially the most money going into them. It's one of those things that needs constant monitoring. What we do is through the Interact Committee and through the Defense Scientific Board and through our own CNO Executive Panel, with the expertise from the outside, seek to keep a very, very close monitorship on this program. I don't know of anything that I feel we ought to be doing differently, other than trying to avoid spending less money per unit.

QUESTION: Is there someone competing with Admiral Rickover now - competing for attention, I suppose, or competing for an ear or establishing the same rapport for 15 or 20 years?

I realize that staffs change but it seems to me someone else

is setting up his own little shop. It might be a few years yet.  
In the Congress's Armed Services Committee.

ZUMWALT: The only other institution that the Navy has that  
you could say was equal to that would be that of RADM

Levering Smith in the Polaris shop, or Poseidon shop, now  
Trident. He has been there nearly as long as Admiral Rickover,  
starting out under Admiral Rayburn and moving up to take the  
top job, and he has achieved very much the same kind of sex  
appeal on the Hill, but he has been what I would describe as  
much more of a team player - living within the system rather  
than trying to get the system overruled.

QUESTION: That's what I meant - is there someone in the wings  
that the "service forces" haven't unveiled yet, who has been  
developing this background to compete? To provide an even  
argument? I think...I can't say that I disagree with Admiral  
Rickover in all ways or I agree with you in all ways, but,  
you know, there ought to be equal arguments.

ZUMWALT: Admiral Rickover is a phenominon like J. Edgar Hoover.  
J. Edgar Hoover was a great man for his country, but he stayed  
too long and became a disaster. The same thing has happened  
to Admiral Rickover. The answer is that he ought to leave and  
I don't think that will happen, unless he dies.

But the Navy is now suffering more than we're gaining by  
virtue of his very aggressive efforts to push one program,  
to Admiral Rickover than the Navy.

You can only have anarchy in one part of the Navy.

QUESTION: You're quite right, this Admiral Smith, Levering Smith, is very restrained in his approach with the Congress. He's considered a very good technical man and he responds to their questions and queries within his boundary. He has established an excellent reputation within his

ZUMWALT: He doesn't seek to be a requirements man and that's what I wish Admiral Rickover would do.

QUESTION: Who would be the logical successor to balance this?

ZUMWALT: I would hope there would be none.

QUESTION: Well, I don't mean to follow in the line, but to provide the balance that you think is needed?

ZUMWALT: I think it would be equally wrong to try to create an aviation Rickover or a surface Rickover. You'd have the Navy becoming oblong in a different direction. I think that the answer is to digest it and get it behind us, even as J. Edgar Hoover died, and get on with a rotation of administrations which is the essence of the health of any organization.

Admiral Rickover, in his early days as a three-star admiral, used to have almost weekly fights with VADM Smedberg, who was the equally feisty Chief of Naval Personnel. The two of them, almost weekly, were in the office of the Secretary of the Navy getting him to resolve arguments that should have been solved at a much lower level. Finally, one day, Mr. Court sent for both of them, cleared all the aides out of the room that were diligently listening through the door, and proceeded in

tall Texas language to tell them exactly what he thought of both of them, using generous expletives. When he got all through cursing them both and telling he didn't want to hear anything more out of either one of them ever, threw them out of room. As they walked across the lobby, Admiral Smedberg was heard to turn to Admiral Rickover and say - I have never been talked to by anybody before in my life like that. Whereupon Admiral Rickover looked at him and said - you deserve it!

QUESTION: Admiral, if this is not a subject you prefer not to address, what are you thinking about doing now that the CNO job is behind you? Do you have any plans? Or would you like to discuss that?

ZUMWALT: Well, I've taken one page from the State Department's book, and pushed my options ahead by renting a home in Falls Church for a year, so we could decide where we'd like to settle at a later time. I'm doing four things at the present time, one of them, still trying to turn off the mail that continues to come in, as though I'm still the CNO and many people remember the name. Admiral Burke tells me that that takes about six months to phase out from that. And get my files in shape. Second, I'm doing a series of lectures around the country, trying to follow up on this point that was made over here, about striking a blow for what's happened to our military power. I'm doing that both in a series of private groups with my

investment company, and I'm also doing it in front of a series of public audiences. Third, I've undertaken to be a visiting professor at four universities. At Vanderbilt, I'll be going down three times a semester to lecture to their management graduate school on the management kinds of problems. At Pennsylvania, I'm giving a lecture on the President as Commander-in-Chief, as part of a course on the Presidency. At Stanford, I'll be lecturing for the Political Science Department in arms control. And Whittier University has asked me to do a six-week's chair on lectures of my choice, so I'll have an interesting range of things there. Finally, I'm trying to dictate my memoirs on airplanes in between. Sometime during the next year we expect to decide what the second career ought to be.

CLOSING: Admiral, we appreciate your coming here and discussing a wide range of subjects with us

We appreciate your talking with us.

ZUMWALT: It's been exciting to be with you all. I have tried to give you an unrestrained so you can see some of the prejudices.