Linda Cavalluzzo: David Chu is currently president of the Institute for Defense Analysis (IDA). From 2001 to 2009, Dr. Chu served as the Under Secretary of Defense for Personnel and Readiness. He served as Assistant Secretary of Defense and Director for Performance Analysis and Evaluation from 1981 to 1993. From 1978 to 1981, he was the Assistant Director for the Congressional Budget Office for National Security and International Affairs. He was in the Army from 1960 to 1970, and he was an economist at the Rand Corporation between 1970 and 1978.

He was also the director of Rand's Washington office from 1994 to 1998. Dr. Chu is a member of the Defense Science Board; he's got lots of awards, but I'll mention only a couple: Department of Defense Medal for Distinguished Public Service with Gold Palm, as well as the Department of the Navy's Distinguished Public Service Award. Let's welcome Dr. Chu and his panel.

David Chu: Thank you very much. I would like to express my appreciation to the organizers of this event. It's been a wonderful review of how we got to where we are today. The challenge of this panel is to speak about what now faces the volunteer force: what issues, problems, opportunities it may face in the years ahead. We have a distinguished lineup. I won't go through the bios, but they are comprised of individuals who have a long experience analyzing these issues. And, in many cases, they've helped administer the programs involved. They've been there, done that.

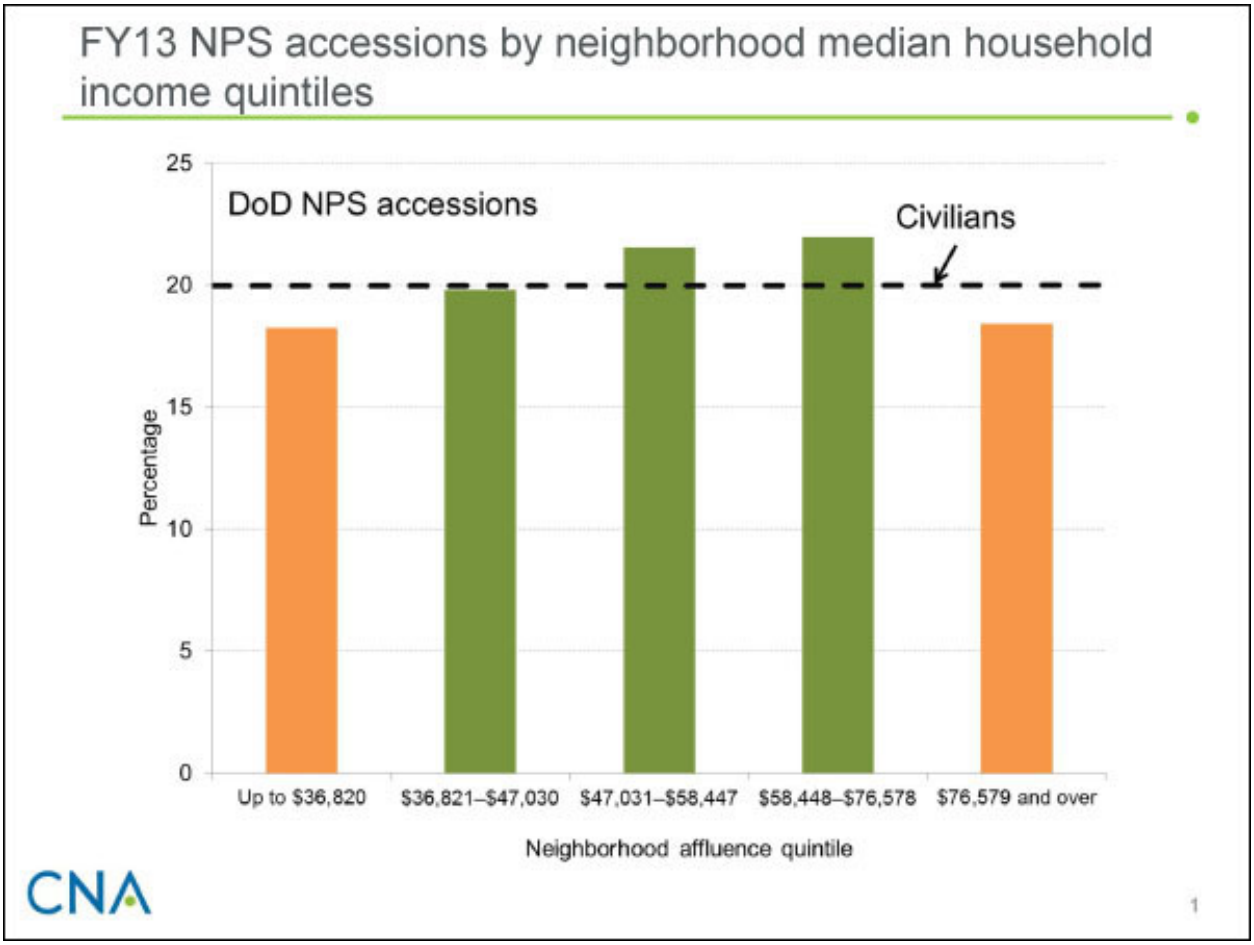
I've asked each panel member to pick an issue or a subject to speak to, in terms of presenting a future challenge. Each should take about five minutes, and we'll have a short discussion with the panel members so people can agree to disagree with their colleagues. Then we're going to want to invite your comments and your views on the same set of questions. What are the challenges? What are the surprises going forward?

We will start, not in quite the alphabetical order that we're arranging, but an order that has, I hope, some meaning, in terms of what each panel's going to say. We'll begin with Aline Quester, who I believe actually has some data.

Aline Quester: My talk is more of a quick look at the worries about the AVF and then, 41 years later, what does it look like. I've got some slides but before I show them, I want to read you one quote of Senator Ted Kennedy, from about 10 years before we got the AVF. It summarized what many people in the country were thinking:

> A volunteer force during wartime would be mercenary, comprised mainly of the poor, the black, and the uneducated.

It's hard now to think about the fact that people really believed this very firmly at the time. Well, what I'm going to do is show you representation-type issues over the years of the AVF—minorities, gender, age, and geography.

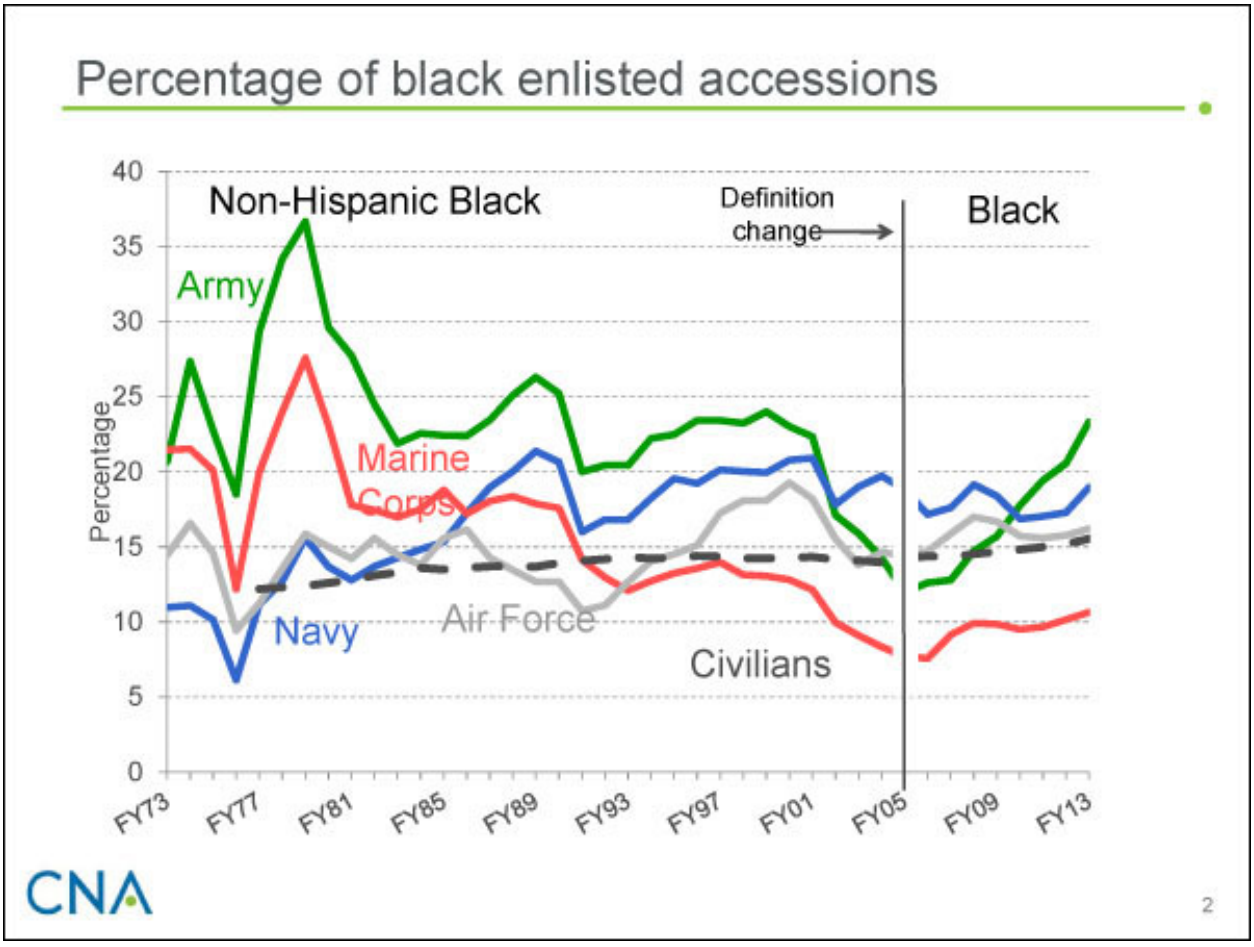


The neighborhood income quintiles for new accessions is some updated work of my colleague Diana Lien. Her analysis builds on work since the beginning of

the AVF concerned with representation and socioeconomic background of recruits. Now, we don't have any income data directly on recruits' family's household incomes, so what Diana did was take neighborhood median household incomes. She used census tract data.

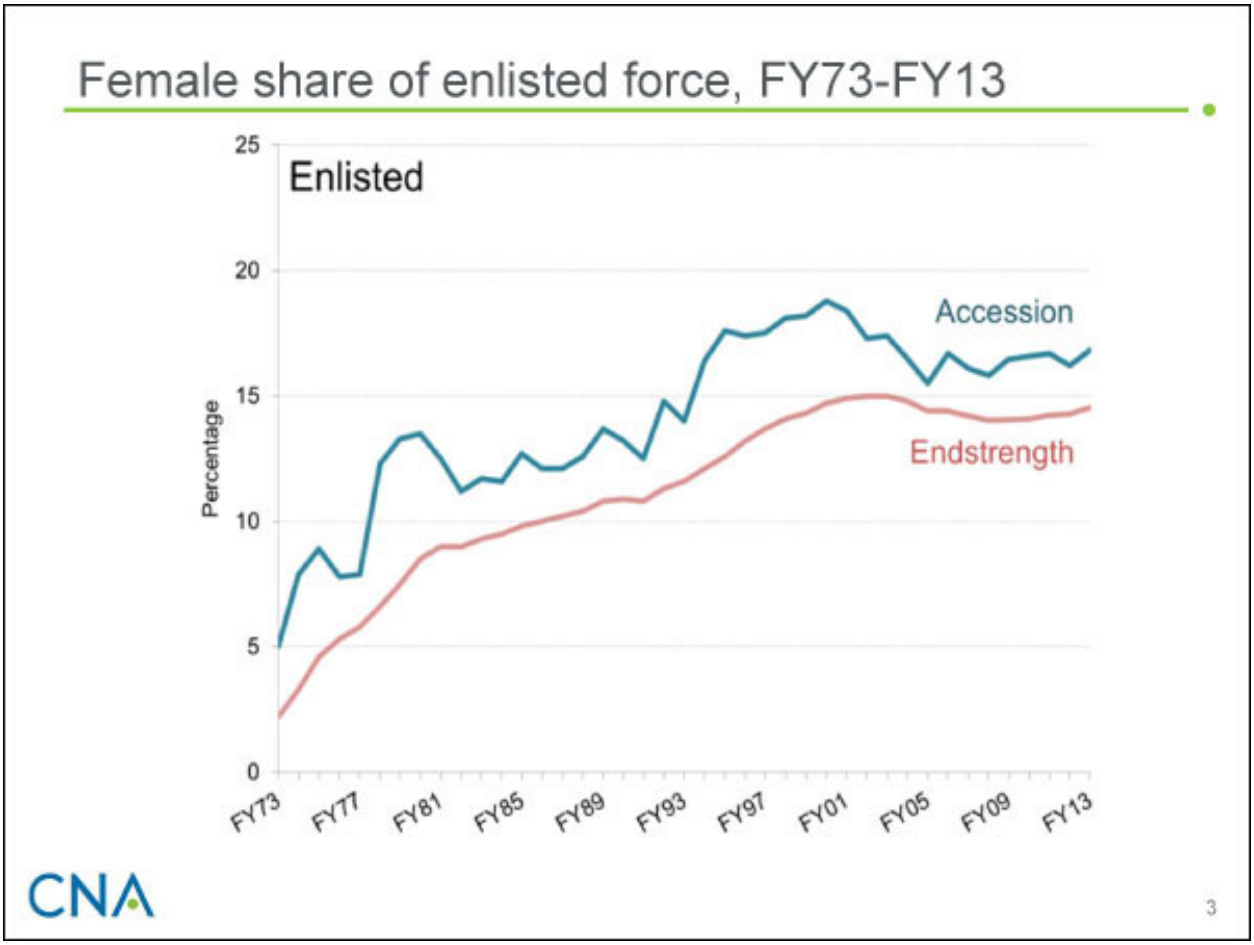
You see, as many of the speakers have said before, this is 2013 data, but 2010 looks similar, 2012 looks similar. The analysis Richard Cooper did in 1977 looked pretty similar to this also. You see that the lowest quintile and the highest quintile are somewhat underrepresented. The lower one probably because of the education requirements—we're just basically taking high school diploma graduates plus now—and in the upper-income group because those young people are going to college. The middle-income groups are solidly represented.

The prediction that the force would be poor has not held out. Let's look at minorities next.



This is the picture over time from 1973 to the present. You could see in the late seventies you're having higher proportions of blacks in the military. The black line going across the figure is black representation in the civilian economy. The peak of black representation in accessions was at 29 percent in 1979, and the low point of it was 13 percent in one of the recent war years.

The idea that volunteers would make up a black mercenary army, particularly in combat, did not hold up. In fact, black representation in the military decreased during the years of the war.

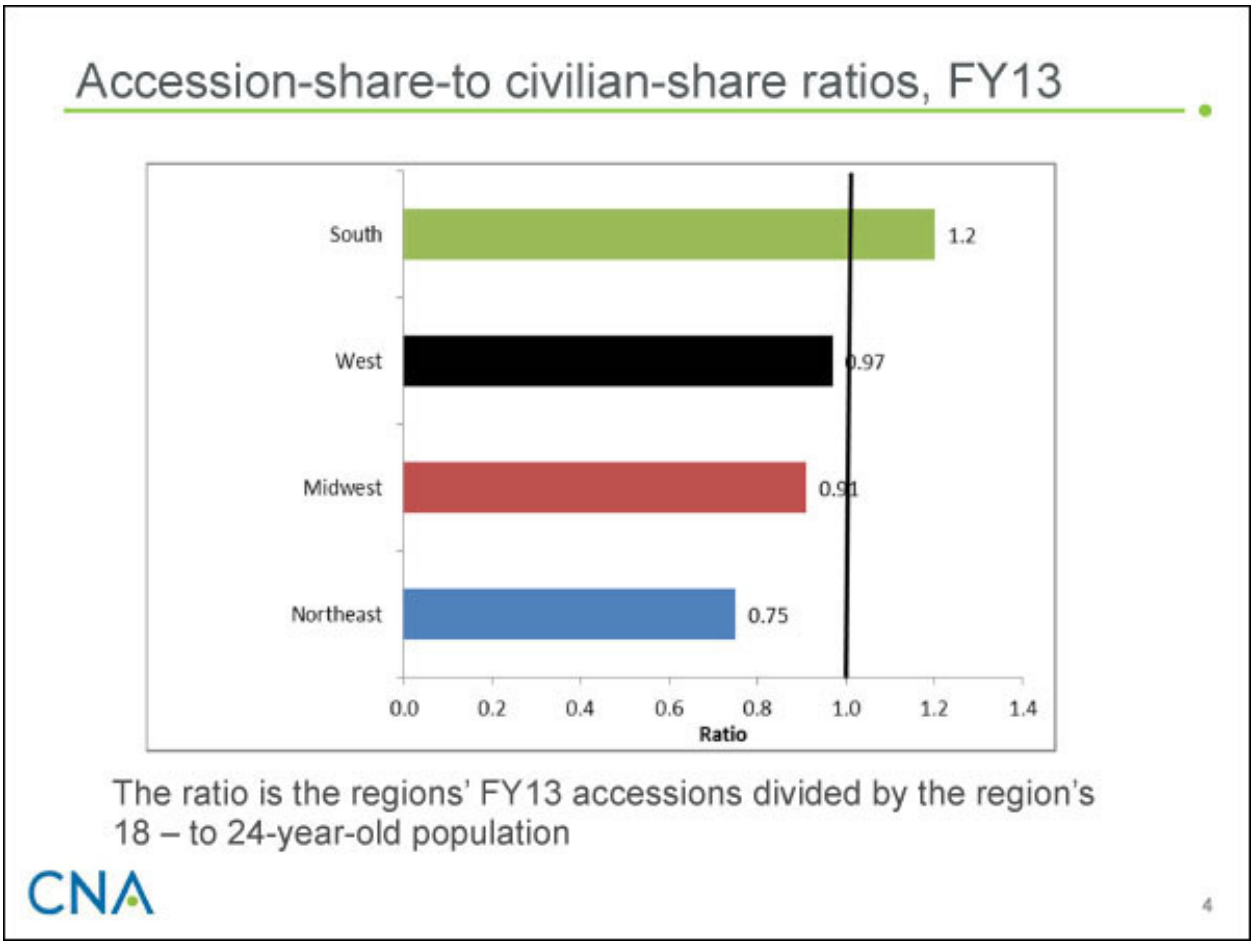


What about women? Well, curiously enough, when the Gates Commission in 1969 did the Gates Report, there isn't anything about women. I mean, this is just amazing to us now nowadays, and even to several members of the Gates Commission. I found references in the literature where people said, "I was sure we talked about women, and I went back and looked and I

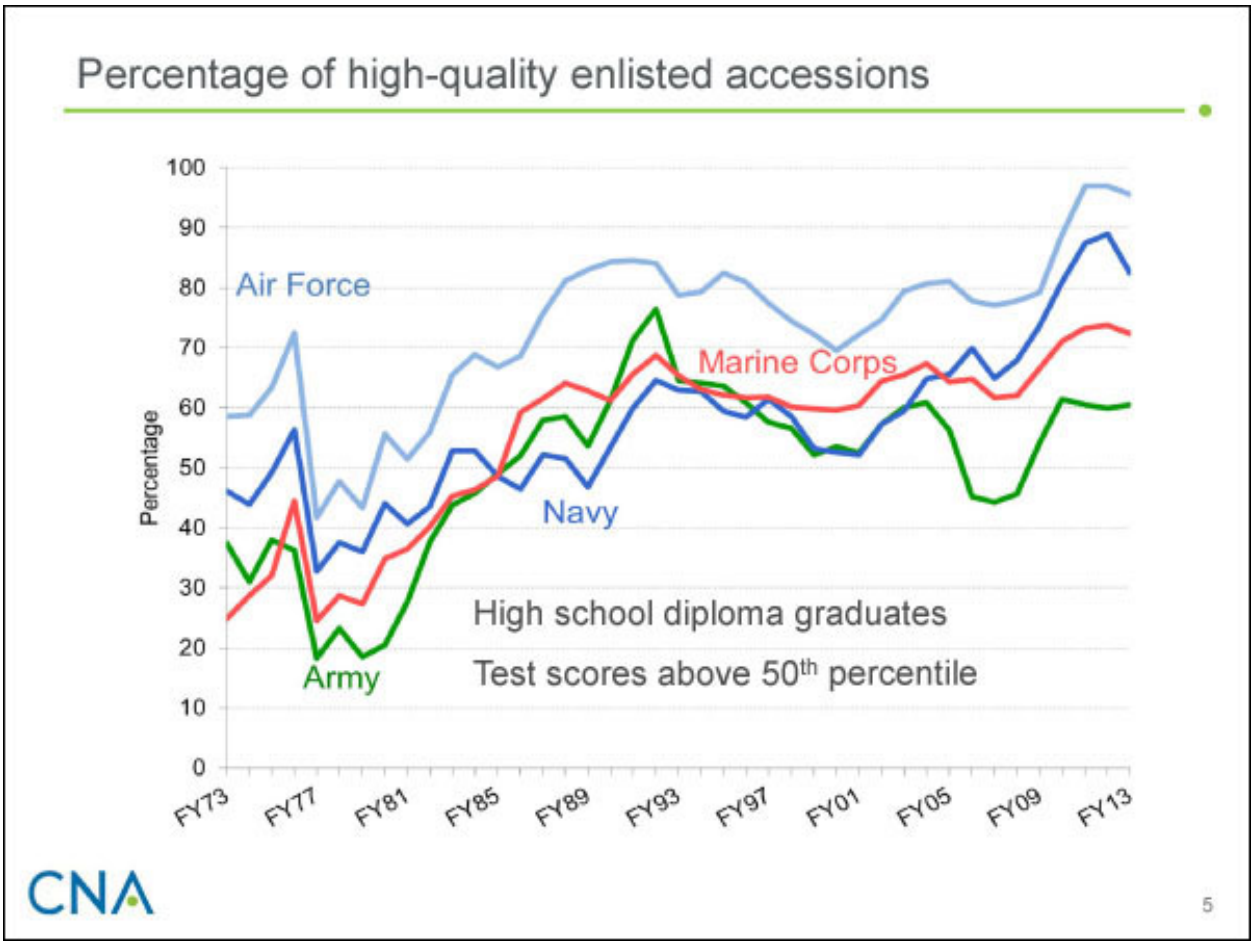
couldn't find anything at all." Fairly immediately after the report, however, you get the Equal Rights Amendment passed by both houses of Congress and an interest in women, but that's past the time period of the Gates Commission.

In terms of women, I'm just showing you the percentages of women in the active-duty enlisted force. At the beginning of the AVF, the enlisted force was 2.5 percent female. Very few women in the force, which maybe is the reason that the Gates Commission was not thinking about women. You realize what a long way we've come in terms of female representation. One fact that I don't think is very well understood is that since 1996, female enlisted end strength has been flat. In the officer corps, we continue to have slow increases in female representation. Presently, we have proportionally more women in the reserve forces than we do in the active component, a fact which surprised me. There's all kinds of initiatives now that we decided to open up all the occupations to women. This will be something to watch in the future.

There's no talk about age in representation in the Gates report, and I think most of us would realize we probably don't want all ages in the force. If you compare it to the civilian labor force, the military is a lot younger. It's a little bit older than it was at the time that we started the AVF, but it's still a lot younger than the civilian labor force.



In terms of geography, the slide shows 2013 non-prior-service active component accessions divided by the 18-to-24-year-old population in each of the regions of the country. The South is way overrepresented. It was overrepresented when we began the AVF, but it's much more overrepresented now than it used to be.



The final thing I want to talk about is the percentage of high-quality accessions. You can see the point in the late eighties where Bill Sims discovered the misnorming, as the percentage of high-quality accessions just falls off completely. The test scores had been indicating accession quality was great, but the operational forces were complaining that the accessions were really stupid. Bill listened to the operational forces and discovered they were correct.

Since then you've seen this tremendous rise in quality. General Max Thurman for the Army and Generals Barrow and Wilson for the Marine Corps really changed the views of their services on the importance of quality recruits. The quality in the last few years has just been absolutely astounding.

I guess I'd have to agree with all the other people who came before me who said we now really don't need to worry about the AVF succeeding. We've

used it during a war, we've seen what high-quality recruits it has, we've seen that it's pretty representative of the country in terms of racial and socioeconomic groups.

David Chu: Aline, thank you for setting the scene so nicely. I do think, if my memory serves me correctly, that one reason the Gates Commission didn't talk about women, if I'm remembering accurately, women were still serving basically in a gender-segregated establishment.

Aline Quester: That may be an excuse, but I'm not going to take that as a reason.

David Chu: Fair enough. Now let's turn to Fred.

Fred Vollrath: Great, thanks. Let me just open with a couple of facts. Fact one is I entered active duty in 1963. That makes me really old. That was clearly the draft era, and then I spent the rest of my military career as an HR practitioner. Publicly, I want to thank all of you analysts in the room for all the hard work and input that you provided over the years. It has, in fact, been invaluable to us trying to set programs and policy.

I also need to publicly thank Dr. Oi. I didn't have a clue who he was until I got invited to this and then I read up on him. In the 1990s, when the Army recruiting was really bad, and everybody including Army was missing missions, I had the opportunity to go and testify in front of Congress. One of the members of Congress waxed eloquent about the draft, saying, "Since you're having such a problem, don't you think, General, it's time to bring back the draft? "

I told him very clearly and very succinctly there's no way in hell I would ever agree to coming back with the draft and if, in fact, there was a draft, I would not be appearing before them today because I would have left. The draft was an unprofessional, extremely costly operation for this nation, in my opinion, and we had to do something different. Having walked the walk, and thanks to Dr. Oi and many other people who were cited here, the nation changed, and it now is an all-volunteer and all-professional force.

We spent the most of today talking about the military side of the force. To me, the all-volunteer force is enlisted and officer, it is active and reserve, and civilian. DOD is now an all-volunteer force. Now, if I were king for a day and could cause things to change, I would for sure try to, in some way, bring together all of those constituencies so they are better synchronized, leveraging the volunteer aspect.

Make no mistake about it. When the Congress says, in all of its infinite wisdom, that civilians will not get a pay raise this year, and then civilians will not get a pay raise next year, and civilians will not get a pay raise the third year, that has an effect in America, in terms of how people view government service. You don't just take those actions in isolation, and so if DOD needs to do anything, and the research community can help, it should be to take a more holistic look at the all-volunteer force in all of its dimensions.

My comments are going to be around two things. One is consistency and the other is continuum. As I said, I'm an HR practitioner and have been for 50 years. My comments about continuum are going to be based on what I have learned both in DOD and in corporate America, namely, that we will only be successful if we understand the interconnected programs and policies that are required to make this work. We talked in here a lot about attracting, that's recruiting; we've talked to some degree about retaining; we have talked almost not at all about transition, and we have absolutely not talked about veteran status.

From my perspective, for the all-volunteer force to be successful in the future, all four aspects of this continuum have to be interlinked. When I was head of HR for a global corporation, I figured out that they really needed to get their employees to at least have a favorable impression about their company when they got fired. I use the U.S. term "fired," or "made redundant," if you like the European term. It pays to spend a little extra money so that fired employees don't go out and trash your recruiting effort, or deface your company in some public way, because it would come back to haunt your ability to be profitable.

We are no different in the Department of Defense. We have had transition programs; we now have a transition program by law. However, I don't think anybody ever really looked at it in a holistic view, as part of a continuum. We transition the service members into veteran status; in my opinion, we must be extremely supportive of the Veterans Administration, because every one of those veterans has been involved in recruiting those young men and women.

Then, if that happens, you're back to accessions and then retention, and I think we in DOD, and with your support, can do a heck of a lot better in tying all of these together and putting equal emphasis on transition and equal emphasis on veteran status. It will pay great dividends, and I think it will be a far more efficient and cost-effective force.

Transition is something that costs some money in the short term, but I submit if we did some good analysis, we would find out that in the long term it is very, very cost-effective to spend a little bit more money—not just for the nation but for our own vested interest in the Department of Defense.

Since we're limited to five minutes, the next thing that I've got is consistency. Looking back over 50-something years as a practitioner in HR, one of the biggest problems and, I submit, one of the most costly problems that the Department of Defense has had is the lack of consistency, in terms of its programs and its support of the accession programs.

In the 1990s, it was my fortune, or lack thereof, to be the Army G-1 during a drawdown, and in an environment where the economy had picked up—thank goodness for America. The economy was roaring, and so recruiting became extremely difficult. Why? Well, because the word on the street was the Army is going down; the Army is firing people. If you hear General Motors is firing people, you're not going to go to General Motors to find a job. The Army's no different.

Number two, the economy, thank God, was really, really picking up, and so that propensity, economic, really wasn't there. As a result, we did a

bureaucratic thing: you know, there's a bureaucratic rule, where you can't fix it till you break it. We broke it, and to fix it, generally speaking, under that bureaucratic rule, you pay twice as much money to fix it as you ever would have spent to prevent the problem. In those days, and we've done it twice, we cut recruiters, we cut advertising, we closed stations, all the things that you shouldn't do.

My concern, and the reason I talk about it today, is because we really shouldn't make the same stupid mistakes over and over again. We are, in my opinion, looking at the tea leaves or approaching about that same condition. The economy's getting better; great news for America. The word's on the street: DOD is downsizing. Great. Civilian workforce? Not hiring. We say we need the money elsewhere, so recruiting and advertising dollars are going down. I submit that needs to stop.

That needs to stop now; otherwise, we'll do what we did twice before on my watch. After we cut everything, we needed to double the recruiting force and pay twice as much on incentives to get people to enlist than we ever would have had to have done otherwise. My experience as a practitioner is that you can either pay me now or you can pay me double later. One way or the other. My caution now for DOD and all of the services is do not go to that well the third time, unless you really want to pay in the long run.

I think there's probably also some other fundamental things that can be done. I think it's time that we, as an institution, with your help, go and try to find other factors that motivate the force.

In corporate America we did some testing, but we absolutely interviewed people. We absolutely cared about what motivated them, and we also cared what they really wanted to do, because it was far more cost-effective for us to do that up front than it was to create a churn, in terms of attrition. Because attrition costs two and a half times as much to replace a person than it does to keep them, so you're better off again up front doing it. I think we should not just figure out what the test scores say; I think we

really need to spend some money on what they want to do—the desire, what motivates them.

I know, from corporate experience, if I can find out what motivates you, I can buy you for a hell of a lot less money. Period. You cost a lot less money if I scratch your itch. I think we can do a far, far better job at the front end, on assessments, by looking at all three dimensions, not just the single one because it's cheaper. In the long run, I submit, it's more costly. Thank you.

David Chu: Fred, thank you for raising a series of challenging issues. Let's now turn to Dr. Hosek.

Jim Hosek: Thank you very much, and I also just want to open by saying how much I enjoyed the opportunity to be here today. This has been a pleasure. I want to talk about compensation challenges in the future. Maybe the best point of departure has to do with the issues raised by Christine Fox, and others as well, that is, that the compensation bill is high and it's rising. In the foreseeable future, it's going to continue to grow. That may imperil the force because, at some point, maybe Congress is going to say, "It's too costly. We've got to do something to rein it in. If we can't rein it in, we need to set parameters about when we might shift to a draft and what circumstances, and so forth."

I think that history has shown that the issues the volunteer forces face are manageable issues. Inevitably, the volunteer force will speak for itself, and that's because of the nature of volunteerism. When pay and the conditions of service, the opportunities available to families, and so forth, really fall below some competitive threshold or reservation wage, in effect, that differs person by person, eventually those decisions will accumulate to provide a signal to policymakers that recruiting is bad or retention is bad or quality is waning. That is basically a signal to the Hill that it either needs to change policy or make a policy that exists more viable by changing conditions or increasing pay.

Therefore, the challenges that have been faced in the past are really a good precursor of what might be faced in the future. When one talks about

increases in compensation, one is really talking about similar issues to what was faced in the past. There are things that will be changing. I want to talk about several of those, and the relationship between compensation and the supply of personnel and the relationship between compensation and the allocation of personnel within the force.

In both cases, what's going to be relevant to these comments is that they get back to the very notion of volunteerism. The individual incentive to serve, that may be hidden knowledge, private knowledge to the individual, but can be revealed to some extent under different mechanisms. The mechanism we use today has to do with military pay. The most obvious measures, regular military compensation, when it's high enough, there are enough quantity to come in at enough quality, and that's good. But inevitably, at high rates of pay, a significant amount of economic rent is being paid to individuals, some of whom would have served at lower rates of pay. Does that mean we want to totally reconstruct the compensation system? No, but if we are thinking about controlling costs and yet making our manpower requirements, in terms of the quantity/quality/experience mix, then we need to think very hard about extending the volunteer mechanism.

Let me give some specific examples. There's been very exciting research under way within the Army at the Army Research Institute on the development of personality measures that can be used as an additional screen for bringing personnel into the military. This research has now developed to the point where the instrument that's being used for personality assessment is resistant to gaming, so if you thought you knew the right answer to a question that could help you get access to the right position, forget it, because there is no obvious right answer.

This is interesting information. I think it holds great potential. It will not, as I mentioned, displace high school degree graduate and AFQT as important indicators, but let's assume for a second that this research is successful. It conveys information about performance in the first term of service. When I think about compensation, then I think the next step is to bring that information into the context of compensation analysis.

So far, and understandably because this is a work in progress and instruments are still under development, subsequent performances are unavailable, but as this instrument gets fielded, it would be terrific, and even essential, to have the information added to personnel records so that one can see not only the tradeoff between, say, being a 3B and having a high personality score versus being a 3A and having a lower personality score, but understand at what cost. What is the supply curve? What are the costs of adding this information to the mix? That's a challenge for analysis. This type of analysis will help by revealing more about the individual's match with the military.

The second, again, very exciting element of personnel management has to do with policy innovations that the services have begun to implement. These include the use of auctions and the use of matching mechanisms. As many of you know, the Navy was a pioneer in the use of internal auctions, using auctions as a way of attracting personnel to hard-to-fill locations. What the Navy would do would be to offer a maximum amount, a ceiling, that they would pay and let qualified individuals bid down from there. Instead of $500 added a month, I'll do it for $400. Well, I'll do it for $375. Well, try me for $350. This is a way, a monetary mechanism, for revealing information about the individual's preference for service in that location. It's a revelatory mechanism.

Another mechanism is the matching mechanism, exemplified by the Army's branch-for-service initiative, whereby cadets who were just graduating have the option of choosing which branch or career field within the Army that they will enter, in exchange for a commitment of additional years of service. Now, if you graduate, say, from an academy, you owe five years of service right off the bat. If you want access to a computer branch, well, maybe you've got to sign up for several more years.

This is a nonmonetary, revelatory mechanism. It's very interesting; its intellectual birthplace was a paper by Gale and Shapley in 1962 on matching mechanisms. It's been used in a number of instances, such as matching residents to hospitals. The development of this mechanism in the area of personnel has led to something called career-optimal-stable

mechanisms. There have been a couple of papers recently and an article in the *Journal of Political Economy* that describes these mechanisms, why they're stable, equilibria, etc. Again, however, my point is that these are two mechanisms now for eliciting further information about an individual's willingness to serve within the service.

The third thing I want to mention relates to productivity and compensation, and here, I suspect that if you were asked "What do you think about the relationship between productivity and compensation?," one of the first questions you would ask yourself is, "Well, what do we actually know about productivity?" This was a hot topic in the 1970s and 1980s. It was understood at that time that the all-volunteer force could succeed and get stabilized, and if the initial analyses were to be believed, it would lead to a more senior force.

There were a lot of questions like, How senior should it be? and What's the trade-off between a less junior and a more junior or, alternatively, a more senior versus less senior force? Studies were done, studies that were enriched by showing not only the relationship between experience and productivity, but also bringing in the role of AFQT. I submit that it's time for an entirely new generation of these studies, and further, that the studies should be tied to compensation, as was suggested in a talk earlier. In John Warner's talk, one begins to understand Walter Oi's point about what's the relationship between incentives offered by compensation and the subsequent performance.

Now this extends, obviously, not just to the individual but also to analyses that would involve unit leadership and unit composition, and there are precursors to studies like that. This is an important area within the military to try to figure out, not only how to make the force more effective, more flexible, more able to retain people, but also how to pay them efficiently and to do so in a way that is cost-effective. We want people to serve on a voluntary basis; they know their own willingness to serve, to some degree. As Fred Vollrath was saying, you want to know how to scratch their itch, but people won't necessarily voluntarily tell you exactly what would get them to stay, so you need a mechanism to elicit that

information, and you want to do it in a way that is neutral across individuals.

One final point that I'll raise—this has to do with the projected growth in healthcare costs. I know Carla is going to be speaking to that in a minute so I won't say much. Healthcare costs, too, are a compensation challenge. What incentives will induce military families or retirees to shift to less costly healthcare? To sum up, the topics that I've suggested—the examples, personality screens, assignment mechanisms, and productivity and incentives—are all challenges for compensation policy and compensation research. They will, I hope, join the ongoing stream of research on recruiting or retention and the structure of compensation, and so far help sustain and enrich and preserve the all-volunteer force. Thank you.

David Chu: Jim, as you noted, Congress has the last word on compensation, given our constitutional system, and to speak from a Congressional perspective, Carla has actually worked on both sides of the aisle.

Carla Tighe Murray: I would like to talk today about the affordability challenge, if you will, and I've arranged my remarks into three points. First, the total compensation package offered to military personnel is, of course, the key way to attract and retain a professional force. Secondly, as you know, the cost of that compensation package has been rising dramatically. It's risen more rapidly than DOD's top line and more rapidly than general inflation in the economy. But that leads me to my third point, which is that I think the cost of compensation can be managed, and that affordability need not jeopardize our all-volunteer force.

As we saw this morning, from the earliest analysis that Walter did, compensation, and particularly, how much the wage would need to be to attract a volunteer force, was a key part. As you also know, a professional force, a volunteer force, is going to stay longer than a conscript force, and the volunteers will bring their families, and the families are going to be there longer as well. We need to think about the non-cash compensation, as well as cash compensation, in part because of the civilian opportunities

available as alternatives to joining the military, but also because of ways to compensate the families for the unique aspects of military life.

Current non-cash compensation includes the benefits that servicemembers use immediately, and those are the things like subsidized child care, healthcare for servicemembers and their families, subsidized housing, and so on. The total package, of course, also includes deferred compensation, which would include military retirement and family healthcare for those who have served an entire career.

In addition, deferred benefits go to people who do not serve an entire career but separate before that time, and those are funded by the Veterans Administration, such as healthcare, disability payments, and the education benefits as part of the GI Bill. Now, that's a lot of benefits, and I don't have a lot of time, so I'm going to focus on healthcare.

Servicemembers can receive healthcare, as you know, funded by DOD, for themselves and their family members. It's zero or low cost through a program known as Tricare. Christine Fox mentioned it earlier. Retirees can also purchase coverage for themselves and their family members through Tricare for an annual fee of about $550 per year. This is much lower than comparable civilian plans available on the market. Remember, of course, that military members can retire as soon as they complete 20 years of service, often around age 40, so that retirees can benefit from this program for many, many years.

In the mid-1990s, when Tricare was first implemented, healthcare costs represented about 6 percent of DOD's budget, but spending increased by more than 130 percent—that is more than doubling, after adjusting for overall inflation in the economy—between 2000 and 2012. Today, it represents about 10 percent of DOD's budget. What caused this increase? In a recent CBO report published in January, we found that there are two main factors.

- First, lawmakers have expanded the Tricare benefit in various ways. One example is the new benefit, Tricare for Life, that was created in 2002. When military retirees

become eligible for Medicare, and this is when they turn 65, if they enroll in Medicare for a fee, they can join Tricare for Life for free. Tricare for Life provides a Medicare wraparound program that eliminates most of the out-of-pocket costs. The program is quite popular. DOD reports that about 1.6 million people enrolled in Tricare for Life in 2012.

- A second factor is the increased usage of healthcare services that is fostered by financial incentives to use Tricare.

The share of healthcare costs that Tricare users pay is much lower than the costs paid by most civilian consumers. Tricare's comparatively low out-of-pocket costs have two effects. First, the number of users has increased, as people switched from more expensive plans to Tricare. The total number of people enrolled in Tricare Prime, which is the most costly program for DOD, rose by 8 percent between 2000 and 2012.

Second, Tricare participants have increased the volume of health services they consume. DOD estimates that the average person enrolled in Prime uses 50 percent more outpatient services than a civilian of comparable age participating in a comparable plan. CBO found that these factors explain most of the growth in military healthcare costs between 2002 and 2012. This suggests that while the rising cost of healthcare and other elements of compensation is cause for concern, and it may indeed cause DOD to make difficult choices in weapons procurement or modernization, its costs are not a good reason to move away from an all-volunteer force. Moving to a conscript force who were paid less would obviously shift again the burden of maintaining a ready military from the taxpayers to the loss of opportunities for conscripts.

The cost of benefits like healthcare can be managed in an all-volunteer environment. CBO has explored different options to reduce healthcare spending by DOD. Three of the options would have increased the out-of-pocket costs paid by military retirees and their families without affecting active-duty personnel or their families.

CBO estimated that these sorts of policy changes could reduce federal spending on military healthcare by between $2 million and $10 million per year. I'm not advocating these particular changes. There are, of course, pros and cons associated with any of the proposals, but I do think that these sorts of examples and these sorts of analyses can help mitigate the affordability challenge faced by the AVF going forward.

David Chu: Carla, thank you. I'd like to turn now to Sam Kleinman. Sam has also been a recent practitioner, responsible for the readiness portfolio within the Department of Defense and other special issues.

Sam Kleinman: Thank you. I appreciate the relationship with Walter, over all those years, first as a teacher, and then a mentor, and then a friend. You know, it didn't start that way, I have to be honest. It is 1970 and I'm newly a graduate student, and Walter wanted me to talk with him in his office. It was a mix between awe and intimidation. Here was a blind man who was just phenomenal and could do anything. It was always three of us: it was me, Walter, and Genie, the dog. When I left that room, I remember thinking, "I don't think I'm ever going to get this guy to like me. I hope the dog likes me."

The reserves and the National Guard—I think I picked an important topic and one that we haven't spoken about today. I think it is a big issue, and it really does touch on the issue of the AVF and the draft in many ways. I see these other issues that we talked about as costs we have got to deal with, but I don't see them as the type of issues that will threaten the AVF. I don't think we're going to go back to a draft because of the cost.

What will trigger conscription is going to be things outside the control of the Defense Department—certainly outside the control of the manpower analysts—and that will be something that happens around the world. Take 9/11: we managed to get through it, but something really serious had happened and we felt that we have to act quickly and show some determination and resolve.

The President authorized a call-up of 50,000 reservists. Even though we may not use them for a while, as a signal it is very strong. It's like a draft;

you think back to 1940, when we instituted the draft. It was really a sign to friendly countries in Europe; they had been mobilizing, and we would do the same. It was a real threat, but also, it was a statement of our alliance with them in Europe, as mobilized in their own defense. In my mind, I think having a strong reserve, and National Guard is really critical for the AVF. That will allow us to surge, that extra force we need, when we feel we have to call on something extra.

I think it's part of what I would consider the full AVF model. I do think we have to convey that this full model does work, that it lets us complete the mission we have to accomplish. As a big supporter of the AVF, I'm not arguing that reservists and National Guard members are perfect substitutes for the active force. They aren't. I mean, we always have to understand where they fit in. They can complement our active force, and they are certainly superior to a bunch of untrained recruits that we could bring in on the same timeline through the voluntary process.

One reason I'm concerned, though, is the fact that we don't have the same sense of public outcry when weekend drills decline and reserve funding for training and equipment is cut that we do for active-force cuts. Yet what makes me most worried about reserves is the political realm. The reserve advocates are the military leaders in the Pentagon who are representing the total force. Because they are closer to their active forces, the conflicting roles of "help for the actives" and "help for the reserves" sometimes make it difficult for them to see the importance of the reserve forces. Of course, the National Guard are in a little better position, with a lot more political clout, and they have a four-star in there to help along the way.

Another thing that sometimes hurts the reserves is our unrealistic expectations of how quickly they will reach a certain place and training level. They're going to get there to do something in three months or six months. I don't think people realize that you can't get an active unit to go somewhere in three to six months, unless you plan it. When we were doing Afghanistan, we had three or four years of plots with the BCTs we had. We planned what we were going to modernize, where we're going to

put the new equipment and the parts, and the people that would be needed.

The idea and the thought that we would get reserves deployable in three months is just totally unreasonable. We have to think about reserves differently. They have a different role here, and it is a good role. Unfortunately, it could work against us because people will say, "Oh, they can't do X. Reserves are no good. What are they good for?" I'll give you examples of where I think the reserves and National Guard are good for.

I think the last 13 years gave us some insights. The reserve and National Guard performance has been commendable (and it is probably a lot better than that). They performed much better than anyone would have expected in very trying times, and I can't imagine how the active Army would have survived without having them. I mean, it was just stressful on the Army. The active Army just couldn't make it happen, certainly not at the levels that were desired, with the people they had.

The war years weren't all good years but we did make it through them, and as speakers here noted, people did sign up, even with stop-loss and through the changes and expectations about deployments. People stayed, at least the right number stayed in, and we found out that a lot of reserves and National Guard people filled a lot of important roles in both OEF and OIF.

The shortages were not E2s and E3s, which a draft could fix. We were short E5s and E6s—that's where our problems were, that's where the Army was stressed. Those holes were plugged by the reserves and the National Guard.

Reserves and the National Guard really change how you can build the force, as you are no longer constrained by the active-duty pyramid and the active-force table of organization. Deployed reservists were helping to build local communities, and helping build local police. The individual augments (IAs) that we used to call up and the joint-staff positions were heavily populated by reserves of all four services.

The other thing is that, had we joined the reserves and National Guard with BCTs and other formal organizations, it would be very hard on them. I guess the end of my points here is that we should think about what the mix between prior and nonprior service should be. If we need more prior-service, experienced people quickly, we have the reserve and the Guard. I don't think they have to map exactly to the active force, and I don't think it will require huge investments.

I think the "continuum of service," wherein we build build on the active population, is the essence of Selected Reserves; they are our citizen soldiers. I went to Afghanistan to meet reservists we've been deploying, and I thought that these guys represented the best we have to offer, and that's pretty good, and that is all I have to say.

David Chu: Sam, thank you. Appropriately, the last word is from Russ Beland, who is a current practitioner, so he is someone who is facing some of the issues we've described here already. Russ?

Russ Beland: Thank you. First of all, I'd just like to thank Aline and Linda for pulling everybody together. I think I know, at least in passing, a majority of the people in the room. It's really great, and I want to thank Bob Murray and Katherine McGrady and Bernie Noble for making all this happen and for providing facilities and lunches and all that stuff. Thank you very much.

I have a Walter Oi story that's worth part of my five minutes. First time I met him, I was in graduate school. We were at a conference, the Western Economic Association meetings, and it was 1988. I had no idea about national security work. One of my professors introduced me to Walter, told me a little bit about him, and I thanked Walter for all his work because when the draft was repealed, I was going on 17 and I didn't know what I wanted to do, but I knew I didn't want to get drafted and I knew I didn't want to go to Canada, so the draft getting repealed was particularly important to me.

I watched my brother—my brother enlisted in the Army rather than be drafted. His draft notice arrived about two days after he reported. I saw his experience with it; it was a total waste of talent, a waste of 22 months

of his life. The Army got very little out of him for it, so I thank Walter for saving me from a fate like that, which may well have happened.

What I'd like to do in terms of the talk is to end on a high note, as I think the all-volunteer force is in great shape. I think it's in no danger. I think there is very little cause for worry and problems we do face are, A) manageable, and B) not terribly large by historic standards. With that said, recruiting is always going to be an issue. For active-duty enlisted this year, DOD-wide, we need about 150,000 people. Trying to get 150,000 teenagers and 20-year-olds to do anything is going to be hard. In my personal experience, getting two of them to do anything is hard, so it's always going to be a challenge.

Looking, you know, at the years ahead, baby boomers are retiring in fairly large numbers now, and that means they're dropping out of the labor force but they're continuing to consume goods and services. That should mean, other things equal, it's going to mean that the labor market is going to be fairly tight for a while, because they're going to be demanding exactly the kinds of goods and services that would-be recruits can provide. They'll need lots of labor-intensive work: they need drivers, they need swimming-pool cleaners, they need massage therapists; they need all those kinds of things that the labor-intensive services provide, exactly the kind of thing that the military-recruit population would also be a good fit for.

The good news is those of us who were baby boomers, after about 2030, 15 years from now, more of us are going to be dying rather than retiring, so this is a short-term problem. They call economics a dismal science, but that's only because they never studied demography. In 15 years, we're going away. After about 15 years, that demand from the baby boom retirees is going to be tapering off—more will be dying than retiring—so that's a relatively short time in this line of work. People who have already reenlisted once will still be in the military 15 years from now; some of them may have reenlisted twice.

Let me talk about why I think it's basically a good news story in four dimensions, real quickly on each one, obviously. The first one is supply,

and it's true, I don't think anyone's mentioned it, but it's true that, over time, the percentage of young adults who qualify for military service has been creeping down. It's been a slow, steady trend, downward trend, which could conceivably be cause for alarm. Fortunately, while the percentage is creeping downwards, supply is growing, so an average year-group—say, people in their late teens, early twenties—in 2005, each year-group was about 4.1 million people. By 2014, it will be 4.4 million, not a huge difference. By 2035, you're up to 5.1 million, so we've got a bigger and bigger pool to draw from.

We're also already seeing an increase in willingness to take foreign nationals through programs like "military accessions vital to the national interest" (MAVNI), where we'll take people and accelerate their citizenship. They can do a few years perhaps, as a foreign national, and they'll get their citizenship while they're in the military. That increases the pool. We're also changing military jobs. Cyber warriors we've talked about a little bit. I don't know what cyber warriors look like, but they don't look much like the rest of the military, probably, so we'll be drawing from a bigger pool.

More positions are open to women; recruiting women remains a challenge, but it increases the supply pool because now we can take women for almost any role in the military. Finally, on supply, our standards are flexible. The Army taught us a few years ago that we don't want to recruit prior felons. They don't work out well. We also don't really want to recruit the dolts. They don't work out well either. Thank you, Army, for being the test case there, but there are other standards that are flexible: for example, weight or tattoo policies. Nobody wants soldiers or servicemembers covered in tattoos or considerably overweight. But, you can bend those standards a little bit. They're already talked about, in the case of drone pilots and cyber warfare, where we don't really care if their hair is long. You can extend it just as easily to a lot of other MOSs and ratings. Do we really care if a sonar tech is physically fit? It's nice, but it's not a must-have.

I did a little research in preparation for this. Obese servicemembers are less than one-half a percentage point more likely to medically eat right than ideal-weight servicemembers, so it's not like you're entertaining a huge health risk if you've got some servicemembers who are a little heavier. We're not to the point that anybody's looking at that, as far as I know, but if supply ever does become a problem, there's a big group of just-a-little-too-chubby folks that you could open up the roles to.

This is an economics conference. If my first dimension was supply, the second dimension has to be demand. We used to bring in a lot of people. The size of the force has been in decline for a long time, and it looks to me like it's going to total about a million active-duty, somewhere out there. That, combined with people serving longer than they used to, means a lot fewer people coming in the door.

The average years of service in the force was 5.7 in 1975 and shot up in 1990 to about 7.4 years. It's fallen a little bit since then, but that's largely because we increased end strength because of the wars (we increased end strength in part by bringing in a lot of new people). It's still hovering in the seven-year range. For officers, it's over 12 years. It's amazing that we have an average 12-something years of service for officers.

To give a sense of scale, I went back and I got the numbers. In 1955 the accession mission was 623,000 DOD-wide. That was nearly 30 percent of a year-group of 18-year-olds, and they had to be almost all men, so if you need nearly 30 percent of a year-group and almost all male, that's a huge percentage of your people. In 2005, it was 3.8 percent, and a lot of them could be women. The recruiting missions came down to 152,000.

We only need a small percentage of each year-group eventually, and they don't have to be exactly 18 years old. We only need to get 3 percent or 4 percent of them, I think, and if we keep using a little bit of price discrimination, we can actually get more efficient on that. Not everybody has to get the same pay. Price discrimination is efficient, so I think there's room for less pay that goes to everybody, and more targeted pays to improve efficiency.

The third dimension is our recent experience, and we've been through 13 years of continuous war. Not necessarily the most intense war we've ever fought, but 13 years is longer than the U.S. troops in World War II, World War I, Korea, and the War between the States combined. That's a long time. Anybody that's been in the military less than 13 years entered at a time of war, or they reenlisted or continued as an officer in a time of war.

On top of which, for the first half of the war, the economy was pretty good, so we were competing with relatively low unemployment rates and, for the middle third or so of the war, the war was really unpopular. That was when the IEDs were blowing servicemembers up in Iraq at alarming rates. We got through all that, and actually, recruit quality managed to go up. High-quality recruits score in the top half of the ability distribution and are high school graduates: high quality in 2000 was 57 percent, and by 2010, it was 72 percent.

Now, 72 percent. Those of you who have been doing this for a while, that's an astonishingly high number, and to achieve that in war time! Just a guess. But if that didn't crush the AVF, what would it take to kill the AVF? Thirteen years of war through pretty good economic times, for a large part, and quality's going up, retention's going up.

The final dimension is just basic pragmatism. If for no other reason, the AVF is in no danger because there's simply no viable alternative. There are only two choices other than the AVF. One choice is no military at all; even Code Pink doesn't endorse that situation, so I think we can rule that one out. The other choice is at least partially conscript. For a conscript force to be of any use, we'd have to have probably implausibly long terms of service. Doesn't do any good to bring people in for a year. That's just a drain on the resources. You're busy training them and weeding them out, supervising them, and then they're gone. You'd have to have a long term of service.

By any possible standard, the most we could possibly use is 15 percent or 20 percent of America's youth, which means it's not going to be a universal draft. Or if it is, most of them are going to do something other than

military service: Work for the Forest Service or something. You're going to have all the selection-quality problems you had with the draft and the people who don't want to be there, and find ways to try and avoid it. The ones who are unsuccessful avoiding it become morale problems in the force.

I don't see any great movement toward conscription, other than by people with the mistaken notion that an all-volunteer force leads to the underclassed and the disadvantaged fighting the wars of the privileged, which is really more of a matter of refuting their assumption with the hard data.

I think if there's a recruiting problem facing the Navy, where I work today, it is that we can't seem to find a slogan for recruiting. We figured out that "It's not just a job, it's an adventure" was a bad slogan, and we had a "Global force for good" that I don't think we're using anymore, although it probably still shows up now and then. "Always on watch" was the last one I saw.

Samuel Kleinman: You had "Full speed ahead."

Russ Beland: "Full speed ahead," yeah. We recently suggested to the Navy that they use "The Navy: We shoot pirates," but they didn't like that one, so they're actually in the middle of looking at their whole advertising programs. Those are the kinds of problems we're dealing with in recruiting; it's certainly not quality. It's really not quantity; we're making goal without nearly the work we did in the past. The AVF is, if nothing else, it's the only choice, so for that reason, I don't think there's any danger of it going away.

David Chu: Russ, thank you for a wonderfully provocative set of observations.

Russ Beland: Opinions were all my own.

David Chu: In the interest of giving the audience a chance to have a say, let's start with your comments, questions, observations on these said issues or challenges. Bob?

Robert Murray: I haven't heard a good word all day about why we should move away from the AVF. I've heard lots of ideas about managing it, and sitting here, trying to think of a good idea as to why we would be pushed away from the AVF, the only one I come up, although I haven't done the math in my mind or anywhere else, is numbers. If we somehow, we're in a situation where we have to go to a World War II–like environment, where we are mobilizing vast quantities of people and things, would that drive you out of an AVF world? If that wouldn't, is there anything that would drive us out of the AVF world?

Leaving aside things like the argument that public service is something good that all of us ought to be doing. Sam Kleinman used to make that argument quite a bit. Other than that, we don't seem to be being driven out of the AVF by cost or by ideas of how to attract people, so is there anything that would drive us out?

David Chu: Jim, want to give it a try?

Jim Hosek: Yes. Okay. John Warner and colleagues actually have done a couple of models, theoretical models, that address your point directly and, as John mentioned briefly in the course of his presentation this morning, the models indicate that there is a point at which that it is socially superior to shift to a draft. And this is, just as you surmised, when the quantity of personnel involved becomes very large. This is because, under a volunteer system, the cost rises exponentially as, essentially, you move up the taste distribution of those willing to serve.

There is a point, and that is an argument by itself that should be considered in context with other issues that would, no doubt, come up at the same time, having to do with the importance of patriotism, service to one's country, support of a good cause, and so forth. If I recall, back in World War I, when the U.S. announced the draft, it was oversubscribed. Too many individuals wanted to go.

Fred Vollrath: I'd offer the point taken, with large numbers, you get there, but we saw with Vietnam the limits of draft force. It was about nine years, and the draft, whether it was repealed or not, was clearly breaking down.

Students being shot on campuses, large numbers of people were finding ways to evade the draft, so yes, you could get to a scenario where you need so many that a draft looks like the answer. But we also know, at the same time, that's not going to be sustainable and work for very long, so I think, even then, you'd have to stop and ask yourselves, Do we really want to go down that road?

David. Chu: I think that you could get a relatively large number of problems arising. As you know, in the 1950s, the number of males was sufficiently small so we needed a very high fraction of them. At a longer range perspective, it's not surprising we kept conscription for a long time after World War II, even after the British had long abandoned conscription.

I do think the major threat is the one you posed, which is the national service interest. It waxes and wanes. You hear it, I think, in the lament that there's no participation by the rest of the country in the wars in the last 13 years or so. But I think the real barrier, personal opinion, to national service is the unions, which really don't want the competition and local jobs taken up by free labor. Other comments?

Bernie Rostker: I'd be remiss if I didn't get on my hobbyhorse, and that is, I think we desperately need to rethink the whole construct of our personnel structure. We've had a revolution in military affairs and a revolution in technology procurement, and we're running a personnel system with the basic tenets of World War II, and you can go back and find it earlier. We heard about cyber warriors and we need a young, and maybe a more experienced, force. But if you enlist at 18, we will throw you out when you're basically 48, and if you're an officer, you will be commissioned at 22, and if you don't make general officer, we have no need for you in a whole range of modern occupations once you turn 52.

It is a terrible waste of manpower, and we really do need to think through the whole structure of a career—how we utilize people—and that will have a big impact on the numbers we have to bring in.

David Rodney: I think changes are being reinforced by the change in requirements, where, certainly with the Navy, there's proportionately fewer requirements

for junior personnel, both in the officer corps and enlisted personnel. The base of it, the need for much of it, is going away. The whole personnel system is built upon the base, and much of the need for it is going away. It reinforces the point, as Bernie was saying, to rethink the whole thing.

David Chu: We've seen in the last decade one of the areas where you need more experienced personnel: civil affairs.

Paul Gade: I'm from George Washington University, formerly of Army Research Institute (ARI). First of all, I want to thank Russ for ending on such a positive note that we're all going to die pretty soon.

. With respect to some of Carla's points, I think family issues are something where we can continue to make some improvements in how we structure incentives. One of the things that we did about 20 years ago was to look at the desire to stay in the military for those who were in—both on the part of the spouse and the soldier—and then looked at what they actually did do. Basically, it was a 50-50 decision.

Jeff Peterson: We mentioned our personnel system. One of the basic premises that currently exists is the equity, both in compensation but also in promotions. I'd appreciate your thoughts on whether or not that's something that the Department should stay married to as we move forward.

David. Chu: Fred, that was your portfolio more recently, if you want.

Fred Volrath: Okay, I'd be glad to respond to that. I think it's time—it's probably past time—that we institutionally take it on, particularly in the officer corps and in terms of DOPMA and the DOPMA premise that all officers are created equal, that all officers are going to have the same group patterns, that all officers are going to have the same minimum points, and that all officers are going to retire about the same time. In today's environment, to be blunt, I think that's stupid, particularly when we've got such a broad breadth now of technical and specific requirements in our business.

We're no longer mainly combat arms; we are, to a certain point, but after you hit that tipping point in the Army, for example, you have to get out of being an infantryman. There are only X number of infantry batallions, and if you're a lieutenant colonel, you're not going to get there. There has to be something else. The Army's grappled with this for some time, but the Achilles heel to the solution is the law that says, Thou shalt progress this way. If we can come to grips with that in a logical way to provide a better professional force at best cost, then I think we can win it. But we haven't got to the "and best cost" part of it because we're not a profit organization. That's crazy.

Back to the main point; we can't keep going at the rate we're going. We have to start changing how we manage the force; the force cannot be managed in this modern environment the way it was managed in Vietnam. It just doesn't work for every military service. We got a bazillion special pays—I'm preaching to the choir now—to try to mitigate that, but, to Bernie's point, we really need to rethink how we manage the force. Manage the force—not placate the force, but manage the force.

David Chu: We do make some exceptions, when we have an A-priority rationale, so physicians are different, chaplains are different, lawyers are different, grad nurses are different, and so on.

Jeff Peterson: Peterson here at CNA. Back in 1995 to 1999, those of us who were on recruiting duty approved lots of enlistment waivers, and some of those weren't particularly pretty. My next time on recruiting duty, 2005 to 2008, as we got to the end of that time, waivers started to fall out of favor, and part of that is just supply and demand. By the time we got into the 2011, 2012, and 2013 timeframe, we started to get to a point where waivers that were routinely approved in other times were not approved at all. We are now at a point where, all services but especially the Air Force, you know the numbers as well as the rest of us, has really, really high quality. I'm wondering if there's a point in these very favorable recruiting conditions in which the services get too exclusive, in terms of not being able to bring in youngsters even if they only have a small bump or a bruise,

and whether that creates any social problems for us, with respect to our interaction with the civilian community.

David Chu: Bruce, I know, has actually done research on this topic. I don't know; Bruce, are you willing to summarize your findings briefly?

Bruce Orvis: I can summarize, but I'm not sure they're on point with that question. There are definitely relationships. I want to agree with your point, though, before I say what I'm going to say, about the relationships between waivers and subsequent problems. You are more likely to have medical issues later on if you have a medical waiver. If you come in with conduct-related waivers, there's a little bit of difference in attrition, but it's more about the reasons why you attrite. Now, that said, in tough recruiting years, maybe 25 percent will get enlistment waivers. Lately recruiting has been very good, and the services are much more restrictive on quality and with the waivers. Yeah, there's probably room to think about that. I would agree with that.

Fred Vollrath: I would agree. Again, lessons learned as a practitioner, particularly in the 1990s, and I see that again, factually. Because of the market, the place, and the propensity that's out there, it's natural to try to get the most quality you can get. The problem with that in the 1990s is when it started to become tough, when we couldn't take 98 percent HSDGs, the perception in the force was we were taking dummies: we had lowered our standards, we had somehow sold out the force, and commanders were having problems because those guys at Recruiting Command just were enlisting bad people.

The fact is we were way above any standard we ever set, based on empirical data, and all the research good folks in this room did that said you can handle this many Cat IVs. You can handle this many non-HSDGs.

When you drive up quality like in the 1990s and today (and I submit that's one of those mistakes we made and we're making again), when we go back to normal everyone believes we have lowered quality. We need to have consistent standards. We need to stick pretty close to those standards, as opposed to going for the brass ring every time, because the impact then

becomes significant. As a matter of fact, in the 1990s, I had to stand up in two press conferences in the Pentagon press room to explain why we had lowered our standards. We didn't lower our standards.

David Chu: We have time for a quick response also, Russ or Aline, and then we have to adjourn.

Russ Beland: Yeah, I was just going to say real quick, first point, I think, is well taken. Coming off high quality is hard. That said, and after the economy tanked, it took a while to work through the debt, it took a while for young people to realize they were going to be poor for a while. After that, recruit quality shot through the roof, and in the short term, it's good in every imaginable dimension. Boot camp attrition got so low in the Navy that they didn't have spots in A-school for everybody because so few people attrited from boot camp. It's a nice problem to have for a while. You think if you take really smart guys and give them the low-end jobs, checking paint and driving trucks, you'd think they'd be miserable and unhappy and unfulfilled. But they stick in. They stay in the military at higher rates than the lower quality recruits. In the short term, there is just no downside to quality.

David. Chu: Aline, you get the last word.

Aline Quester: Yeah, well, I probably don't need the last word because I think Fred spoke about the kind of danger that too much recruit quality can bring. It leads to expectations out there among civilians that you can't get in the military if you ever had any kind of problem, and that makes it more difficult in the future when the economy improves and recruiting is more difficult. However, I agree also with what Russ said. In the short term, there is no downside to high quality. It's been a wonderful conference. Thank you, everybody, for coming.

David Chu: Yes. Thank you all and thanks for the members of this panel.