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TROUBLE IN THE LAND OF
EARLY CHILDHOOD EDUCATION?
A FUTURE OF CHILDREN EVENT

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Overview of Volume:

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Overview of Policy Brief:

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Keynote Address:

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Panel:

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P R O C E E D I N G S

MR. HASKINS: Welcome to Brookings. My name is Ron Haskins, and along with Richard Reeves I co-direct the Center on Children and Families. The panel seems to be in discussion up here, but maybe they'll stop. But more pertinent for today's event, along with my former co-director, Belle Sawhill, we've been involved with the *Journal of the Future of Children* for lo these many years, almost a decade now I think, and that is why we're here today to talk about our most recent *Journal*.

The way we organize these events we start by talking about the *Journal*. We have a presentation and an overview of all the issues dealt with in the *Journal*, and the issue here is pre-K through grade 3, which is kind of a new development in the field. But then we focus exclusively on the policy brief and the panel is organized around the policy brief.

Let me just mention that the *Future of Children* is a top rated *Journal* on family studies and interdisciplinary social science over the last five years. So a lot of people reading this thing, and will be reading the *Journal* that we're releasing today. And I think that this issue of the *Journal* is not an exception from the past, that it's a remarkable issue with lots of interesting stuff in it, not least this issue that we're about to deal with here, which was roughly caused by our good friend, Dale Farran and her colleague, Mark Lipsey.

So here's the plan for the event. I'm going to sit down in just a second and then Jean Brooks-Gunn will provide us with an overview of the entire *Journal*, all the articles and all the themes of the *Journal*, which the main theme is pre-K to 3rd grade. Then I'll give an overview of the policy brief, which is about the Tennessee Voluntary pre-K Study and how its results have posed a challenge to the pre-K field. We'll then have two key note talks, Dale Farran, one of the authors that has raised the issues about pre-K, and then by Bill Gormley, a very well known pre-K researcher. I'll say more about both of them at the appropriate time. And the key notes will be followed by a panel discussion

at which I'll introduce a new panelist, who is Art Rolnick, and I'll say more about him in a few minutes. And then we'll end the event with Q & A with the audience. So I hope this distinguished audience is still around at the end.

So let me just say a few words about Jean. She is the Virginian Leonard March Professor of child Development and Education at Columbia teachers College. She is also the Co-Director of the National Center for Children and Families. She's the Senior Editor of this volume. I think of the people who are not senior editors, Jean has probably had more involvement with the *Journal* than any other person. She's been involved from beginning to end. So it's particularly appropriate that she's the first editor of this volume and she will now give us an overview of the volume.

Jean, thank you so much for coming.

MS. BROOKS-GUNN: Thank you, Ron. And I'd like to thank the Foundation for Child Development who funded this issue and -- oh, you guys, most of you already have the issue -- I'm so happy. What I want to do is briefly talk about some of the highlights of the whole volume. First we all know that the idea of starting early is irresistible. At this point there is a huge swell of political opinion that agrees that we should start education early. In fact, 70 percent of adults favor pre-K programs at this point. Our issue is devoted to pre-K programs for three and four-year-old, with the bulk of evidence that exists focusing on the year before K, hence the term pre-K. Just for you guys to know, we used the term pre-K to include all programs for three and four year olds. Many people use them to talk about state pre-K. So when I talk about state or local pre-K, meaning programs that are somewhat related to the education of elementary school kids I'll use that term. Because Head Start is also a pre-K program and there are lots of community programs that are pre-K programs and there are for profit programs. We do no talk about the for profits. In general, the few studies we have of for profits suggest that they are of relatively low quality.

Also we're concerned with the integration of pre-K into early elementary

school. Much less is known about the success of these efforts to provide other continuity or to integrate programs for four year olds with K and first grade. We present two exemplars in the introduction of efforts that we think are pretty great. One is the State of North Carolina and the other is Montgomery County right here in the Maryland area. We make a strong plea to evaluate these programs because basically almost none of them are being evaluated now. We give some examples of how you can evaluate because clearly you're not doing randomized trials when you're talking about changing systems and reaching, for example, all poor three and four year olds in Montgomery County or in the State of North Carolina. We're not going to talk anymore about that, except that I was really shocked about what the evaluation literature looked like when I went and looked at it.

Now, I just want to quickly go through the premises underlying pre-K. I think most people know them here. The first is that pre-K programs will provide enriching activities more intensively and more intentionally than parents can. You can debate that, but that is one of the premises underlying pre-K. Therefore, these programs have the potential to boost children's learning and skill acquisition, which makes it easier to learn in elementary school. Well, we will be talking about whether that's true when we hear Dale talking. Our second premise, and this is not my premise, this is the premise of the field, but usually we don't set out the premises in the field, is that if disadvantaged children are less likely to receive school relate activities at home, then they will be more likely to benefit from pre-K. That was the underlying theory of Head Start when it began some 40 or 50 years ago. Accompanying the second premise is the third, which is that disadvantaged children are less likely to have access to high quality programs in their neighborhood. This is before we started the state and local pre-Ks. And even when such programs exist enrollment in high quality programs is severely constrained by cost.

Based on these premises we would expect more disadvantaged kids would benefit more. That's one. Two, high quality programs, if quality matters, would

have the greatest benefits. Third, that children who receive such education would benefit more than children who remained in KITH and KIN care. Related to this is comparisons between different pre-K programs would not show a stark contrast as comparisons between kids who went to a specific program versus those who -- this is in their randomized trial -- did not win the lottery, so to speak, and were staying home with KITH and KIN. Pretty much my read of the literature and what you'll see in here is that all four of these premises are upheld in the literature.

Now, what these assumptions apply -- and this is where the policy brief comes in -- is that not all programs will show equal benefits. This is heterogeneity of outcomes for all of us policy types. And so we must pay attention to family background, comparison group composition. This is in terms of whether a control group received pre-K or were in KITH and KIN care. That's incredibly important to consider in program quality and intensity. So these are things that we have to pay attention to in the evaluations going forward.

The thumbnail way of describing the findings -- clearly we say a lot more in that volume -- is that the small, well designed, high quality programs, which most of you know and love, when evaluated appropriately shows short-term impacts. This has been demonstrated in probably over 100 evaluations. The large multi-site programs often show short-term impacts, but they are usually smaller in size. Some, like Head Start in Tennessee, show quite small impacts. Others, like Tulsa and Boston, show impacts about the same as the small evaluations. So what that leads me to think is that we have to really look at what the large scale programs are doing, how they're being rolled out, how they're being implemented, which leads to the issues that we looked at in our policy brief.

So we need to look at why we have this variation, especially in these multi-site large programs. And what we can do to maximize the likelihood of getting large impacts short-term. By large impacts I am talking about a quarter to a half of a standard

deviation.

I will deal with the question of fade out later.

We speak to 6 different topics via 10 articles. These are the topics.

One, efficacy of pre-K in both short and long-term and economic benefits. I just saw Lynn Karoly here, who did our economic chapter. The second is development and evaluation of curricula, focusing on several areas of learning, literacy, STEM, and what I'm calling attention/ behavioral self-regulation. Third, what are the ingredients of quality learning experiences in education, training, and compensation of teachers. Four, how best to integrate parents in to pre-K programs. Five, what are successful practices for teaching young children with special needs, and how best to teach English language learners.

So what I want to do is talk about parents, high quality programs, and English language learners, just to give you some highlights of what we found. And then we will go back to the heterogeneity of outcomes issue after we've heard our two major speakers give their remarks.

So what distinguishes high quality programs? Actually, I'm going to do that second. I'm going to do the more surprising findings on two of our topics. We did ask how should pre-K programs serve parents. This was a really terrific article. Actually, all the articles were terrific. People really did a good job. And the comments I want to make are four, and this will probably go against what many of you believe. That's why I think it's important to highlight it here. First, we know very little about whether involving parents in pre-K is beneficial or not. Two, what we do know suggests that most programs evaluated to date do not confer benefits. This is saying adding parents makes a difference. I'm talking about three and four year olds, not talking about early Head Start and home visiting. However, this does not go, you know -- involving parents is like motherhood and apple pie. Three, the exception are programs targeting very specific issues. Probably the best evidence comes from programs that target parents of children

who are showing behavior problems in -- well, Head Start is where they started this work. And we've shown -- not me, but the field has shown that we can really make a difference there. There is some evidence, a little more mixed, that it could be important to involve parents with low literacy skills. And that might help both parents and children. And fourth is the interesting new research on using media platforms to enhance parent involvement in school. To me this is really interesting. One just came out in science, a math app for parents of young kids. And I think we really have to stay tuned to see if any of this work as it develops looks good. But my bottom line there is we have some problems.

Second, how should pre-K programs serve English language learners? This would be a surprise. The debate tends to be between total immersion in English versus dual language instruction. That continues without a lot of valuation. I was surprised there are only a handful of randomized trials, well designed interventions, actually looking at what's better for three and four year olds, let alone kindergarteners. So obviously we're pleading for more research. We also want to make the point when these debates which get very hot and heavy tend to obscure the fact that many different models are being used, not just two, total immersion, dual language instruction, people have identified six or seven different models. It also obscures the fact that classrooms with children who speak different languages cannot easily do dual language immersion classrooms. So we need to get away from this total immersion versus in English versus both languages, look much more closely at what's happening in the country, and people have got to design some evaluations to look at this. Also we have almost no information looking at how kids are taught in pre-K, which of the six or seven models that are being used, and whether there's continuity in what the kids are getting, English language learners, in pre-K and early elementary school.

So this is an area that I really, really urge people to do research and not to continue to debate, but do the research and at least look at what kids are getting. As an aside, a lot of programs may say that they're doing dual language learning and it's not

clear that they really are. That's why we need more descriptive work.

Okay, high quality programs, just quickly. This everyone here knows. Children are capable of learning more than we currently teach them. Content can be delivered in many different ways. Curricula are more developed for literacy than for stem or attention behavioral regulation. Evaluations of promising STEM and regulation programs are provided in the issue, and we hope to see more of that work done. Literacy curricula, as the authors of that chapter wrote, and this may be true of STEM as well -- I think Doug Clements would agree -- the curricula are limited by focus on what we might call constrained skills. Think learning to read versus reading to learn. And development (inaudible) psychology promotes scaffolding on what children already know, as well as expanding beyond simple skill learning. This you clearly -- any of you that know developmental psychology know that we spend a great deal of time trying to understand that, especially in terms of how parents are interacting with children. But the same principles would apply here in the classroom. So we need to think much harder about how to build more interactive and individual focused curricula and help teachers learn how to do it.

Two other comments and then I will finish. Teacher training is ripe for more attention. I was pretty shocked about how little we know about what aspects of teacher training are effective, let alone whether workshops and the like make any difference in what teachers are doing in the classroom. Huge issue. We've got to do more work on that. Wages vary by auspice and we need to find out of increasing wages will enhance quality and if so how. And we need to look at whether tying increased wages with getting an AA or BA in early childhood education enhances teacher quality, and whether such effects will reduce teacher turnover.

And with that I am going to end. Thank you very much. (Applause)

MR. HASKINS: I begin with a quote from Farran and Lipsey, "The benefits of pre-K intervention are being pushed without taking time to define what pre-K

really means, and worse to determine whether what has been implemented has produced the promised outcomes. It is time to take a step back and to figure out what really can and should be scaled up and then how to make that vision happen with consistency and the desired results." I think this is the heart of the issue that our policy brief and this event were designed to address. So to do that I'd like to just give you a few comments about the policy brief itself. And I hope all of you have a copy and can read it at your leisure.

It's very clearly established right in the beginning that until recently, today most importantly, there have been two different sets of publications here. The first is of a smaller sample than the full sample of almost 3000 4 year olds. So the original idea was 3000 4-year-old throughout the state, in places where they're oversubscribed, randomly assigned kids to the program or not to the program. And that's how you created the original random assignment design. And that is the design, the full sample that Dale will talk about today, but they did not get full information and parental permission from part of the sample and they didn't want to wait until the end of third grade for publication, so they began to publish about their consented -- what I'm calling their consented sub-sample, and that's how we refer to them in the policy brief.

They could not administer tests or interview teachers about particular kids unless they had parental permission. We all know that very well. And so they got for about two-thirds of the sample and on that part of the sample they do have extensive information at the end of the program, at the end of kindergarten, first grade, second grade, third grade, and that's the information that all of this debate is based on. Now, today, for one of the first times -- I believe she's talked about this once before, and maybe Mark has too -- she'll give information from the full sample. So the claims about the random assignment are much less applicable to the partial sample because it's not a random assignment sample, it's a part of a random assignment sample, and that's the sample we're talking about today.

So here are the results that have caused a lot of controversy. At the end of pre-K year, exactly as Jean just described, the program kids performed better on achievement tests and they had higher ratings by the teachers that they were better prepared for school, work skills were better, and they had a positive attitude about school. By the end of kindergarten, the program children's advantage on achievement tests disappeared, and by the end of first grade and also second grade and third grade, the control group children rated by the teachers as less prepared for school, weaker in work skills, and more negative about school. And that finding was replicated in second and third grade. So this is a provocative finding. There's lots of evidence about fade out, everybody knows about that. It's one of the things we're most concerned about, that we're trying to find ways to make the impact, especially on intellectual development stick, and what kind of things we could do. There's a recent paper just published by Greg Duncan and colleagues that's the best thing I've seen on this topic. But the program and control group reversal, so that the control group looks worse than the experimental group on these important measures is not very often reported, and that is a big part of what all the debate is about in this case.

I think there are at least three explanations for how such a thing could happen. The first is a flawed study design. There have been many people who have said that a poor quality study, there are big problems with this study, and Dale is going to address that directly in her remarks. And keeping in mind the difference between the partial sample, the consented sample, and the full sample. The second is a contrast between pre-K and public school, that there's something about kids who have been to a preschool program that when they encountered public schools it could cause difficulty for their behavior. We had this situation in the Abecedarian Project many years ago and we wrote about it in child development in extensive detail. We created five kids who went ahead to public schools, were continuously in trouble, and they didn't want to line up, they were very demanding of teacher attention, so they spoke out and so forth. We

called them the gang of five as I recall. We did very careful work. We interviewed the teacher and described in great detail what -- and then we tried to develop programs in the Abecedarian preschool program so that the kids would do better when they got to the public schools. Intellectually and on achievement tests they would continue to do fine, it was just their behavior. I shouldn't -- "just their behavior", but their behavior was what their problem was. And it turned out that when we tried it like we practiced, lining up during preschool, they'd line up for meals, and we practiced sitting in seats and listening to the teacher, and all the kind of things that are characteristic of the public schools, and they seemed to have some impact. So there may be something, and we speculate more about this, and research is not great, that there is something about the contrast between the close attention and a lot of freedom in a preschool classroom that is not necessarily characteristic of public schools. And that's the kind of thing that could make a difference.

And then, third, this work oriented or task oriented pre-K at age four is developmentally inappropriate. There are a number of articles that have been written recently, including one that's gotten a fair amount of attention by Erika Christakis in the *Atlantic*, and when she argues that preschool is crushing our four-year-old, crushing us in the title of the article. And there are a number of other people who feel this way as well. So that sets up a real debate that we shouldn't even have kids in this intense academically oriented pre-K. There are arguments that they're really not that way, but anyway.

So there are these three explanations that could account for not the fact but the finding that there are problems for some kids who have been in pre-K when they go to the public schools.

So I want to talk about a constructive response here. The first thing is, this is a quality study in many ways. Dale will lay that you for you, you can make your own judgment, but it's at least equal of other studies in this area on any of the accepted measures of quality of pre-K programs. And it's just not scientific to just dismiss these

findings out of hand and say we have all other studies that show the truth and this is just an outlier. So we have to try to incorporate them into our understanding of pre-K programs, and especially the differences across pre-K programs and what they might mean.

Now Farran and Lipsey have also written a much broader interpretation of pre-K, not just dependent on their results, but the status of the whole field. There are two articles in Evidence Speaks -- Russ Whitehurst, Evidence Speaks, which you can get on the Brookings website. But the first point that they make, which I think is undeniably true, is that if you look at pre-K education in the United States, or what's called pre-K education, there's a tremendous range along almost every dimension, hours, teacher training, whether it's open year round, and so forth. And secondly, it's really important for us to understand that there is a sharp contrast between the idea of scaled up pre-K, which that's the issue for us today, and the rest of the literature on early childhood education, which you might not expect to produce the same kind of findings as pre-K. So I'm referring to Perry and Abecedarian, the two classic programs that we all know and love. I think that was the term that Jean used in the beginning. And even Head Start, there are probably some big differences between Head Start and the typical scaled up pre-K, and there are certainly big differences between -- or there should be -- between pre-K and the run of the mill daycare that many parents, especially low income parents, put their children in. So we're focused on that pre-K literature.

And the features of what we're focused on is they're mostly for four years olds. There are a total now of 43 states that conduct these programs. They now spend something like \$6.2 billion, they're controlled by the states, mostly, but not always, they're done in the public schools, and states are interested in scaling those up and many states would like to have a universal program or at least involve all low income children in the program.

And then the final assertion I think that has to be dealt with from the

Farran and Ramey -- Farran and Ramey (laughter), that was the old days. We were at Abecedarian in that -- I'll say in a previous century to save us both embarrassment about how long ago that was. Lipsey, Mark Lipsey -- Mark, forgive me. So the results of state scaled up pre-K that is the focus of our attention now and a focus of our policy brief in this event may not be as strong as it's often represented to be.

Now the last thing I want to say is I think that there is a -- I know that there's a group of well known pre-K researchers and early childhood researchers who I think are in the process of adopting a very constructive response, and Mark Lipsey is a member of this group, and also Debra Phillips, so Tulsa and Tennessee together, much like on our stage right here before you with Bill Gormley. I'll take more about that in a minute. And several distinguished researchers from preschool and we've joined forces with Ken Dodge at Duke, who also was in the process of organizing a group, and we're going to publish a report specifically on what the argument here is about and what we know and what we don't know about pre-K and a research agenda for the future of issues we do need to settle in order to help make pre-K produce the impacts that are often claimed for it now. And that group will start publishing results early next year. We're also going to write a book about issues that are associated with this, but still with a focus on the pre-K issue and the issues raised by the Tennessee pre-K.

So now to discuss these issues more coherently and understandably and in an interesting way we have one of the culprits right here, Dale Farran. And as I said, I urge all of you to read the two articles in Evidence Speaks, they're quite good and they have the advantage of being fairly short, but Dale will give us her own interpretation of the Tennessee results in one moment. Along with Mark Lipsey she's one of the two principle investigators of the Tennessee Voluntary Pre-K Study. I've mentioned her articles in Evidence Speaks, which you can easily gain access to on the Brookings website. And Dale holds the Antonio and Anita Gotto Chair in Teaching & Learning at Vanderbilt.

When she gets through Bill Gormley, who has done a lot of work in Tulsa, will also give a keynote talk. He's a University Professor of Public Policy at Georgetown. He's also the Co-Director of the Center for Research on Children in the U.S., and he's well known for his work with Debra Phillips of Georgetown, studying the Oklahoma pre-K program in Tulsa, Oklahoma, which has produced remarkable impacts on children and is often a study cited as the best evidence of what pre-K can produce. And I think it's safe for us to assume that his view of the pre-K world will be more optimistic than Dale's might be.

So, Dale Farran.

MS. FARRAN: Thank you. Hi everybody. I'm fighting a cold so I'm going to try to drink water and not talk really fast so that I'll lose my voice. I'm delighted to have this chance to talk to you. Ron is an old friend. Again, we won't say how old. But we were both at Abecedarian together. He was there a few months before I was because he's older. (Laughter)

So you may know that this study was funded by IES and when Mark Lipsey was the principal investigator and was then funded again by NIH, and we are now in the process of doing the middle grades follow up. So we've had continuous funding and we're very delighted about that.

So I want to address the criticisms. It's interesting, a lot of people don't talk to me about this, they just talk to each other about this. (Laughter) But I've heard some of the words that have been said about me and so. Anyway, I'm not going to respond in kind. So one of the criticisms is this study is flawed, our consent process yielded a different group and it may not be representative of the whole sample. You know, as Ron said, we consented children and we consented families for their children because we knew we would have to wait until all the data from the state database was available and that's not available immediately after, and then it requires a lot of clean up time, if anybody has worked with state databases. So we were fortunate to have a

consented group and we have been following them.

So I want to give a response to this because I want to share with you the results through third grade on the full sample. And these will be what's called in Tennessee, TCAP, which is the Tennessee High Stakes Testing, in reading, math, and science, our retention rates through third grade, IEP status, and disciplinary infraction rates. So let's look at the achievement first.

Well, no, let's not do that. Let's look at this. So I just want to be clear about this sample. We have spent an enormous amount of time -- anyone who knows Mark knows how extraordinarily careful he is. I'm very fortunate. Our final sample is 2990 children. The reason this is a little smaller than Ron said is we actually assigned more than 3000. It may be more than I've even said here. We got randomized lists from the participating school systems for each school, but to remain in our sample we have now culled all those lists and made sure that we have someone in the control group and in the treatment group in every list. So now every list is now represented, which then lost us some lists. And we can talk about that in some detail at 11 o'clock if you want to go into how sausage is made.

So they had to be rescinded. But we also then had to locate them in a Tennessee kindergarten. This is very important because in order to follow them if they were in the control group we didn't have them in pre-K, so we had to find them again in a Tennessee kindergarten. So that got us to 2990, which mean in terms of assignment -- and that's what I'm talking about now, it's called an intent to treat. These are the children who were assigned to attend pre-K, it's 1852 and not assigned 1138. So let's look at the achievement results at the end of third grade.

So what you have are the -- always we're going to have those who attended pre-K are in red and those who did not, who were not assigned to attend pre-K, who were the control group, are in blue. So what you see now is that there is an advantage on every single one of these measures for the children who did not attend pre-

K. Those advantages become significant in math and science, with effect sizes of about .11 or .13.

In terms of grade retention, again VPK is in red and the control group is in blue. So we do have in kindergarten, as we've reported before, we have a slight retention rate that favors our VPK children. And as we saw from luckily our small consented sample, those children did go into pre-K better prepared. We get about the same effects as everybody else. They went into pre-K better prepared and their kindergarten teachers saw them as better prepared. So it's not a surprise that they were not retained as much. However, that reverses in first grade. So these are retention rates, these are cumulative retention rates. So now this is through second grade. It's not a significant difference, but it still favors the kids who did not attend pre-K, which is a surprise.

Special education data is really interesting and very difficult and needs to be thought about quite carefully because these children come into pre-K in the public schools, they get identified actually for special education earlier. That could be a good thing. Those who believe that special education can be preventative would say identifying these children earlier and getting them services is good. The trouble in public schools, if you've worked with them, is that you don't lose that designation for a while. So when you see at the end of the IEP, cumulative through third grade, you'll see a difference between the two groups. It looks like it's about the same difference. Proportionally it started in pre-K.

Bit disciplinary offenses. Again, those assigned to VPK, red, those not in blue. What's interesting to me is those minor offenses. Those minor offenses have to do more with attitude. Those minor offenses are breaking school rules, wearing your hat backwards, those kinds of things.

So, in conclusion, in every respect the results of our full randomized sample mirror those we found with the consented sample. Achievement was better for

the control groups, especially in the areas of math and science and math score differences were the critical ones at the end of third grade for our smaller sample. All of the "non-cognitive measures" favor the control children. They retained less, they had fewer disciplinary issues, though not significantly different, actually the control group attends school slightly more often.

So, other criticisms of our study involve -- it's just not a good program. So the goal as I've said is to build a firewall around Tennessee and pretend that our results are not applicable to any other statewide program because our program is poor. So we'll talk about that.

So our responses. One, the results that we obtained at the end of pre-K when we were highly lauded all over the country, were of the same magnitude as other smaller randomized studies of pre-K, as Brooks said. Ours were .35, she said the good studies were between .25 and .5. Ours were right in the middle there. RDD results tend to be higher across the board. Ours are close to RDD. We deliberately constructed the program -- because it's relatively new on the scene -- to follow the near benchmarks provided to states for guidance, and we meet 9 of the 10. So these are all licensed teachers, they're all paid at the same rate as K-12 teachers. And the ratios in the classrooms meet the benchmarks. In a subsample of 155 of these classrooms that were chosen to be representative of the whole state program, we collected the ECRA scores and our scores are about the same magnitude as those found in Boston and those found in the multi-state study of pre-K and childcare. So we don't have any evidence that our program is of a lower quality than others.

So what's the way forward? Let's look at some recommendations. One, I think we need a discussion of two critical issues in our field. I have been in this field for a long time and it's making me grumpy. (Laughter) We need to decide how we view the four and five developmental age. Is it the end of the 0-5 period or the beginning of formal schooling? Pushing public schools as the primary site for pre-K classrooms suggests we

think of this as the beginning of formal school. Many high achieving countries don't begin formal schooling until children are six or seven. The rate of redshirting by higher income families who can afford another year of preschool is increasing every year. And the NCES estimated it at 6 or 7 percent in 2010, it's now up to about probably 17 percent. Why is formal schooling the best option for low income children and families when higher income families are not choosing it?

So here's my second issue that we have to talk about. Should funding follow the child or the classroom? Most state scaled up pre-K programs fund classrooms not children. It is a dirty story that public schools do not want to tell you, that most of their programs are not full, that attendance is an issue, and it's treated as a parental problem. Classrooms are places where there is space, not necessarily need. Many school systems don't have the infrastructure to support putting in the kinds of preschool classrooms that would actually be appropriate for children. Pre-K programs are not family friendly. They're not helpful to working families, they tend to be a school day, 6-7 hours, a 9-month school year, and often no transportation is provided.

So next steps. So I have argued and I will argue to you forcefully we should not have any more expansion funding without adequate funds for an independent rigorously supervised collection of state data. I'm not talking about an RCT, I'm just talking about collecting similar data from all the states about all the programs that are out there so that we know what the characteristics of state programs are. We don't even have a really good way of assuring that the information, even that the NIEER yearbook puts out every year is accurate. We need to get data from the states about what their programs are, and we need information on not the short-term benefits which we all know are there, but what are the sustained benefits, what happens K-2? I don't think we should fund any more of these programs, especially with Federal dollars unless we get this information.

And we need a serious comprehensive review of Federal programs and

policies that affect the care of 0-5. There are a bunch of them, especially for low income families. And they come from different agencies, they have different rules, they have different requirements. They make it very, very hard for families to navigate, they make it hard for agencies at the local level to navigate. If programs were more coordinated and coherent care for children would be better, I hope. Viewing pre-K as part of the 0-5 or 0-8 continuum of care would change the program dramatically.

I'm actually going to finish early. I can't believe that. It's because I didn't digress. Finally, I want to argue with you that that values determine policy when a problem is identified. And the problem that we identified years ago was the achievement gap. The problem that many states talk to me about, that Tennessee talks to me about, that other states talk about, is their concern about the achievement gap. Now they assume that the achievement gap, if you remediate it at kindergarten entry, will then take care of itself across time. And we don't have any evidence that that's true. But we need to be still focused on that was what the problem was. We decided on a solution, which was pre-K. Once we decided on that solution we need social science evidence to determine if our solution is working. We must not become wedded to the solution and forget the problem we were working on.

Thanks very much. I appreciate it. (Applause)

MR. GORMLEY: Good morning. It's a pleasure to be here at Brookings, which has published two of my books on children and public policy and which has some of the best policy analysts in the nation. I'm not as grumpy as Dale said she was. (Laughter) Maybe I haven't been in this field long enough, so check back in a few years.

SPEAKER: Because you're younger.

MR. GORMLEY: Well, I'm not sure. So do high quality pre-K programs, including large scale programs, improve school readiness? Researchers have produced lots of interesting rigorous studies that seek to answer that question and they've produced a scholarly consensus. That kind of consensus is rare. Let me give you a

couple of examples of other interesting questions that you may have talked about from time to time here at Brookings.

Do school vouchers improve educational outcomes for disadvantaged students? Are charter schools better or worse than traditional public schools? Do teacher pay performance system encourage and reward superior teaching? Are smaller or larger high schools better for students? Social scientists and policy analysts have produced a lot of interesting rigorous studies that seek to answer those questions and they have not reached a consensus.

So before we talk about some areas of controversy and disagreement, I think it's important to stress that there is a strong scholarly consensus on the key question of whether or not a high quality large scale pre-K program improves school readiness. We have lots and lots of studies that have reached affirmative answers to that important question. Those studies have taken place in Georgia, in North Carolina, in Texas, in New Jersey, in Florida, in Tennessee, in Tulsa, in Boston, in Miami, and in other jurisdictions. Our work in Tulsa has generated a lot of interest for several reasons. It's an ambitious program. It provides high quality pre-K to all four year olds irrespective of income. It's been around for a long time, actually since 1998, and it's also generated interest because frankly it's a social entitlement program adopted by a very conservative state. So when Oklahoma adopts a program like this it's a man bites his dog story and people tend to be interested in that kind of a story. We're certainly interested in that story.

We have been assessing the impacts of the Tulsa pre-K program basically for the past 15 years. We have visited Tulsa and conducted field work there on three separate occasions, gathering data on three separate cohorts. Our data have gotten better every time, our testing has gotten better, our methodology has gotten better. We've gotten to know better restaurants in Tulsa, we've gotten better at avoiding tornados (laughter), so this is sometimes hazardous duty, doing research in Oklahoma.

But we have pretty consistently reached the same conclusion, which is that the school based pre-K program in Tulsa generates impressive gains in school readiness for participating students, gains in pre reading skills, in pre writing skills, and pre math skills as measured by nationally normed tests. We found substantial gains for middle class students and even bigger gains for disadvantaged students, roughly what folks in Boston have also found.

In Tulsa the gains for English language learners have been especially striking. The gains that we've documented over the years have been largely cognitive gains, but we have noted some modest improvements in social emotional development. And we have confirmed that a plausible explanation for these gains is that the quality of pre-K in Tulsa is relatively high. So we've been able to visit just about every pre-K classroom in Tulsa, observe them systematically, and then compare what's going on inside these classrooms using class and other instruments with what's going on in school based classrooms in 11 other states. And the quality of the pre-K education that kids are receiving in Tulsa in the school based system is relatively high. But do those gains persist? Are there still differences between participating students and comparable students in elementary school, in middle school, and beyond? A number of separate studies have tried to answer that question, focusing at this stage of the game on elementary school outcomes. And the overwhelming majority of those studies have found evidence of fade out. The overwhelming majority of those studies have also found evidence of persistence. Persistence takes different forms, but many of these studies have found some lasting cognitive effects on either math test scores or reading test scores, or in some instances, both. Many of these studies have found a reduction in grade retention, not an increase. And many of these studies have found a reduction in the need for special education, not an increase.

Now it's true that the Tennessee study has reached different conclusions. When the Tennessee study was first revealed and I had a chance to read it

my reaction was that this was a well-crafted and well executed study. That's what I said publicly and that's also what I said privately. That was my position then and even though this is an election cycle, it's still my position today. (Laughter)

So basically I am inclined to believe Dale and Mark's latest findings from the full sample just as I was inclined to believe their earlier findings from the sub sample. A key question then is why are they getting these results in Tennessee when so many other researchers, including us, have reached different conclusions. And I'll be honest, I don't have a glib answer to that and my inclination to these matters is generally to trust the researchers on the ground and look to them for plausible explanations.

I do think there is one other explanation which may be did not surface either in Dale's comments or in Ron's comments that I will offer as just a hypothesis because, as I say, I honestly don't know why they're getting these results and I also think we need to understand why they're getting the results. I don't think we want to dismiss them. I think that that's the nature of the scientific enterprise; you want to celebrate and try to understand these kinds of anomalous findings.

So one possibility I think is that the pre-K program, which Dale has described as a high quality program, is actually a high quality program. I mean look at the evidence on short-term effects. That evidence is fully consistent with the proposition that this is a high quality program. It is possible though that something is not happening in the K-3 grades. Specifically, it is possible that the K-3 teachers have not upgraded their pedagogy in response to this big influx in students who have gone through a high quality pre-K program. And when that happens, based on research by Amy Claessens and others, we have reason to worry because students may be getting redundant instruction if they were already in a high quality pre-K program. And getting redundant instruction may make them grumpy and surly. And less curious and less committed to the educational enterprise at school. So I don't know if that's true, it's just a hypothesis, but it might be true.

Where do we go from here? I think that the Vanderbilt study raises some very interesting questions about the merits of traditional pre-K instruction and that Dale has raised some very interesting questions about the future. I am intrigued by some of the ideas that Dale has presented here and also in other fora about how we might try to improve pre-K instruction, because even if the pre-K program is good we ought to be trying to make the Tennessee program even better, we ought to be trying to make the Tulsa pre-K program even better. So what are my thoughts on that? I have just almost finished a book on critical thinking and K-12 education and so that is on my mind at the moment. It seems to me that as we ask what pre-K programs should be doing, whether in Tennessee or New Jersey or Tulsa or elsewhere, we may want to ask a basic question, which is at the end of the day when students hopefully graduate from high school, and when some of them hopefully graduate from college, what kinds of skills should they have. I would like to see them have critical thinking skills. And I would also like to see them have problem solving skills. And I would also like to see them be capable of creative bursts of imagination and invention. And incidentally I'm not the only one who is saying that. The World Economic Forum recently came out with an interesting assessment of what the needs of the workforce are likely to be in the year 2020, and at the top of their list of the skills workers are going to need was complex problem solving, right behind was critical thinking, and right after that was creativity.

So my plea would be that when we go back and revisit pre-K education, as we should, and when we revisit what K-3 teachers are doing, as we should, that we should ask are these skills being cultivated by early childhood educators, including elementary school educators. Now, admittedly critical thinking in a four-year-old looks different from critical thinking in a Socratic seminar for seniors in high school. For four year olds it means being open to new ideas, it means learning to ask questions, learning to question adults, looking for patterns, learning to connect the dots. Problem solving is different for four year olds than it would be for high school seniors as well. It means

formulating hypothesis, even if you can't pronounce the word hypothesis, coming up with an idea or an embryonic theory, testing out an idea, even in a rough or crude way, offering explanations, drawing distinctions. Creative thinking looks different for four year olds also than for seniors in high school. It means thinking for yourself, learning to express yourself, verbally and non-verbally, through art, for example, transferring something that you've learned from one domain into another domain.

So as we think about early childhood education, and pre-K in particular, I think it's useful to recall something that Alison Gopnik said a few years ago, and that is that adults may be better at the tried and the true, but young children are good at the weird and the wonderful. And I think we need to take advantage of that.

So let me make one brief comment. It is true that there is not a consensus on what pre-K actually is, however, there is not a consensus on what home visits are, there is not a consensus on what employment and training programs are. And so I don't think that we should wait for a premature consensus on those definitional questions before taking advantage of what we do know, which is that high quality pre-K actually works.

Thank you. (Applause)

MR. HASKINS: So it's our custom to discuss the issues that we raised during the forums and that's what we're about to do. We've tried to produce a balanced panel of people who are known by reputation and I have talked with them about the issues before us, that they are roughly speaking think that preschool is doing well, it's a very important intervention, and we should do more of it. And then we have two people that are less convinced that the way we're doing preschool now especially is the right way to go. So hopefully we can produce a productive debate.

And joining us to do that is one last person, Art Rolnick. Art is also an aged individual. I was glad to see he actually could fly here and everything, which is very good. He is now a Senior Fellow and Co-Director of Human Capital Research

Collaborative at the Humphrey School of Public Affairs, University of Minnesota. He's a former Vice President at the Minneapolis Fed and spent many years. He was also the Director of Research, among other titles, there. So he's well familiar with research even though he was dealing with bankers. One other thing about Art that I think is quite interesting is that he is a ballroom dancer extraordinaire. He and his wife have won several ribbons and all kinds of great things. I tried to get Strobe to organize a ballroom dancing contest here this afternoon, but there was a lack of interest in doing that, Art. Can you imagine? So, Art, thank you very much.

Now, the idea here is that Art obviously has not commented on anything and Jean has commented on volume, but not the policy brief. So we're going to give each of them several minutes to state their position on the issue at hand, beginning with Jean.

MS. BROOKS-GUNN: Thank you, Ron. I want to just do this in kind of bullet points so we have more time for discussion. And these comments actually work for the fade out effect as well in part as the reversal effect on math and science that Dale has reported. I'm focusing on math and science because that's where she gets her significant effects.

So I'm going to talk, just give you bullet points for primary school and then for preschool and we can discuss these later.

Why do we get these reductions, or flip in Dale's case? One, primary school classrooms are of low quality. These are all promises and all of them need work to either confirm or refute. So the fact is I would with agree with where the consortium is going, which is to look at some of these issues and push for at this point an agenda where we start looking at some of these things. So the first is, that may or may not be true, primary school classrooms are of low quality. Number two, kindergarten and first grade teachers concentrate on students who are performing poorly so they focus on the skills some children have already acquired in pre-K. This hypothesis, a lot of people think

it's true. Okay, guys, let's go out and test it by actually observing and videotaping what teachers are teaching in kindergarten when they have a mix of kids in their classroom. Kindergarten and first grade may lack challenging curricula. Is that true or is that not true? Kindergarten and first grades may not focus on teaching unconstrained skills. Catherine Snow would certainly say that about literacy. We would like to see much more attention to unconstrained skills not just in pre-K, but in kindergarten and first grade. And my fifth point for the primary school kids is that children from disadvantaged families may need a larger dose of school. I'm going back to trying to reduce achievement gaps as a goal, which means after school programs and summer programs to sustain effects. We really haven't tested that properly. Montgomery County would be an exemplar. They actually have done a lot more in terms of getting all of their early elementary school kids into after school programs and summer school programs.

Turning to pre-K again. Pre-K also may not focus enough on unconstrained skills. In fact, for sure they aren't. There's no question about that. Two, maybe pre-K is only effective at raising achievement in the short-term. We actually have to consider that as a hypothesis and I don't think we have the answer to that. Third, pre-K isn't enough; I do think we have evidence on that. I liked Dale's comment about nine months of school and six hours a day is not family friendly for mothers who are working. Of course, kindergarten and first grade aren't either. Fourth premise that needs to be tested, maybe pre-K is best suited for making a difference in regulation persistence and engagement not in sustained effects on achievement scales. People have raised this argument, we don't have data to answer it. Fifth, pre-K, maybe it's really hard to train teachers to do scaffolding and to do what's considered developmentally appropriate interaction with three and four year olds. That hard to train? I guess it's pretty hard to train. It's like training a home visitor. I know more about that and that's really hard to train home visitors to be sensitive and empathetic if they start from a base where that is not where they naturally are coming from. Seventh has to do with what is pre-K. Pre-Ks

have different masters and different regulations, which is making kind of a mess at the moment. And I'm going to give an example, the Foundation for Child Development is funding a series of New York City researchers to look at various issues as UPK gets rolled out in the City. And our group is looking at what kids are in what classrooms and who is funding what classrooms. Now you would think this would be easy to get, however many classrooms have multiple funding and they have multiple standards. In some cases, we're finding classrooms in the same setting are serving totally different children. So what we have is this amazing system that's kind of a non-system. And that's even in New York City as we're looking at the rollout. Fascinating to me. This research is really great. And then, finally, quality, are we measuring it appropriately. I'm the type that believes if you want to do it you've got to go in and get video tapes, but that's a whole other discussion.

So those are just my bullet point. I do have some sausage making questions for Dale, but I will leave those for later.

MR. HASKINS: Art Rolnick.

MR. ROLNICK: Thank you, Ron. So I'm going to take a public policy perspective on this issue. I spent 40 years as Director of Research at the Federal Reserve Bank in Minneapolis and I was taught one of the first things you do when you enter the public policy arena is define the problem, be clear what the problem is. And we defined the problem as the achievement gap. Too many of our kids of color don't succeed in school and therefore don't succeed generally. Too many kids that are born into poverty end up in poverty as adults. Too many kids who are born of incarcerated parents end up incarcerated. Too many homeless kids end up homeless as adults. So there's the problem. So when we started to look at this problem, we started to look -- this is about 13 years ago -- we took an economic lens to it. We looked at studies that were out there, longitudinal studies that have been mentioned, Perry preschool, Abecedarian, for example, and we simply did -- we asked a question that most business people would

ask, most economists would ask, what kind of a return on investment when you make this.

And we made this argument because early childhood advocates up until then mostly were saying it's the right thing to do, and we were saying policy makers have limited dollars and the question to how should they spend them. And you need some sort of a metric. So economists have this benefit cost tool that we can look and see if the benefits outweigh the costs, and we can actually translate that into a rate of return. And on these studies we found very high public -- I want to emphasize public -- return. Because when these kids are more successful they're less likely to need special ed, they're less likely to be retained in a grade, they're more likely to graduate high school, get a job, pay taxes, stay off welfare, and crime rate goes down dramatically. So we found double digit returns from investing if done well. Okay, now that's a big issue, if done well. And this is where Farran, Lipsey study I think is very important, as I'll get into once I get into the political arena.

So from that research we said okay, what does the research imply for how we can do this well. So there's a number of challenges. The research by the way is not just the longitudinal studies, there are independent neuroscience research that says much of that brain is developed by age three, it's critical that child is in a healthy environment with a parent. Jack Shonkoff would say the debate between nature and nurture is over. And so we have these two independent lines of research that says early childhood development is very important and if we do it right we have a chance of making a big difference.

So what does doing it right mean? Well, first off all, the problem, we want to target at our most adverse kids. You want to empower and engage the parents. I'm going to argue you don't get these long-term results if you don't have an engaged and empowered parent. The parent is critical here. We need quality. We've all argued about -- and I admit we have a hard time finding quality, but that's true of almost any area, so I

don't think that's a show stopper, but we need quality. We have to start early. So getting into the study, what does early mean? I'm going to argue early childhood development starts prenatal. We know this from the science, we know this from health research, that we need to start to make sure these kids are more likely to be born full weight, full term, and not addicted. How are you going to close that gap if you wait until four? So we have to start early.

And, finally, it better be scalable. If you show me some great person who's doing great early ed stuff. Geoffrey Canada, for example, and the Harlem Children's Zone, terrific job. But try cloning Geoffrey. Doesn't work very easily. So whatever you're going to propose, you want it to be scalable. So we have a very simple idea, a couple of economists, this isn't going to surprise you, market based approach that meets these criteria. Scholarships and mentors. Mentors, home visiting coaches and nurses starting as early as prenatal and when the child turns three they get a two-year scholarship. We call this the Minnesota model. Notice this empowers the parents right away and provides them critical information that they need from the coaches. And they get to pick the quality programs. And it's a mixed delivery system, that's why we call it market based. So let the market figure it out. And people say one size isn't going to fit all here, we know this from our own kids. One size doesn't fit all. So we need a diverse system and that's what markets can deliver, with parents deciding. So that's what we call the Minnesota model. And you're looking at me, will something like this work. Well, fortunately we were able to get the business community in Minnesota to raise \$20 million to fund the pilot in St. Paul. It worked great. We then got \$45 million race to the top money. As we're speaking we're doing the Minnesota model in four different, what we call transformation zones, St. Paul, North Minneapolis, an Indian reservation, and a very low income rural area. We've got waiting lists for these scholarships. My critics said oh, the parents won't use them. Every one of our scholarships have been used. As the market has learned we paid initially up to \$13,000 a year for these two year scholarships

and the market created all kinds of three and four-star high quality programs in the community. I argue that early childhood development, I want you to think of it as economic development, and some of the best economic development that has ever happened in these communities has been brand new early ed programs that have opened up, that are culturally sensitive. And why are they culturally sensitive? Because they hire people from the community, they work with the community. It's public and private. Parents get the choice, which one works for them.

So it's interesting, Minnesota I think has a lot to learn from Tennessee. And why do I say that? So you would think with the kind of results we're getting that we are getting the kind of results that the research suggests that we can get. Now, I admit that it's early, but we've got some metrics now, we've been measuring and we're showing the kind of results the research suggests that we could get. You would think that the political system would be behind us and we could bring this to scale overnight. And this is not difficult to do overnight, it's relatively inexpensive to compare -- you don't want to get me started. We spent half a billion on a new stadium for the Vikings, I can tell you we've got a better investment. So you would think with this kind of research, with the business -- I got Fortune 500 CEOs supporting this -- this would be easy to fund and bring to scale so that every child born into poverty in the State of Minnesota would have access to this kind of a program. And yet we have some headwinds. And what are the headwinds? What are we fighting here?

Well, it turns out the teachers' union has decided, finally, after 12 years of trying to make this case that yes early childhood education is important. And here's what they propose, a universal four public school only. If they brought their program to scale just for four year olds it would be about \$100 million more than our program. Ours is about \$350 million a year to bring to scale, theirs is about \$400-450 million per year. And they need \$2 billion in infrastructure to get the classrooms up. We don't need that for the mixed delivery system. It's out there. We've got terrific Montessori programs,

faith based programs, New Horizon, it's a terrific private program out there. We've got this rating system so the scholarships have to be used in a four star rated program. And because there's an incentive -- economists love incentives -- you can't get our scholarship kids if you don't have quality. We're producing a lot of high quality. We now have 2000 programs around the state, center based and family licensed programs. We're not just center based programs. And this is not just about taking children and putting them in a center based program.

So you look at the Tennessee study and I'm hoping Minnesota will take a hard look at this study, because what is it saying. Four looks like it's too late guys. I'm going to argue it's one size fits all. These parents don't have a choice. You go to the public school, that's it. There's another interesting thing we're finding in some of the studies. There's a very famous program, the Child Parent Center Study Program, which is age three to grade three. We now have evidence. Some of our parents are choosing private programs and some are choosing the public preschool program. And we're finding one major difference right away. Parent engagement is so much better in the private programs. And if you will visit these private programs you'll know why. They embrace those parents, they bring them into the program. And the public schools, drop them off, trust us, we'll take care of it. It's a big school. I'm not saying the public school can't get better here, but why would you not let these parents have a choice to choose. And I ask many of the proponents of public school only, where do you send your kids. Montessori, faith based. Why wouldn't you let our low income parents have the same tools that middle class families have?

So my view of what's coming out of Tennessee for me, politically, is more evidence and a better argument in some ways because we not have a real world example where it's not working. And it may be as some mention that K-3 has to get better, and I'm sure you can make that case. But I'm going to argue if we really want to close the achievement gap, if we agree that is the problem, and both of the side of aisle

in Minnesota agree that's the problem, and you target and you start at the beginning -- I may have mentioned this, but on the White Earth Reservation we're working half the children there last year were born addicted. So you better start early if you're going to close the achievement gap, if that's the problem, if that's what you want to do. Just looking at four year olds and a public system, you're going to fail.

Thank you.

MR. HASKINS: Thank you. Now I get to ask some questions here and then I'll turn it over to the audience and they can ask questions.

Let's deal first with the first problem that Farran and Lipsey brought up, which is there is no commonality to pre-K. Extremely diverse all across the county. And I think that's undeniably true. Is that a problem?

MS. FARRAN: Can I answer?

MR. HASKINS: Yes.

MS. FARRAN: I think Brook is right, that we don't need to wait to expand pre-K until we have a common definition. The point I was trying to make is we're not even collecting information in a comparable way to determine if some of the things that states are doing might yield better results than other things. And that's what I think we need to know. And that may lead to a common vision, but at least we ought to know the effects of these variations that are out there, and we don't know that.

MR. HASKINS: Okay. So money is contingent for you on not just descriptive data about the program, but on outcomes as well?

MS. FARRAN: Yes.

MR. HASKINS: Both? Okay. So at least in a correlational sense we could -- okay.

MS. FARRAN: That's right.

MR. HASKINS: Does anybody object to that?

MS. BROOKS-GUNN: No, but we have neither. We really can't

characterize programs across settings. That's why the descriptive piece is really important. If you do the evaluation without the descriptive piece, we still aren't going to know what's going on.

MS. FARRAN: I agree.

MR. GORMLEY: Well, I guess I might have an objection. I think we have a Federal system and in a Federal system it's up to state and local governments to make their own decisions. And so should those decisions be influenced by systematic evidence, absolutely, but ultimately up to the state and local governments to make their own respective decisions.

MR. HASKINS: But they could do that more effectively with what Dale is proposing to make the Federal dollars and state dollars if they decide to do it contingent on collecting this basic data on describing the program and outcomes so that across the country we could at least do associational work, correlational work.

MR. GORMLEY: That doesn't sound like a heavy lift to me. I think the heavier lift would be to require them to do evaluations of their programs.

MR. HASKINS: Well, it's a form of evaluation. I mean it's not rigorous, but. Okay. A second issue that's gotten a lot of attention and maybe it produces the most emotion, and I mentioned before Erika Christakis of Yale, who wrote this article in the *Atlantic* about preschool crushing kids. And it fits somewhat with the Tennessee outcome because it's a possible explanation of what happens when kids go to the public schools because they've been crushed so to speak in preschool. Do we think that's a big problem? Do we think that it's a big problem to put kids in a -- I'm not going to say this is Tennessee or any other state, but in a program that's fairly rigid, that has a curriculum, that tries to teach skills, and more kids have to sit there and do certain activities and maybe even write things down and someone watches them and so forth. Is there anything wrong with that? Does that characterize our preschool programs in the U.S., and is there something wrong with it?

MR. ROLNICK: I don't think it characterizes -- I mean I don't think it's that uniform. And I think recognize things change and you get a new principal and you get -- people have a better understanding of early ed. And there's a lot coming out about the importance of play now. I would imagine over time things will get better, we'll learn how to do better. I don't mind the emphasis on rethinking this and looking at the research. And I think for some kids, by the way, that may work fine. And other kids they need a more playful environment. So again, I'd like more the power in the parents to make those decisions for their kids and what works for them and get away from the one size fits all. And how we do that exactly, I think I know how to do that right now in the birth to five, because it's a mixed delivery system now. In the public schools I think we have to look more at this -- kind of learning by doing and base a lot on research as we go along.

MR. HASKINS: So under your system -- go ahead Bill.

MR. GORMLEY: So we are not seeing any evidence of the pre-K program crushing kids in Tulsa. We have data not only on instructional support but on emotional support. And so that's one indicator. We also see that the kids who are in pre-K are more attentive and less timid when they enter kindergarten, so that seems to be a step in the right direction.

MR. HASKINS: Both more attentive and --

MR. GORMLEY: Less time.

MR. HASKINS: -- less time?

MR. GORMLEY: That's correct. So --

MS. FARRAN: And we saw when children entered kindergarten that their kindergarten teachers rated them indeed as having better what we call work related skills, they were more attentive, their social behaviors were more under control, they had fewer behavior problems as they entered kindergarten. So I think we really have to think about -- there are two things I want to say. I think we have to think about the interaction

between the experiences that children had in pre-K and kindergarten. So I think there's a huge issue in the fact that the poor children we're serving are often going into poorly functioning schools and we need to -- I don't think it's a matter of all the joy goes out of them when they go into those schools. I think in many of these preschools that are in those same failing schools that the joy goes out of them in pre-K. That there is an interaction between having this experience early as a four-year-old and then having it again and again and again as you go through the elementary schools. That looks like it's not very beneficial for kids when they get to the -- at least in the third grade. So I am in a lot of classrooms. I still collect data in classrooms. I decided the system I use is probably -- I'm about two years too old to use it anymore, but I still go out there and use it.

MR. HASKINS: Do you have to run after the kids or something?

MS. FARRAN: Right, yes. And I think if you get to Bill's point earlier about the -- and Catherine Snow's issues about non constrained skills, if we could get more of that emphasis into any classrooms, including our public schools, we would change a lot of what's going on. You can't teach problem solving by having kids sit in whole group for 30 and 40 minutes at a time, which is what we see going on.

So I think we need some invasion of more information about what skills are important for children and I think teachers are flailing right now, they're not sure about it.

MR. HASKINS: Anybody else on this issue? Okay. According to NIEER, the National Institute for Early Education Research, which has done this great service over the years of collecting all the data that describes the state programs and publishes them in their yearbook, it's really a -- available on their website. If you Google NIEER, the website comes up and you can get to the yearbook and get all these -- a lot of what we know about the pre-K programs in the country. So they now say 43 states have pre-K programs, \$6.2 billion is now being spent. That goes up. It stopped going up

during the recession but recovered afterwards and now is higher than it was before. And it goes up every year, including last year. And there are about 1.2 million kids in these programs. So we're talking about (inaudible) taking it as growing.

All right. The question that has come up here and that has again generated a certain amount of emotion is the interpretation of Dale's findings and what she has said, that the states should not continue to invest in these programs until we understand them better and are sure it's a worthy investment. You agree with that?

MS. FARRAN: Well, we have not -- I mean I think you're directing that to me. We have said often that we are not in support of ending pre-K. We are in support of trying to come to grips with what our data may mean about what these programs should be and issues that we should be dealing with instead of just using data from studies that are 50 and 60 years old and saying everything will be fine even though we're not actually enacting those programs and that we should just scale up without much real serious attention to what's going on.

MR. ROLNICK: You know, it's interesting. If you were to come out to my neighborhood in Minneapolis, actually it's a suburb of Minneapolis, it's a fairly well to do neighborhood, there's no general oversight over early ed, it's a mixed delivery market based system. My neighbors, young families, have all kinds of choices, very high quality. Their kids go on and do very well and they go to a good public school and they succeed in school, et cetera, et cetera. And so we know the market can deliver this on its own if parents are in power and they have information. That's the system. We know it works, we know it works for middle and upper middle class families. And more and more families are recognizing the importance, for a number of reasons, of high quality early education.

So I don't think we need to wait for more -- you know research -- and I'm a research guy, we always want more information, there's always more we can do, but in my mind there's a real sense of urgency here. We've had this achievement gap for I

don't know how many years. Detroit, my hometown, something like 75 percent of the children in that town don't graduate high school and they don't graduate on time. That economy is close to a third world economy now and it will be even worse 10-15 years from now, I don't care how much money you give General Motors, all right. So it's a problem now and we know enough now that we're not going to go too far wrong if we empower these parents. So in my mind we should be bringing it to scale now. And yes, we'll get better as we do it, but I'll still argue we'll get you double digit returns. Detroit has two new stadiums and three casinos, guys, and it is a serious economic problem.

So I disagree that we shouldn't be investing now. I think absolutely we should be investing now. But again, my line is start as early as you can.

MR. HASKINS: Okay, but wait. It's not exactly an answer to the question because your -- I can tell your form of investment would empower parents, you wouldn't build a state pre-K program like they've done in Tulsa because it's too restricted, right?

MR. ROLNICK: I wouldn't, but I do like the fact that we have states trying different ideas out and then we can learn from that and we can compare a Tulsa to a --

MR. HASKINS: A Minneapolis.

MR. ROLNICK: -- Minneapolis, you know, to a Nashville, or whatever. I think there's a lot we can learn from that. So from a research point of view I don't mind, but when I advise I say start with the parents. Focus your program on the parent as early as you can. You can't go too far wrong. Just in terms of health measures alone. I mean I would argue that economic development is both health and education. And just on the health metrics alone, if you look at research coming out of NIH and CDC, the foundation years are critical for long-term health, critical. And we've ignored that in this field and I'm trying to get us to collect much more data, especially in Minneapolis on -- because we're starting as many parents as we can prenatal and we're trying to show the benefits just on

the health metrics.

So I'm saying we just know too much now. Before we build another stadium, guys, let's invest in these parents.

MS. BROOKS-GUNN: Of course you're talking about not a universal program but a targeted program.

MR. ROLNICK: Absolutely. Because I start with the assumption that we're trying to close the achievement gap. I know there's some work. A good friend of mine, Tim Bardick, has done work that middle class kids can benefit from high quality programs. How do they benefit? So long-term according to Bardick, the estimates are okay. Instead of making \$100,000 a year this child will grow up as an accountant and make \$102,000 a year. That the problem we're worried about? And that's a private investment, it's not public. We're talking about a public return. Because when our most vulnerable kids succeed in life there's a huge benefit to society in a whole lot of different ways. When middle class kids earn a few more dollars, parents can make that decision whether they should do that.

So I'm arguing that we keep your eye on the problem, which is the achievement gap. And there's no research to support in my mind limited dollars going to middle class families before they go our most vulnerable kids. And it's unconscionable in Minnesota, which is one of the most educated states, which has one of the best economies in the country, that we haven't solved this problem, we're not funding it.

MR. HASKINS: Brook, go ahead.

MS. BROOKS-GUNN: It's just that the universal pre-K program and a lot of advocates for pre-K for four-year-old is premised on universal, right, because they think they're going to get larger buy in.

MR. HASKINS: Bill, will you weigh in here?

MR. ROLNICK: Yeah, and I don't think that's true. In fact, the universal -

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MR. HASKINS: Well, wait, wait. Here, let's get the whole thing. Bill, go ahead, because I know you're a strong advocate for universal.

MS. BROOKS-GUNN: The universal, right.

MR. GORMLEY: Well, let me make a few points. First, on the need for research. An insider looking out yeah, I can think of lots of research that we need I'd love to see and I hope that other people will do it. As an outsider looking in, I'll bet people say wow, that is a data rich sub field. It's amazing how many high quality studies have been done. And so in relative terms I think that there's a heck of a lot of research out there that's very well done, very much on point, to guide policy makers.

Secondly, on universal versus targeted programs, it is possible for a sane person to argue for a universal pre-K program. I think they did it in Oklahoma for a couple of reasons, but one reason is that they expected that just as James Coleman argued some years ago, that disadvantaged kids would benefit from the presence of middle class kids in the same classroom. Another reason they did it I think is that they have so many poor kids in Oklahoma that they distinction operationally between a universal program and a targeted program is not as big in Oklahoma as it might in let's say Massachusetts or some other state.

The final point I'd like to make on the achievement gap, which I actually care about, is that we ought to be looking not just at who's getting pre-K services, but also at the kinds of pre-K services kids from different socioeconomic strata are getting. On this point there is some suggestive evidence from Deborah Stipek dating back a few years ago, and more recently from Rachel Valentino that's more current, focusing on pre-K, that disadvantaged kids in pre-K programs and disadvantaged kids in elementary school are more likely to be enrolled in programs where the emphasis is on didactic rather than constructivist instructional approaches. And I think this is something that we as a field should be concerned about. And it may be that what disadvantaged kids need is not just more access to pre-K, but also more access to pre-K programs that are

emphasizing constructivist instructional approaches that are more likely to develop their critical thinking skills, their problem solving skills, their sense of curiosity, and their capacity of creativity.

MR. HASKINS: Go ahead.

MR. ROLNICK: So an interesting comment on low incomes kids would learn more if they were involved in programs that had kids middle class, upper middle class. Well, it turns out because our scholarships are very portable some of our parents are choosing to put their kids in programs where they work. So even though they live in the inner city they work in the suburb and some of their kids are going to very high quality programs in a very high end community. And it turned out when we look at -- one of the criticisms we were getting is well, it will be -- they won't be as integrated as the public schools. It's just the opposite.

We have data to show that our scholarship kids are going to much more integrated programs.

MS. BROOKS-GUNN: It's completely true. I mean they --

MR. ROLNICK: Yeah, let me just --

MS. BROOKS-GUNN: They're segregated by income in pre-K as well.

MR. ROLNICK: And the other thing is I agree we need a variety of different types of learning environments, but who's going to say that to the parent? I don't understand why we don't say let the parent figure that out? I can tell you my younger son was a much different learner than my older. Like they came from two different mothers, which they didn't. (Laughter) They didn't. But they're such different kids and such different learners. And I know some kids that do very well in small colleges and some kids that do very well in large schools. Who is best to decide that decision?

So we did focus groups with our parents, and this was very interesting. Many of these parents hadn't graduated high school. They got the scholarship, they got the mentor, and we asked them what did you think of your mentor. There was a lot of

bonding that went on there. The scholarships, they loved the scholarships. Here was their biggest concern -- again these are many parents that hadn't graduated high school - - is K-3 going to be a four star rated program. So I have parents now that are now --

MR. HASKINS: You said no, it's in the public schools, right?

MR. ROLNICK: No, I didn't say no, I said -- but now we have parents that are that engaged that they're worried about the quality of their program. I'm going to tell you, you have engaged parents like this, you're at least halfway home. And that's what you're missing when you tell a parent you have to go to Head Start or you have to go this program. And by the way, if you don't like the teacher that's kind of too bad. You're lucky to be there because we only half fund a Head Start.

MR. HASKINS: I'm going to call the panelists to weigh in on this. Under your system government actually does two things I think. They come up with the money and distribute it, and your preference would be primarily or exclusively to low income families under some definition, and they have a rating system that sends a signal to anybody who wants to look that this is a good program or it's four starts or whatever state does it, which I think almost everyone in the field likes to have good rating systems. QRIS is very popular and growing. It's still too small scale. But those would be the two government functions.

Under the sort of the world that Dale is trying to instruct the vision is that we have high quality pre-K programs that are established by the government, and the fact is most of them are in the public schools. This is a long way from your -- these two things are incompatible. Right, Art?

MR. ROLNICK: Yes.

MR. HASKINS: Okay. So what do we favor? Should we let 1000 flowers bloom and give parents more control --

MR. GORMLEY: But it should be research based. What is the research telling you? The research is -- look, one of the best predictors of a child's success is the

mother's education. If you start with the parent early on and you get that parent involved, engaged, get her back to school, deal with mental health issues, you have a huge effect on that child's development. I don't see given that research how you wouldn't start with a parent. I'm not saying the parent can't choose a public school --

MR. ROLNICK: Well, wait, a parent can choose a public school program. I'm not ruling that out.

MR. GORMLEY: The answer to your question is that Tulsa and a number of other programs -- we haven't talked much about Boston, which I think is going to be in every way comparable and already is, but now they have a big random assignment study going on and I think they're thinking the results are going to be very similar to the previous study. So these school based, kind of the ones that you're trying to call attention to, can be made to work quite well and produce impacts that -- long-term is still up in the air I think on research grounds, but definitely sizeable short-term impacts and at least the things that can be picked up through third grade. So are we going to turn our back on that and give the money to the parents and let the parents decide what they want to do?

And let me mention --

MR. ROLNICK: But if the schools are good the parents are going to choose -- half of our parents choose Head State --

MR. HASKINS: Okay, but wait, Art. Art, wait. We have 15 tons of research that contradict what you're saying. And what it shows is when parents make decisions about where they're going to put their child in a care setting, it's convenience, it's cost, it's all the factors that are most important to the parent. Now I'm not saying -- you have --

SPEAKER: (Inaudible) parents.

MR. HASKINS: I know that. But you have said that you have to have a second system here, which is the one that helps the parents starting in the pre-K years.

MS. BROOKS-GUNN: But there's a really important point, Ron, about what you just said. You're absolutely right. If you survey parents, particularly parents who are marginal incomes, that's what they say. Because they can't afford any other choice, they cannot pay for quality. Why would a parent say well, I'd really like quality but since I can't afford to pay for it then we're not going to have it? It's schizophrenic. They have to go into denial about that. What Art's program has done is provide them the funding -- which is actually I don't think any more than the funding it costs to run a classroom -- provide the funding to the parent which enables them to choose high quality. Now they actually have that as an option. You can't use prior research on surveying parents when they actually couldn't possibly afford to choose quality.

MR. HASKINS: Oh, yes, I can. Because the only thing I'm trying to bring to the surface here is you've got to have a second part of your program. It's not just the pre-K setting or even earlier, it's the parents.

MR. ROLNICK: No, I said our scholarships have to be used at four star programs.

MR. HASKINS: You have to train the parents. And that's a difficult proposition.

MR. ROLNICK: No, no, no, wait a minute. The scholarship has to be used at a four star rated program. Every one of our parents used the scholarship. They were there with a coach. The bonding went on with a coach.

MR. HASKINS: Okay. So you do -- it's a combination. You train the parents and you restrict their choices?

MR. ROLNICK: We don't train the parents, we engage them, we empower them.

MR. HASKINS: Okay. (Laughter) Excuse me, I didn't mean train. You culture your parents, you help them grow. Okay, but it's a separate kind of program. You can't just start at age four and the parents are going to make the right decision, which you

constrain by the way as you said with a four-star rating system.

Okay. Final comments by any of the panelists? And then I'm going to go to the --

MS. BROOKS-GUNN: I'm going to say one thing about the universal. Our problem in the U.S. is we have a fractured zero to five system, but it is a system, I mean because it has no choice. You know, it works, it doesn't work well. As soon as you put in a public funding for a four-year-old program you begin to impact that system. And what's happening with universal pre-K is it's actually threatening community childcare because four year olds are being pulled out of community -- four year olds from parents who can pay are being pulled out of the four-year-old system, which makes it harder for them to care for their zero to three. So we really have to think about the whole zero to five area before we just get wedded to one little part of it.

MR. HASKINS: Bill, do you want to make a comment on that?

MR. GORMLEY: I think that's a legitimate question to ask. That's all I'll say.

MR. HASKINS: Okay, audience. Raise your hand, someone is going to come around and give you a microphone. Give us your name and where you are and then ask a question. We don't want any long statements because I'd like to accommodate as many people as possible.

We'll start right here on the left.

QUESTIONER: thank you. Hi, I'm Katherine Merseth with Research Triangle Institute. The question for the professor from Vanderbilt. On one of your final slides there was a note about the lens of looking at this pre-K as the beginning of schooling, or looking at the end of the zero to five space. And I wondered if you could talk more about the implications of those two perspectives.

Thanks.

MR. HASKINS: Good. Thank you. That's a model for everybody to

follow. (Laughter)

MS. FARRAN: I hope that communities will get engaged on that particular issue. I think when we sort of back into setting up more pre-Ks in public schools we are implicitly making a decision about what we think without actually maybe explicitly saying that's what we think. And I think what Art has demonstrated here, his program is more of an illustration of thinking of zero to five than it is of thinking of beginning of formal schooling. I would hope communities would engage with themselves about this and actually thing about what they really believe about young children.

MR. HASKINS: Okay, there's one in the back, all the way back there. Yes, right there.

QUESTIONER: Hi, my name is Erica Li and I work with the U.S. Department of Education. There's been a lot of discussion about the Minnesota model, but I wanted -- a clarification question. I thought that all Head Starts actually entered at the highest rating in Minnesota. And I guess if that's true I'm just kind of trying to grapple with the fact that we also know based on the Head Start studies that Head Start classrooms have various qualities. So again I'm just kind of trying to think, if I'm a parent can I really just look at that system or is there really something more that I should be thinking about.

Thank you.

MR. ROLNICK: That's a great question. And if you think of a -- as a startup company, when we went into St. Paul there were some issues in getting early ed programs interested in the scholarship kids and we needed some programs involved. And so we decided that initially St. Paul got a high start rating, the St. Paul early ed program and Head Start got a high quality program. And if they were NAEYC already approved they got a high rating. But over time we're not just looking at inputs, we're going to be looking at outcomes and what percentage of those children actually are assessed school ready. And we have a 32 variable tool that assessed social and

emotional skills as well as cognitive skills. And we expect those kids, a high percentage of those kids coming out of those programs to be assessed ready. And if they're not -- like there's only about 30 percent of low income kids are assessed ready. We expect them to get it up to 50-70 percent. If not the rating is going to go down. But we had to get it off the ground.

MR. HASKINS: And the state agrees with that? The state will do that, or whoever did?

MR. ROLNICK: But this was a private program.

MR. HASKINS: No, no. I'm talking about the rating system.

MR. ROLNICK: The rating system right now is input based, but we're going to as we get data --

MR. HASKINS: But who controls the ratings?

MR. ROLNICK: The state.

MR. HASKINS: That's what I -- okay.

MR. ROLNICK: And it's a good question whether we're going to be able to move them to outcomes. I know we're going to get pushback on that, but there's nothing preventing -- we have a private organization, and that's called Parent Aware, and that's the name of the rating system, that does oversight over this and we will publish -- it will be public information for most of it. We will publish. So if you go on line, you put in your zip code, we'll tell you the start ratings of the program in your communities, and we'll tell you what percentage of the kids are school ready out of that program. And we'll give you some more information. So you as a parent will have considerable information about that program.

How much the state will allow us to do in the long run? We're making some progress and getting much more data on this, but we have a ways to go. They're fighting us.

MR. HASKINS: Bill, do you want to add something to this?

MR. GORMLEY: But you will not be looking at what their baseline was?

MR. ROLNICK: No, we will be looking at the baseline.

MR. GORMLEY: You will be looking at their baseline?

MR. ROLNICK: That will be part of the information. You'll get an idea of what the baseline, what the parents going into the parents, and how the kids are progressing or not. So if we're really good, it's what we were hoping to do in the medical industry, right. You want to know how good your surgeon is. You don't want to know the degree they have, you want to know about the outcomes.

MR. HASKINS: Go ahead, over here.

MS. SCHANZENBACH: Thanks. I'm Diane Schanzenbach; I'm a Senior Fellow here at Brookings and I do research in the same area. I really appreciated the keynotes by both Dale and Bill and I share your commitment to science here. And I wanted to say we've done a lot of interpreting of these results, but I want to make sure we're getting the science right here. One thing I wanted to say to Dale is I think that a lot of criticism is not about the fact that you only have consent on a share of your -- I have two questions, I promise, Ron -- a share of your data, but you don't actually use the experiment to identify the impacts. And there were lots of write ups of this that were misleading about this and I think many of us feel burned about that fact.

And so I have a question about the new results, which is as an economist I would be talking a lot about the need to control for randomization pool fixed effects. I know she didn't say that and I wasn't able to find the academic version of this paper yet. It seems like maybe it's not available. I trust you did that and I would encourage you to talk about -- or I'd like to hear your answer to that. But let me ask sort of the broader question as well, which is in both the Head Start impact study and in the project STAR class size experiment a lot has been learned, more than the original designers ever anticipated from secondary analyses. And particularly in the Head Start impact study some of this new analysis has really changed how we think about the basic

impact results. So I wanted to know what your plans are to open up this data set to secondary researchers.

MS. FARRAN: Those are many questions. And I should say, I should be really clear about this, that Mark wanted to make sure that I talked about these as preliminary results. We have been in the process -- I'm not sure you know Mark Lipsey but we've been in the process for a long while of being very, very careful about these because we are aware of the scrutiny that we are getting. So I think you can be assured that Mark is doing the appropriate analyses.

Now, let me talk about --

MS. SCHANZENBACH: Wait, so you can't say (off microphone; inaudible)?

MS. FARRAN: Yes. And we also are quite aware that these data will have to be available. We have this issue that we're still collecting data. And so we have another issue in that the State of Tennessee was unable to give a high stakes testing last year, so we'll have a year without -- that's a whole other story. But that doesn't have to -- we didn't cause that. So we'll have a year unfortunately without -- that will have no fourth grade test scores on these children. So we're still collecting data, but as we go along we are absolutely making sure that we -- in fact, right now our data set can account for every single child who was on every single list and what happened to them. And we can talk about that more at length. But we have different data sets so that people -- they are prepared for researchers so that it is completely transparent who was who, who was where, why we couldn't find them or why we lost them or whatever.

MR. HASKINS: And when will that be published do you think? Or some portion of it?

MS. FARRAN: Well, it's an issue we have to think about in terms of whether it should be public at the end of the IES version, so we should make it public up through third grade, or whether we have to wait for our -- anyway, it's --

MR. HASKINS: And when it gets public the whole data set or --

MS. FARRAN: Oh, absolutely.

MR. HASKINS: -- or a big part of it will be --

MS. FARRAN: Oh, all of it.

MR. HASKINS: Okay, good.

MS. FARRAN: Yes.

MR. HASKINS: All right.

MS. BROOKS-GUNN: Certainly could use the same model as Head Start used where the data became public over time.

MS. FARRAN: Yes.

MR. HASKINS: Yes, right here.

QUESTIONER: Thank you. I'm Dave Rabinowitz; I'm retired. And I don't find the Tennessee results at all surprising based on the way brain development works because the vast majority of brain development occurs after birth and continues at least into the 20s. And until a certain part of the brain has developed to a certain point a student cannot learn something, just physically impossible to learn. And if you teach to the median then about half the children are not able to learn. But the thing is that they don't just not learn, they do learn --

MR. HASKINS: Okay, you need to get to a question.

QUESTIONER: Yes, I will. What they learn is that this is hard and they can't do it. And a couple of weeks later when they can do it they're not even going to try to because they've already learned that they can't. And this doesn't just affect a few students, this affects everybody because different parts of the brain develop at different rates in different people. And if you try to teach someone something before they're ready they're going to never be able to learn it, they'll be crippled for life.

MR. HASKINS: So, Dale, what are you thinking?

QUESTIONER: If on the other hand --

MR. HASKINS: Wait a minute now, hold it. Really, serious, a lot of people waiting --

QUESTIONER: Let me finish. I'm getting somewhere.

MR. HASKINS: I'm not going to let you finish if it goes longer than another 30 seconds.

QUESTIONER: Okay, 30 seconds. If you expose children without expecting them to learn they're going to be exposed and the ones that can learn will learn, the ones who can't will not be adversely affected. Has anybody looked into doing that instead of trying to teach children in preschool? And by the way, this continues at least through high school, this problem.

MR. HASKINS: Dale, he's looking right at you.

MS. FARRAN: I know. I'm thinking. So what you may be asking actually is what we haven't done yet, is a more subgroup analysis. So are there some subgroups within our group that might have profited more than other groups. And we're in the process of looking at that. We do find some things that -- it would be too complicated to talk about right now, but I think those are important questions in terms of timing. And when you put kids into a whole group setting like this and you do a lot of whole group teaching, then you are sort of teaching to the median, right.

MR. HASKINS: Do the one right on the aisle here quickly.

MS. CHEROW: Thank you. Evelyn Cherow, Global Partners United. I serve on the Early Child Development Task Force on the Global Partnership on Children with Disabilities which is housed at UNICEF and we'll be meeting in two weeks. Obviously for those of us who've worked in the field of pediatric disability in early identification and intervention -- and I know all of your universities are very active in the research in those areas -- having worked with national committees on evidence-based practices we know in the speech language pathology and pediatric audiology and deafness, we've worked on Federal legislation for universal newborn hearing screenings.

So I was very happy to hear Art comment on the interface of health and education in early child development.

You touched a little bit on special education. I wasn't sure if you were discussing inclusive early child development, which is our goal for low and middle income research countries. Is there data -- I just heard you say sub sets analysis -- where you're looking at the children who -- and there are a lot of them because of lifesaving techniques in developed countries and also now in developing countries. Are you looking at those children and the affects long-term?

MS. FARRAN: Well, we absolutely will. That's one of the subgroups that's very important to us. It turns out to be a lot more complex situation than we might have understood from Perry or Abecedarian, who tended to summarize at the end of the pre-K-12 years, how many had IEPs. So these early IEPs, a lot of them tend to be speech language. These early diagnoses. It's just hard to get rid of them once you get them. Public schools tend to keep them for a couple of years, those same diagnoses. And what we really think may happen is that as we get to grades 4, 5, and 6 we may see a real diminution for the first time in some of those special education characteristics for the VPK kids who were identified early. Maybe that helped them. And we'll be interested to see what happens to the group across the middle school years when learning disabilities become more of an issue. But we will definitely be tracking those children as a group.

MR. HASKINS: Okay. One more question over here quick and then a quick answer.

MS. DANIELS: Hello, I'm Sameera Daniels. This question is for William Gormley. I'm excited that you're pursuing this issue of critical thinking. Do you have evaluations of the programs that may or may not have been doing this constructivist approach, and is it specifically in the developmental education choice program, for example, in Boston, that this kind of thing is possible? And are there any programs like

that that you can call attention to?

Thank you.

MR. GORMLEY: I think it's safe to say that most of the tests that we use for four year olds or five year olds are not focusing on their critical thinking skills. On the other hand, there are some curricula out there, including probably the building blocks curriculum that either explicitly or implicitly are trying to nurture those kinds of skills through guided play and playful learning. So we need to do a better job of including those kinds of skills in the mix, appropriately gauged for four year olds or five year olds.

One encouraging sign is that as the common core has become prevalent we do have models for including critical thinking skills in common core mandated tests, so it can be done for older children and it should be done for younger children too.

MS. BROOKS-GUNN: Read the article by Doug Clements in our issue and also look at Deanna Kuhn's research where she's trying to enhance critical thinking skills with slightly older children.

MR. HASKINS: Okay. Thank you very much, panel. Audience, please join me in thanking the panel. (Applause) Thank you. Goodbye.

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