autonomy. Those are a lot of constraints. Under those conditions, children attending day care centres don't seem to grow up any different. No better, no worse from children at home when you measure things like language development, aggressive behaviour, normal emotional development -- gross things. That's all the study said.

**David Cayley**
Jerome Kagan's study looked at a number of issues. But I was particularly interested in his findings in the area of attachment, that is, are children in day care as securely attached to their parents as children at home? His answer was equivocal.

**Jerome Kagan**
We don't know how to measure attachment. We use superficial measures, although the best available. With our superficial measures we found no difference in attachment. I wouldn't be surprised if in the next 20 years when there are more sensitive measures of attachment, maybe day care children are less closely attached. Remember in my answer to your first question, the methods are crude. Given the methods we use, which were the best available, we found no difference in attachment. But that's like saying when they're investigating the pill, with those methods they found no harm in the pill. Now with better methods, they find -- wait a minute, the pill is dangerous. Science is always tentative. So maybe there is a difference in attachment, we can't detect it yet.

**David Cayley**
Jerome Kagan's cautions about the limited validity of his findings were also echoed by Burton White. White is the author of The First Three Years, a former colleague of Kagan's at Harvard, and now the director of the Parent Education Centre in Newton, Massachusetts. He suggests that the same cautions should apply to all the research studies which have been done in this field.

**Burton White**
What it amounts to is the following. First of all, the bulk of the studies that have been done have been done in non-representative places. The typical study has been done at a university affiliated place. You can't generalize to substitute care very readily from such research, in fact you can't do it at all. Second, there is no evidence of long-term impact, because we haven't had long terms yet. Third, these studies don't address the question of what's best for children. They're addressing the question "Is there any harm being done?" That's not the same question.

Underlying the problem here is the ambivalence and indeed the deep guilt that most young families, especially young women, feel after the fact. By virtue of long-standing traditions, if you do this with your child, if you put your child into a substitute care system most of the day when the child is a few months old, you find it very difficult to sleep easily at nights subsequently. And so what we have is a whole bunch of statements coming out in an attempt to keep the guilt down. Statements like "It's not the quantity of time you spend with a child, it's the quality of time." As if, after a nine-hour day out of the home, when you come home with your six-month-old child and it's 7 o'clock in the evening, and you've got something to do around the house, you can now spend a half-hour of marvellous time that will make a difference. There's a lot of craziness being surfaced about these things. So there isn't enough evidence of consequence. It isn't done in representative places, it doesn't ask the question of what's best for the child. It is just too risky at this point to assume that you don't do the child any damage of any consequence when you transfer that primary responsibility to some other institution.

**David Cayley**
A further problem with the research on day care is that it comes for the most part from a tradition of experimental psychology which deals in measurable quantities. It can thus tell us virtually nothing about those processes which more interpretive psychoanalytically oriented theories have supposed are going on during the first three years. Eric Erikson, for example, suggests that the pre-eminent value created in the first year of life is the capacity for trust, something which no one has yet found a way to measure. And even if the capacities for trust, empathy and affection could be measured, their absence would not necessarily show up in childhood. It follows I think that current studies on day care are not a secure basis for decisions about what is in the long-term interests of children.

One thing, however, that I think is established by the studies that we have is that truly excellent day care amounts to the provision of alternative

mothering, which reminds me a bit of Mark Twain's statement that Shakespeare's plays were either written by Shakespeare or by someone else of the same name.

British developmental psychologist Penelope Leach.

**Penelope Leach**
I think it is proven beyond doubt -- and I know that's an extreme statement, it's meant to be -- I do, now, in the last three to five years take it as proven that the young human infant is designed to develop with and through interaction with one and/or more particular adult human beings. I honestly believe that this now needs to be taken as a starting point. It doesn't matter how many other people the baby has, I have a strong feeling that the more people that are special to a baby, the better off he is. But one special person who is emotionally special to him, he must have if he is to develop intellectually, socially, emotionally as well as physically as far as he's designed to do.

**David Cayley**
The question that follows from this conclusion is whether such care is possible in an institutional setting.

**Penelope Leach**
It is actually impossible within an employment situation. To replace a mother with an employee cannot be done. This is partly of course because what is expected of mothers is far beyond what is expected of any employee. But allowing for any kind of time off, promotion, on the job training, vacations -- anything of this kind -- you cannot provide a child with a continuous or more or less continuous mother figure in an institutional setting. Now this is even before we start talking about how many infants economics demand that one person should care for. Once you add in that factor and say that this group of employees are to care for six or eight or ten babies, of course the whole thing becomes ludicrous, because you can't do it for multiple children. To meet the needs of even twins, any mother of twins will tell you, in the sensitive way we most of us reckon to meet the needs of a single baby is in itself impossible. But the other point about institutional care, even on a daily basis, is that a baby that's in that kind of care is in a situation where he's being cared for by somebody who even if she was there yesterday, because it wasn't her day off, doesn't know what happened to that child in the twelve hours that he's been at home. Now when a child is growing and changing and developing and working very hard at particular areas of his development, even twelve hours can put you totally out of step. Caring for a baby non-continuously is a continual process of experiment. And it may not hurt the baby for one afternoon, but it's awful bad for babies if all of their infant lives they are having to communicate with people to whom their language is foreign.

**David Cayley**
So far we have been discussing day care in the context of extremely expensive and relatively high quality research schemes. The real world of day care is something else again. In 1979, of the half a million children between 2 and 6 with working mothers, only 15 per cent were enrolled in any supervised or approved form of care. The rest were cared for in unsupervised private settings. In a book called The Kin Trade, Laura Johnson and Janice Dineen report the results of a Metropolitan Toronto Social Planning Council study which tried to assess the quality of this informal care. The researchers found on average what they called "adequate custodial care". In the sample of 281 homes, there were a few cases of genuinely stimulating and varied care, and at the other extreme, a few cases of outright abuse. But in general they found indifference. Most of the care-givers were not very interested in the children as individuals, and in a significant minority of cases, the children were simply ignored altogether.

The most rapidly growing type of day care is provided by the profit making commercial centres, which are usually run as franchises of large chains. Valerie Suransky of the University of Michigan has reported on the operation of these centres in a recent book called The Erosion of Childhood. She finds them at best to be highly institutionalized, age segregated, mini-schools, with such disproportionately high child-staff ratios as to virtually rule out any real individual attention to the children.

Faced with the poor quality of both commercial and informal substitute care, most proponents of improved day care services have argued for a massive expansion of state-run institutional care. But the question remains whether such care can really ever replace even an average quality of parental care.

Otto Weininger is the Chairman of the Early Childhood Section of the Department of Applied Psychology at the Ontario Institute for Studies in Education.

**Otto Weininger**
I think that the quality in most of the day care that I visited, and I visited a fair number over the past several years, has really been pretty poor. And I see it as being poor because I don't really think that they take into account what the child comes to the day care with. I don't think they take into account the kind of night that the child has had, or whether he or she has eaten breakfast, how long they've been awake, or any of those things that I think are so important in the lives of young children. But perhaps even more importantly this day care acts as a kind of a very serious interruption to the flow of experience for the child. By that I mean that the child and the parents or parent has been having certain kinds of experiences in the morning or in the evening, and they don't have these same experiences during the day -- they're away from each other. Certainly children go away from their parents, and that's not at all remarkable, but the more remarkable aspect of it is that these children are now placed into centres which have to be institutionalized, and it's that aspect of the separation of the experiences of the child and the parents by the institutionalization of the child that I think has the most damaging aspect to the child's life.

**David Cayley**
Institutionalization in this context means several things for children. It means separation from the day to day world of home and neighbourhood, it means the loss of the opportunity to do what you want when you want to do it, including sometimes just doing nothing at all. And it means the loss of privacy and solitude. These things of course are not always present in the home, just as they may sometimes be present in the very best day care centres. But to some degree at least, numbers alone dictate that institutional constraints will dictate a good deal of what happens in day care.

**Otto Weininger**
These day care settings are so institutionalized that the children are told "It's now 10:30 and we'll go to the bathroom," whether you have to or you don't have to. "It's now 11 o'clock and we're all going to go out." "It's now 11:30 and we're going to start our snack." "It's now whatever time it is, and we're going to do this -- and we do this as a group." Now I don't think that they have any real opportunity of doing anything else, if they're going to function, maybe even if they're going to survive. But children don't behave that way, children don't react that way. Children aren't groups, they are very individualistic. They have very idiosyncratic needs at times when other kids don't have any of those needs at all, and I don't think that day cares take that into account. You go into some day care settings, and you find that all the children are being lined up to move in. And when you line up four-year-olds, they don't line up very well. When you line up three-year-olds, they don't line up well at all. But the day care people say you have to line up, you have to hold hands. Well, maybe that's okay for some, but it's not okay for all, and I don't think that that's teaching them anything. See that aspect of teaching, like "I want you to share with Mary because Mary needs to have some of that." And if you tell that to a three-year-old, that makes about as much sense as if you quoted to me some fantastic mathematical theoretical formula and I wouldn't have really any understanding of it. Well that's just about the same thing that happens with a three-year-old child. They don't have any understanding of the idea of sharing, nor do they have any idea of "be sensitive to". "At three years, I am not sensitive at all, hell, I'm really egocentric. I'm narcissistic, the world revolves around me. Now you, day care person, are taking that world away from me prematurely, and at such a time when I haven't yet understood that I need to be involved with other people, and you're forcing me into involvement, you're doing this in a premature way." And I think that if we do this in a premature way we've cut off a lot of the skills of that child later on.

**David Cayley**
Another concern which Otto Weininger expresses about day care is the fact that it may be forcing some children into premature independence as a result of prolonged and daily separation from home and parents before the child is actually ready to take that step for herself.

**Otto Weininger**
I think we are developing a particular kind of person by this early institutionalization. We're insisting on a kind of early independence, and I think that when we insist on too early an independence in young children, 3 years old, 4

years old, that what we do is we create this child in such a way as to force them to block some of what I'll call dependency needs, which is a kind of "take care of me" and nurturing, a "care for me" capacity which I think we all have, but we gradually sort of block over. And we gradually block this over as we mature and as we grow up. But I think that we can do this prematurely, and if we do it prematurely, what we tend to do is we have a child who is not going to be close to an adult, who is going to have difficulty being taken care of. Who's going to fight when you try to hug them. Who's going to say "I'm independent, and don't come near me." Now part of that -- not all of it -- but part of that is as a result of putting them in centres, I think, at too early an age. And for me, too early an age would certainly be the two-year-old.

**David Cayley**
It is often said that if dependency is frustrated, the result will be a clinging rather than an independent child. But I think it may also be true that the frustrated child will not necessarily cling to the one who is frustrating him. Instead, his attachment may be transferred to more reassuring persons or objects. The well-known phenomenon of the security blanket is a small case in point. Our behaviour as consumers may be a large instance of the same type of displacement. In the case of the day care centre, what follows from a premature disruption of the bond to parents may be a type of substitute bonding to peers.

**Otto Weininger**
I think that the child who is not effectively attached to the parent, and I think that attachment processes will be watered down and minimized when the parent has to drop their child off in a day care from 3 or 4 months of age and on, and that that's going to have an effect on the processes that the child is going to go through in terms of learning, in terms of attachment and later on to other people, in terms of rebelliousness and in terms of not listening to adults. Now day care is essentially a world of children, and they do form peer attachments. That peer attachment may be in fact the saving grace for those children, because adults can't interact with children effectively when they have to take care of four or five or six and there's one adult to do that number. Children are lost. Since the adults can't deal with this, what the child usually does is turn to peers. And I think that it is the peer interaction that effectively stems some of the emotional problems that may actually be present in day care. So it's not the adults, and it's not that they are effective, but it's really that what we've done is we've offered the children other children to be with and to play with. If we allow them to play, I think that there'll be less problems for those children.

**David Cayley**
What Otto Weininger is here calling "attachment to peers" should not be confused with spontaneously formed friendships. He is referring to a substitution of peers for parents which may be a saving grace in the context of day care, but which may also weaken the parent-child bond in later childhood and adolescence. And this I think we very often see. In fact, the separation of people into peer groups from the day care centre to the old age home is already one of the most distinctive features of our society.

It is impossible to generalize safely about children's development, and this applies even more to emotional than to physical development. What one child can handle at 2, another child can't handle until 4. Day care may be beneficial for one child, damaging for another. Babies are individuals virtually from conception, and there is much about their lives and ours which neither nature nor nurture can explain.

Nevertheless I believe that in general children are better off with their parents during their early years, and what I want to examine in the remainder of this program are the obstacles to this arrangement. In 1979, in a passionate polemical book entitled Who Cares?, British developmental psychologist Penelope Leach issued a cry from the heart on behalf of parents and their young children. She argued that despite a mask of sentimental rhetoric, society in fact placed very little value on child rearing. And the evidence which she cited encompassed both the physical and the social environments in which mothers and occasionally fathers bring up children.

**Penelope Leach**
The feeling in most areas, particularly in big city living, is that cities are built primarily for the automobile and for the automobile as used by wage earners and money spenders. In other words, the whole day to day life revolves around people who are commuting to work, who are

working, who are snatching a quick lunch from work, who are collecting their money and are then spending that money on entertainment, on eating out and whatever. The fact that there are young children, the workers of the future, being reared in and among all that is something which a man from Mars would find it very difficult to notice, I think. He would have to go to very particular places -- open spaces, parks where there happened to be playgrounds and so on -- really to know that there are any small children and any of these strange human beings called "parents" around the place at all.

Along with that sort of physical ignoring of young families, I think we have extremely peculiar attitudes to the young of our own species. I mean it's a well-known old joke that the British like dogs better than children -- but you know, it's really true. If you are in a street and a little dog comes bounding along, smiling and wagging its tail, pretty well everybody will smile down at it and hold out a hand and generally look interested and warm. But let a small child run away from a harrassed mother down a crowded street, and you're very lucky if anybody stops it going in the road, let alone smiling or holding out a hand.

**David Cayley**

Anyone who has spent time caring for young children will I think recognize how apt Penelope Leach's observations are. Children are noticed as potential consumers, and the candies in the supermarket are always seductively displayed at child's eye level. But rare indeed in public places are the play spaces or the tolerant attitudes which would actually be of assistance to parents. Difficulties of course there have always been, but more recent developments have also dimmed the prestige of full-time mothering.

**Penelope Leach**

I think the increase in the numbers of people being expected to carry full-time paid employment is a very real factor. Now it's odd to be talking about this now when we're all suffering from unemployment, but that isn't a matter of social preference or social pressure, it's a question of economics. Nobody, so far as I know, wants the kind of unemployment rates we now have. Within that, I think that that part of the women's movement which felt it necessary to fight for women's rights in the labour marketplace was a very real factor.

Now if I could just enlarge on that for a minute, because it's very easy to be taken wrong. I think that women's rights had to be fought for first in terms of equal rights to work, in terms of equal pay for equal work. But I think it was forgotten in the excitement of the moment, if you like, that women who are mothers are still women, and that if you are fighting for women's rights to work and women's right to equal pay, it is vitally important that you should fight just as hard for the rights of those women who elect to do something different from competing with males in the marketplace. And I do think that this was forgotten for a while, certainly in Britain there was very great pressure on all women to seek paid or professional work. There was a real tendency to suggest to women who chose to stay at home and care for their own small children, a real tendency to suggest to them that they were letting down their sex, that they were letting down the cause, that they were letting down themselves. And I think this was extremely damaging, because God knows, child care is a difficult enough job without people also implying to you that you ought to be doing something different.

**David Cayley**

In Canada today, nearly half of all mothers with children under 3 are working. Some are working by clear choice, but among those forced into the work force by either social or economic pressure, there may be many who would choose to be with their children if circumstances or social priorities were different. Some fathers might also opt to be with their young children if the choice were available. It is a question of where society puts its priorities and its resources.

**Penelope Leach**

What I really feel is that when provision is made at all for young families, it tends to be in ways which seem to be designed to help mothers out of mothering rather than to help them with it or within it. In other words, the most money and the most time and the most publicity is expended on schemes for providing workplace nurseries or creches or this or that or the other ways in which a mother may legitimately leave her baby. If a comparable amount of effort were spent on finding ways of helping her enjoy the job she's doing with that baby, I think we might see a very different picture of demand.

**David Cayley**
Penelope Leach's point here becomes a very important one when we consider the current demands for free universally available day care which are being put forward by sections of the trades union movement, the NDP and the women's movement. Such a proposal would require a massive social investment. Would comparable resources be made available to those who wished to rear children at home? The question is rarely even asked. But the preference for socialized child care as a solution to the problem of the economic inequality of women does, I think, indicate an important weakness in the political program of feminism. In this regard, I would like to quote sociologist Alice Rossi. In an essay entitled "The Bio-social Side of Parenthood," she speaks of the tendency to confuse difference with inequality. "As far as male and female are concerned," she writes, "difference is a biological fact, whereas equality is a political, ethical and social concept." In other words, if society attributes inequality to women on the basis of biology, the solution does not necessarily lie in minimizing or rejecting the influence of biology. The point is reinforced by Louise Kaplan, a New York psychoanalyst and the author of Oneness and Separateness.

**Louise Kaplan**
In the typical disputes between nature and nurture, it always seems that nature comes out on the short end. And people who want to be liberal, progressive and want to change the world and make it a better place, get very suspicious every time somebody says something is natural, something is inborn, something is innate. And the idea that many social reformers have is that society can do anything. That society can enforce its template on nature and make human beings into anything they want, and people who say otherwise are reactionary. Anyone who says that something is biological or natural to the human being is a reactionary who wants to keep the status quo. My idea is that biology is our protection against society. That because there are biological givens that are the same in all human beings, the human spirit is such that it can resist being taken over by society. That society cannot do whatever it wants to human beings, and biology ought to be respected, because it's what protects us from social domination.

**David Cayley**
In the light of Louise Kaplan's analysis, and of the remarks I quoted earlier from Alice Rossi, I think it would be helpful to try and offer a broader definition of the women's movement than is commonly understood by the term "feminism". It has been my thesis on this program that children need their parents, and particularly their mothers, in their early years. Since this position has sometimes been typed as reactionary, I think that it is important to establish that there has been a strand in women's thinking which has recognized this need, and indeed gone farther to recognize the mother's need for her child.

I would distinguish two broad and divergent tendencies within the women's movement. The first has been concerned with the elimination of inequality by the elimination of differences. The second has been concerned with the recovery of women's power in the context of recognized biological differences. Perhaps in the second case it would make sense to speak of an ecological feminism. Under this rubric, we could include the struggle to end the medical domination of pregnancy and childbirth and the recovery of breast-feeding as a critical component in the relationship between mother and child. This section of the women's movement has struggled, in other words, not to liberate women from motherhood, but rather to liberate motherhood from the repression and domination it has suffered at the hand of a patriarchal society.

As an example of this struggle, I would cite the La Leche League, an organization which began as a self-help group of breast-feeding mothers in Chicago in the mid-1950s, and went on to form the popular base for the recovery of breast-feeding, as well as stimulating the scientific research which led to the discovery of breast-feeding's emotional and immunological benefits to the child. Marion Thompson was one of the founders of the La Leche League and is now its president.

**Marion Thompson**
I remember with one of my babies, the baby was crying and I was in a grocery store, and the woman said to me, "Oh, oh, he needs his bottle." And I said, "Oh, he's not taking a bottle." And she said, "What? How do you feed him?" It just totally had left women's consciousness that this is what their breasts were originally for. So we thought that when we started La Leche in the middle fifties, that really not very many women

were nursing their babies, because the number of women nursing was decreasing all the time. And it was hard to even find another woman who had actually done it. I mean, you can imagine us finding seven women -- but this was out of hundreds of people that we knew. But what we found out was that the desire to breast-feed is sort of a deep down desire in women. Most women have this instinct or this urge, if you'd call it that, and that as soon as women knew that there was some way that they could get some help, they wanted to go back to breast-feeding their baby.

We were amazed from the beginning of La Leche League that so many women heard about what we were doing, because we didn't even advertise in the beginning. The world was so uncomfortable with the word "breast" even in those days, that we used this name La Leche, which is a shrine in Florida -- in fact it's the oldest shrine in the United States. It's a shrine of the Virgin Mary breast-feeding the Christ child. Because we couldn't say "breast-feeding" or that we were helping mothers to breast-feed, if we were going to be written about or put a meeting notice in the paper. So people were uncomfortable with that aspect of breast-feeding, but women did want to breast-feed. And we found it was almost like having a tiger by the tail, because as soon as we started, women started coming, and they haven't stopped yet. Despite the fact that formula was being sold in the United States and being promoted in the United States, women continued to want to breast-feed their babies, until where I've been told it's somewhere like 74 per cent of the babies in the United States start out being breast-fed.

**David Cayley**

In connection with what Marion Thompson says here, I think that a sharp distinction needs to be drawn between the sentimental idealization of motherhood, perpetuated largely by self-interested male experts, and the recovery of natural feeling which is evident in the growth of the La Leche League. And in this regard it is important to note that the rediscovery of breast-feeding influenced and at the same time was part of a larger pattern of change in the consciousness of both men and women.

**Marion Thompson**

Women were also surprised for the closeness they began to feel towards those babies. In fact I had a number of women who had bottle-fed previous children, who when they started breast-feeding said, "You know, you never told me how close I was going to feel to this baby." It's true they had to stay home with their babies, but they liked being with their babies. They weren't feeling tied down or martyrish, even though a lot of people thought they were. The fact that they were having to carry their baby around really wasn't that much of a problem, because they enjoyed those babies. And so as a result of this, mothers who for example breast-fed a baby, when they would go on to have another baby would be very concerned about the kind of childbirth experience they were going to have. They wanted to make sure that they would have a doctor who would allow them to work with their own bodies in giving birth, who wasn't going to force unnecessary anaesthetics or analgesia on them, or do anything that would interfere with optimal birth experience, because they realized this was important. Not only important in terms of starting breast-feeding, but important in its effects on the baby and its effects on the beginning of this relationship.

I am sure that a lot of the trend toward home birth has grown out of breast-feeding. It's grown out of couples who have had a very special experience with the baby, and want to continue having better experiences with the next baby. And another thing that I could mention is the whole 'family bed' issue. I remember when I was bringing up my first children, and I had a Better Homes and Gardens baby book, and it was very clear in that book that you were never to take a child in bed with you, or a baby or an older child. That for some reason this was a very terrible thing to do. So I would in the middle of the night sit up and breast-feed a baby, sitting on the edge of the bed or in a chair -- always afraid that I was going to fall asleep and that baby was going to roll out of my arms and onto the floor. And it wasn't until I had that fourth baby and was given permission to keep that baby in bed with me that I realized how much simpler that made life. Because I would go to sleep and the baby would go to sleep, and I wouldn't roll over and crush the baby or neither did my husband. And I realize that around the world probably more babies are kept in bed with their parents than are not. This of course led for some families who found their children had special needs to be close -- and of course that's a very normal need, not an abnormal one -- to allow their children in bed with them even when they got older, not feeling uncomfortable about having a toddler or a young

child who wanted to stay close to somebody at night, and realizing that this being a normal need, it should be attended to if possible. And realizing also that when you attend to the needs of your children, you're going to have much more secure children who become much more independent, able to think for themselves, and who feel very good about themselves later on in life.

**David Cayley**
Before I introduced Marion Thompson, I proposed the distinction between two divergent strains in women's consciousness. To some extent, I think that this polarization is real, but there is also evidence of an effort to overcome it. Betty Friedan, for example, has called for a re-examination of feminist views on the family in her book The Second Stage. And Marion Thompson indicates that many feminists have changed their opinion of the work of the La Leche League.

**Marion Thompson**
When it started out, there were very anti-breast-feeding mothers. They were very anti-La Leche League, because they felt we were keeping women at home, and these women didn't belong at home. In fact we had some of our meetings picketed, because they felt we were very anti-women-being-liberated. And yet now they are some of our strongest supporters, in fact the National Organization of Women have very often lent their legal services to breast-feeding mothers who found themselves being discriminated against in getting, for example, unemployment compensation.

**David Cayley**
A similar change is recognized by Penelope Leach in her British milieu, but she raises doubts as to whether it is more than superficial.

**Penelope Leach**
My feeling is that although very few members of the women's movement will now say the kind of thing I was suggesting -- will actually come out and say, "You ought to be out working, it's wrong for you to waste yourself sitting at home with your children," the kind of thing many of them would have said five years ago. They won't actually say that now, but I feel that the change is nevertheless superficial because the phrases that are used now are for instance to campaign for mothers to have "the right to choose" whether to care for their own children or not. Which sounds absolutely fine and dandy in principle, but leaves out the children. So that I don't really feel that the priority which for me starts with the premise that in this day and age, if you have a child, you have that child because you feel that you can and want to rear it. The premise therefore that to some extent the child comes first is still not present.

**David Cayley**
This question of the best interests of the child brings us back to our starting point, and once again, to the question of day care. In closing, I would like to quote from Burton White on this subject. White has made himself popular in some circles and unpopular in others by taking a strong public position on day care. His position is that while part-time substitute care may be in the best interests of both parents and young children, giving them a needed break from each other, full-time substitute care poses real dangers.

**Burton White**
The kinds of substitute care available range from one person coming to a home to take care of one child, to one child going into somebody else's home to be cared for by himself, to a small group of children in someone's home other than their own, and on to huge numbers of children in centres. On the whole, there's no reason to think that the typical arrangement -- and by that I mean, let's say the average arrangement, mixing them all together, thinking in terms of the wide variety of types of people doing this work and so forth -- there's no reason to think that that's a particularly rich kind of circumstance for a child who's going through this once in a lifetime, marvellous introduction to the world.

Compare it with what the average kind of baby gets in their own home. They may not have a well-to-do family, they may not have a great many toys, they may not even have a wonderful diet, but they generally have, from their parents, or grandparents, a kind of attention, dedication and interest that they can't get anywhere else. No one responds to the achievements of a new child with quite the same enthusiasm and interest as the two parents and the four grandparents. And this seems to us to be the heart of the matter. In the first six months of life, children have to have an awful lot of attention for their fundamental life-long emotional well-being; everybody agrees on that. They are most likely to get that from one of

those six people. From six months to three years, the developments in the areas of language and curiosity and social skills and so forth, seem clearly in many studies to go best when the child spends a lot of time every day with somebody who has this irrational commitment to her. You cannot get that in a centre with multiple numbers of children. You're not very likely to get it in any installation, although I have to admit once in a while you'll find a marvellous mother substitute that comes to the home -- there's no question but that happens from time to time.

In surveys recently done, this last year for that matter, in the States, it's reported that the average hourly rate of child care workers is about $3.00 an hour. There is no perfect correspondence between the amount of money you make and your talent, but my God, to assume that you're going to get loving, informed, interested, spirited treatment out of somebody who is at the very bottom of the American wage scale is really a very chancey assumption when you're dealing with something as precious as the basic foundations of a human life. So all in all, I have very little sympathy for people who claim that substitute care is going to do good things for children -- in most cases. By the way, I should point out that this is not mothering that I'm talking about, it is parenting. Men can raise babies just as well as women, as far as we can tell. And I'm not advocating that women stay at home during the first years of their children's lives, I'm advocating that people who choose to create new life mutually discuss how that baby's needs are going to be met. And the more the partners share equally in the process, the better off everybody will be. Not that babies must have men in their lives, there's no evidence to support that, but that both parents are going to have a lot more fun if they share that job, and probably do it better than if only one of them is basically assigned the full term responsibility for it.

**David Cayley**
Our society currently faces a very serious choice in the matter of day care. I believe that if children are to develop to their full potential, they must be permitted to guide their own development at their own pace in an environment over which they can assert at least some control. These demands cannot be met within any comprehensive institutional framework which our current society would be capable of either devising, staffing or paying for. Indeed it seems to me positively perverse to try and transfer to a professional bureaucracy a function for which nature has so precisely equipped parents. There are no perfect parents, and some are very destructive indeed. In these cases, day care may a kind of liberation for children, and this is all to the good. But I think that on average, the only place that society is likely to find the resources for child rearing already mobilized and committed is in the person of parents. These are the resources which we must cherish, support and develop if our children are to fulfill the magnificent potential of their early years. Society can just as easily pay for parental care as for day care.

**Kevin Marsh**
On Ideas tonight, The World of the Child, part two, prepared and presented by David Cayley, with production by Damiano Pietropaolo. Technical operations for tonight's program by Lorne Tulk. Special thanks to Alison Moss, Susan Crammond and Ann Irwin.

We've prepared a reading list to accompany this series. For your free copy, write to us at IDEAS, Box 500, Station A, Toronto M5W 1E6.

Executive producer of Ideas is Geraldine Sherman. I'm Kevin Marsh.

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**PART III**

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**Kevin Marsh**
Good evening, I'm Kevin Marsh and this is Ideas.

**(Song)**

**Seymour Papert**
When we see the child working at mastering numbers, mastering language, what we see is the process of development of number and of language. We're not seeing a child making errors, what we're seeing is the process of growth. To say a child's making errors is like saying that the acorn is an error for an oak tree.

**William Condon**
As I see it, the infant is born as a participant in the world. He's not a being outside of the world into which he's born, but he's born with the biological faculties to be able to participate in it and does immediately, and has been. He's not born outside of the world and then has to learn an alien world, he's already in a sense pre-programmed to be part of that world, and is part of it even in his being born.

**Kevin Marsh**
As beings who share the structure of our world, we're driven by a powerful inner intent to discover and elaborate its language, its customs and its natural laws. The activity of children, quite simply and gracefully, is learning, and to unfold their activities, children need nothing more than an environment which is humane, responsive and respectful of their individuality. Tonight in the third program in our series The World of the Child, we examine this process of development and some of the obstacles which stand in the way of its fulfillment.

**John Holt**
Children come into the world with a desire and a need to make sense of the world around them, which is so strong that it can properly be called biological. It is as strong as the need for food — it is indeed stronger than the need for food, because mothers of nursing infants have reported over and over again — I've seen it with my own eyes, that children in the act of eating or children who are extremely hungry will stop eating if something interesting happens that's more important.

**Kevin Marsh**
The World of the Child is prepared and presented by David Cayley.

**William Condon**
When the other person starts . . . alright now, it's halfway through 47 you hear the sound. I hit 47 and you don't hear it. Okay? Then I go a little further and you hear it. Alright? Now you can't see a movement because that's the . . .

**David Cayley**
The laboratory of Dr. William Condon at Boston University. He is demonstrating the frame by frame analysis of sound films, which has led him to the conclusion that human beings move in precise synchrony with each other's speech.

**William Condon**
The black man . . . his hand is coming up, and when he starts the van his head joins in. See it? Yeah.

**David Cayley**
It looks, in slow motion, like dancing. The parts of the listener's body move in time with the units of the speaker's speech. But even more remarkable is Condon's finding that babies do the same thing.

**William Condon**
We started studying 2- and 3- and 4-day old infants very intensively, and with adults talking to them as well as a tape recorder playing something. And a little infant that early begins to move in precise synchrony with an adult's speech. I think adults are aware of this. The infant doesn't know the vowels and the consonants but he's moving in exact synchrony with them, almost as good as an adult does, which means that the infant is well prepared for this. I've even seen it 20 minutes after birth, which suggests that the infant is even doing this in the womb, maybe in the last two months before birth, the infant even in the womb is moving synchronously with the mother's speech or reverberations of speech in its world.

**David Cayley**
Shared movement is an important element in human communication, and this ability of the newborn must play a significant role in the initial bonding of mother and child. It also demonstrates the remarkable adaptedness of the baby to his world.

**William Condon**
I think the infant has much, much greater capacity, much greater ability than we'd ever dreamed of. That to see a 20 minute old infant moving in beautiful synchrony with the human voice, in exact synchrony perhaps with the consonants and the vowels and also with the intensity of these, indicates that the ability to follow the structure of sound is just amazing, and this is for a creature whose task is to grow up and be a speaking being and thinking being. The wonder of all of this is that the human being authentically reflects the structure and order of the universe, that since we are one with it, in a way, we have an ability to understand its order -- we put names to its order. And that order is running right through us in the fact that we are synchronizing with its order, not just in the

auditory dimension. I'm sure that we're synchronizing with nature's structure in all of our sensory modalities and then we're putting names to this, and then we're able to talk about the structure of the world. Somehow nature is becoming mind through us, I guess, and mind in that sense is this abilty to think about structure and to understand the structure of ourselves and of the world.

**David Cayley**
In the baby, dancing to the sound of the language she will one day speak, we can see the beginnings of a process of learning. Children are not taught language, they learn it by using their inborn ability to grasp its structure. Jean Piaget, the great Swiss psychologist and philosopher who pioneered the scientific observation of how children actually learn, observed the same process at work in the way children learn mathematics. Children cannot simply be taught the concept of number; they must first discover it, just as the very first mathematicians once did.

Seymour Papert is a professor of mathematics and of education at MIT and a former colleague of Piaget's.

**Seymour Papert**
Piaget sees it as a miracle, a source of wonderment that a child should make this incredible thing called number. And to understand how this miracle happens, we need to delve very deeply into the nature both of the child and of number. This is in some contrast with the current educational approach that has a definitely more fragmented epistemology. If you think what the child is doing is learning a lot of number facts, there isn't any miracle, there is just a lot of little bits and pieces the child has to pick up. Facts and skills and concepts, and one by one the child picks them up and that's all there is to it. And the hard work is on the side of the designers of the education system rather than of some profound mechanism in the child. So Piaget's placing himself in a totally different perspective from that of contemporary education. To say the child is 'making number' is not to say the child is collecting a large number of little bits of facts about number, but there is some entity, some structure, Piaget would say, that is being fashioned by the child inside there.

Now if we see the child as fashioning this thing, the question of course arises, how does the child know to do it? What is it about this thing that allows itself to be fashioned by a child? And if we ask a question like that, it's not a matter any more of teaching strategies, it's a matter of understanding very fundamentally what the thing is that's being fashioned, and what the child is that the child can fashion it.

**David Cayley**
To ask this question is to recognize that the child is not a blank page on which teachers can inscribe knowledge. Piaget approaches the child as a philosopher, and discovers a philosopher in the child. Another who does the same is John Holt, the author of How Children Learn and numerous other works on education and childhood.

**John Holt**
Children come into the world with a desire and a need to make sense of the world around them which is so strong that it can be called biological. It's as strong as the need for food. It is indeed stronger than the need for food, because mothers of nursing infants have reported over and over again -- I've seen it with my own eyes -- that children in the act of eating or children who are extremely hungry will stop eating if something interesting happens that's more important. And everybody knows how children will fight off sleep if something interesting is going on. Their need to know is biological, and I say they are extraordinarily active and powerful learners, they are in every sense of the word scientists -- that is to say . . . indeed we all are, but they do what scientists do, they observe and they speculate, they wonder why is this this way? How does that happen? Why is it the way it is and not some other way? They make hypotheses, theories, hunches, guesses. They test these hypotheses with observation and experiment, and sometimes just with plain questions. They do all of the things that scientists do, they do them extremely well and -- nobody wants to hear it! There are handfuls of exceptions, adults in the education game want to think that education and teaching is the process of pouring knowledge from full vessels into empty ones.

**David Cayley**
For the child, learning is above all an active, inner-driven process. Children literally make their knowledge, first by acting on the world, then by accommodating the results of those actions into their understanding. And what is

being learned cannot be separated from the process by which it is learned. Correct theory, in that famous saying of Mao Tse-tung's, does not fall from the sky. It is actively constructed. And what may appear to be mistakes are in fact an essential and unavoidable part of the process. This in rough paraphrase is the version of children's learning which is proposed by Jean Piaget. Piaget holds that what appear to adults as the incorrect ideas of children are in reality something much more fruitful and profound, because they demonstrate the process by which knowledge itself develops.

In his book Mind Storms, Seymour Papert has argued that this perspective of Piaget's is incompatible with the conventional educational practice of treating knowledge as a pre-formed product which can simply be transferred to children.

**Seymour Papert**

I think in Mind Storms, I'm constantly on the edge of expressing a question about whether schools as we know them can adapt to Piagetian ideas. I think there's a profound contradiction between Piaget's concept of how learning happens and the practice in schools. The fact that in school we want the child to do it right, to get the correct answer, goes fundamentally against a respect for the child making his own mental constructions. And that's deeply rooted in school. It poses a dilemma, because it's obviously the teacher's job to bring truth to the child and see that the child comes to master certain abilities, certain skills, certain concepts, and so there's a constant tension between the desire to let the child develop, in an individual way, to construct it individually on the one hand, on the other hand to have this goal of bringing truth to the child. But that's a fundamental dilemma, and I think that's very deeply at the root of how we have to re-think education.

**David Cayley**

According to Piaget, children construct their ideas in distinct stages. For the baby, all learning is based directly on bodily sensations, and this Piaget calls the sensory motor stage. Then at around 18 months, children attain the ability to represent objects symbolically. This so-called pre-operational period, during which thought is still strongly marked by emotional drives, gives way at about age 7 to concrete operations. During this period, children are still limited to manipulations of a concrete, given reality. Only after about age 11, when true formal operations appear, do they become able to go beyond the limitations of a given reality and enter the realm of the possible and the hypothetical. In general, development moves from concreteness to abstraction. At each stage, there is an increase in the scope and flexibility of mental operations, and a decrease in self-centredness. Each new stage reconstructs the earlier ones, and incorporates them as special cases much in the way that relativity theory, say, incorporates Newton's laws of motion as a special case.

Eleanor Duckworth is a Canadian who was a long-time colleague of Piaget's and is now a professor at the Harvard Graduate School of Education. Here she describes one of the so-called conservation experiments, through which Piaget observed the transition to concrete operations.

**Eleanor Duckworth**

In the conservation experiments, two quantities of something are set up to be equal, and the child says that they're equal. And then one of them is changed in some way, and the child is asked whether they're still equal — whether the amount has stayed the same. One simple example: you have two balls of clay, and you roll them until the child agrees that they are the same amount of clay. And then you change one of them into a sausage shape or into a pancake shape, and ask if they're still the same amount of clay. It's a question of whether the amount of clay has been conserved — that's why they are called conservation experiments. So children, 4-5-year olds, will tend to say, no there's more there now, because it's longer. And you can put it back into a ball and they'll say, now it's the same — but a minute ago there was more there because it was longer. And when a child says, now they are the same amount, the child is called a conserver, and that's a classic example of concrete operations. What's required there, is to be able to reverse the two kinds of things. To reverse the action, to realize that you can put it back the way it was before and nothing will have changed, or to compensate and to realize that it's longer now, but it's thinner now — and the thinness compensates for the length. And putting those into relationship with each other, so that one thing can cancel out another, is the essence of concrete operations.