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Experiences Get Carried Forward

How Albertans Think About Early Child Development

A FRAMEWORKS RESEARCH REPORT

Nat Kendall-Taylor • February 2010

ECD REPORT 1 OF 4

Norlien Foundation

Alberta family wellness initiative

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Please follow standard APA rules for citation, with FrameWorks Institute as publisher. Kendall-Taylor, Nathaniel. (2010). *Experiences Get Carried Forward: How Albertans Think About Early Child Development*. Washington, DC: FrameWorks Institute.

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INTRODUCTION

The research presented here was sponsored by the Norlien Foundation and is part of a larger project designed to change the public conversation and create more effective communications around early child development in Alberta, Canada. This particular report lays the groundwork for much of this larger reframing effort by examining how Albertans talk, think and understand early child development.

The FrameWorks Institute has conducted extensive research in the United States with the Harvard Center on the Developing Child on how to strategically communicate information about child development. We recognize, however, that patterns of understanding are heavily influenced by culture and are therefore likely to vary across cultural groups. This report, therefore, compares data FrameWorks has gathered in the United States on early child development with interviews recently conducted in Alberta on the same issue. Through this comparison, we confirm similarities between the cultural assumptions and understandings between Americans and Albertans and enumerate differences in how individuals from these populations understand how young children develop. *This comparison is essential in designing strategic communications in Alberta as it indicates which frame elements already developed and tested in the U.S. could be usefully employed and similarly effective when applied in the Albertan context. This comparison is also useful because it provides a strong indicator of which frame elements are likely to be lost in translation when traveling between cultures.*

Despite cultural similarities between the United States and Alberta, the cultural patterns of understanding that individuals within these groups share and employ in processing information are likely to vary in subtle but important ways. Differences between these patterned ways of making sense of information shape the effect of messages and are therefore highly relevant to the practice of communications. For these reasons, this report's first comparative task is to compare how U.S. and Albertan citizens think about child development in order to avoid a naïve cross-cultural application of communication recommendations that ignores what are fundamentally culturally relative ways of understanding and processing information. Armed with the knowledge of how Albertans reason about child development and how these patterns of reasoning differ from those employed by Americans, messages about early child development can be framed to have optimal and intended effects in the Albertan context.

A second comparative task in this report is to hold up the ways that Albertans think about child development to the key messages and themes of the science on this issue—what we call the "*core story of child development*." Therefore, FrameWorks' research on both the expert discourse on, and Albertans' understanding of, child development are compared here to identify the specific places where gaps exist between these two understandings — a process that FrameWorks calls "mapping the gaps." With improved knowledge of the these gaps and the understandings they stretch between, we move toward the second stage of Strategic Frame Analysis™: identifying communications strategies that close these gaps and activate more productive ways for Albertans to think and process information on child development.

The work of this report is therefore comparative in nature—both between American and Albertan

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cultural patterns of reasoning, but also between ordinary Albertans and those who conduct scientific research on this issue. This report is a foundation for subsequent research that will develop and test specific strategies to translate and reframe the concepts of child development in Alberta—from the complex understandings and explanations of scientific experts to a presentation that improves the accessibility of this information to the Albertan public. The full scope of this project includes an array of methods associated with the Strategic Frame Analysis™ approach: cultural models interviews, focus groups, media content analysis, cognitive media content analysis, simplifying models development and empirical testing of our frames using experimental surveys.

The remainder of the report is organized as follows. We: (1) present a summary of the report's key findings; (2) review the research methods used to produce the findings; (3) present a more detailed discussion of the findings from both comparative tasks and (4) conclude with a set of recommendations and key takeaways that will improve communications practice around this issue and inform the next phase of our research.

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SUMMARY OF FINDINGS

1. A comparative analysis of American and Albertan interview data suggests clear similarities in the ways members of these groups think about early child development. Both Americans and Albertans take the process of child development for granted and have thin understandings of *how* children develop. When groups are able to think about some kind of process of development, they assume that children are "little sponges" that are "filled" by, and passively absorb, things immediately around them. Comparative analysis also showed that both groups employed a deterministic assumption that when a child's development is derailed, the damage done is permanent and irreversible. Americans and Albertans also both orient to the topic of "early" child development by assuming the discussion is about adolescents and "age-up" the conversation. Finally, FrameWorks' research shows that both groups employ an implicit understanding that stress, even when severe, is a compulsory and beneficial aspect of development—in short, that "stress does the body good." These similar modes of understanding suggest opportunities to "borrow" and empirically test in Alberta many of the communications recommendations developed for use in the U.S.

2. Research also revealed a set of key differences in the ways Americans and Albertans approach the concept of early child development. Albertans, unlike Americans, focused on *skills and abilities* as *what* is developed during early childhood. Furthermore, whereas Americans assume the goal of development to be the production of financially successful and independent individuals, Albertans perceive this goal through the lens of *interdependence*—that the result of successful development is an individual who participates and contributes to a foundationally interdependent society. Albertans also focus on communities as the contexts that shape development, whereas the focus of Americans is more myopically trained on individual families and homes. In addition, Albertans, unlike their American counterparts, connect early experiences with later outcomes and consequently view early learning as *real learning*. Finally, while for Americans development is about *protecting* the child *from* environments, Albertans conceive of a *relationship* between individuals and environments in which successful development hinges on the *interactions* between children and their surroundings. Several of these cross-cultural variations point to promising features of the Albertan cultural/cognitive landscape and represent promising levers for strategic communications on this issue. These assumptions should be activated, as they improve the public's ability to understand and grasp the policy implications of the scientific research.

3. Analysis revealed that there are gaps between how scientists and Albertans understand the process of development. Scientists recount a nuanced understanding of the continued plasticity of brain systems balanced with the notion of critical developmental periods, while Albertans assume, deterministically, that "damage done is damage done." Research revealed that another key gap exists in the area of factors of importance, with Albertans focusing shallowly on access to "programs" and scientists appreciating the complex interaction between genes and environments as these affect or mediate programmatic *quality*.

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METHODS

A. Cultural Models Interviews

The cultural models findings presented below are based on 20 in-depth interviews conducted in Calgary by two FrameWorks' researchers in December 2009 and January 2010. Cultural models interviews require gathering what one researcher has referred to as a "big scoop of language."[1] Thus, a large enough amount of talk, taken from each of our informants, allows us to capture the broad sets of assumptions that informants use to make sense and meaning of information. These sets of common assumptions and understandings are referred to as "cultural models." Recruiting a wide range of people and capturing a large amount of data from each informant ensures that the cultural models we identify represent shared patterns of thinking about a given topic. And, although we are not concerned with the particular nuances in the cultural models across different groups at this level of the analysis, we recognize and do take up this interest in subsequent parts of the larger research project.

Subjects

Informants were recruited by a professional marketing firm through a screening process developed and employed in past FrameWorks' research. Informants were selected to represent variation along the domains of ethnicity, gender, age, residential location (i.e., both in Calgary and in rural areas outside of the city), educational background and political ideology (as self-reported during the screening process). Previous FrameWorks' research, as well as the cultural models literature more generally, has found education to be an important source of variation in the way people talk and think about social issues such as education and child development. For this reason, we were particularly sensitive to capturing variation in educational attainment in our sample.

We were careful to recruit a sample of civically engaged, news attentive persons. We did so because cultural model interviews rely on the ability to see patterns of thinking—the expression of models through talk—and it is therefore important to recruit informants whom we have reason to believe actually *do* talk about these issues. Furthermore, assuring that participants access news media in some way allows us to comment, in another part of our research, on how patterns of media coverage relate to patterns of understanding that people draw on to make sense of this information. Moreover, to ensure that participants were likely to have ready opinions about these issues without having to be overly primed, the screening procedure was designed to select informants who reported a strong interest in news and current events, and maintain an active involvement in their communities through their participation in a wide range of community and civic engagements.

Efforts were made to recruit a broad range of informants. However, the sample is not meant to be nationally representative, and the demographic categories that we use to identify the quotes of interviewees in the text below should not be mistaken as categorical reflections of the viewpoints of any particular groups.

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Interviews

Informants participated in one-on-one, semi-structured "cultural models interviews" lasting 1½ to 2½ hours. Consistent with the interview methods employed in psychological anthropology, cultural models interviews are designed to elicit ways of *thinking* and *talking* about issues—in this case, ideas about how children develop, what the outcomes of development are and what factors influence this process. As the goal of these interviews was to examine the cultural models informants use to make sense of and understand the general concept of child development, it was key to give informants the freedom to follow topics in the directions *they* deemed relevant and not in the direction the interviewer believed most germane. Therefore, the interviewers approached each interview with a set of areas to be covered but left the order in which these topics were covered largely to the informant. Put another way, researchers were able to follow the informant's train of thought, rather than interrupting to follow a pre-established course of questions.

Interviews were designed to begin broadly and in as open-ended a way as possible to uncover the organizational mental models that *informants* used to understand the topic of child development—an inherently broad concept. Questions were designed to be consistent with the interview guides used in the research conducted in the U.S. As this research was comparative in nature, parallel interview guides allowed researchers to confirm similar patterns and differentiate between unique patterns of thinking between these populations.

Informants were first asked to respond to a general issue ("What do you think about child development?") and were then probed throughout to explain their responses ("You said X, why do you think X is this way?", or "You said X, tell me a little bit more about what you meant when you said X.", or "You were just talking about X, but before you were talking about Y, do you think X is connected to Y?"). This pattern of probing leads to long conversations that stray (as is the intention of the interview) from the original question. Both the open-ended nature of and the order of topics covered in the guide allowed informants to identify and introduce the information and entailments that *they* implicitly connected and thought most relevant, rather than gathering information about the connections that we *suspected* they would make, or by biasing thinking of one topic based on previous discussion of another topic. The purpose was to see where informants go and what connections they draw from the original topic. Informants were then asked about various valences or instantiations of the issue ("What do you think happens when development goes well versus when there are problems—what are the results and why do you think this is?") and were probed for explanations of these differences ("You said that X is different than Y in this way, why do you think this is?"). The pattern of questioning begins very generally and moves gradually to differentiations and more specific topics.

We should also note that the strength of the cultural models interview method and the data it produces rests in its power to reveal *general patterns* of thinking (cultural models) that individuals, in this case Americans and Albertans, commonly, repeatedly and implicitly employ in talking and thinking. In short, these interviews allow us to see the general patterns that implicitly structure the way Americans and Albertans think about child development.

All interviews were recorded and transcribed. Quotes are provided in the report to illustrate major points, but identifying information has been excluded to ensure informant anonymity.

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Analysis

Analytical techniques employed in cognitive and linguistic anthropology were adapted to examine how informants understand issues related to the scientific concept of child development. Elements of social discourse analysis were applied to identify larger, shared cultural models. First, patterns of *discourses*, or common, standardized ways of talking, were identified across the sample. These discourses were analyzed to reveal tacit organizational assumptions, relationships, logical steps and connections that were commonly made but taken for granted throughout an individual's transcript and across the sample. In short, our analysis looked at patterns both in what *was* said (how things were related, explained and understood) as well as what was *not* said (assumptions). Anthropologists refer to these patterns of tacit understandings and assumptions that underlie patterns in talk as cultural models.

B. Establishing the Science Core Story

To assemble a science core story of early child development, FrameWorks' researchers relied on two methods: *one-on-one expert interviews* conducted with scientific specialists and *participant observation and elicitations* conducted at professional meetings.

Expert Interviews

FrameWorks first located appropriate experts who could articulate the latest scientific research on early child development by identifying the authors of the most widely cited and influential pieces of scholarship on specific issues. These scientists were interviewed and then helped identify additional experts who they believed would be able to provide additional insights. Thus we used a basic snowball sample technique to indentify expert informants. We cross-referenced the lists provided to us by these "key" scientific informants with a list we had developed, and, based on the overlap (i.e., names that appeared on each list), we selected additional experts to interview. One-on-one interviews were then conducted with these experts via telephone. The interviews lasted between one and one and a half hours and, with the participants' permission, were recorded and transcribed for review and analysis.

The interviews themselves consisted of a series of probing questions meant to capture the scientific understanding of the given issue. In doing so, we guided the expert informants through a series of prompts and hypothetical scenarios designed to challenge them to explain their research; break down complicated relationships; and simplify concepts, methods and findings from the field. In this way, the interviews were semi-structured collaborative discussions with frequent requests for clarification, elaboration and explanation.

Analysis of expert interviews employed a basic grounded theory approach.[2] In this approach, common themes are pulled from each interview and categorized; negative cases are incorporated into the overall findings within each category; and the result is a refined set of themes (categorized appropriately) that synthesizes the substance of the interview data. Consistent with this method, the themes we identified

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were then modified and appropriately categorized during each phase of the analysis to account for disconfirming or negating research presented by other scientists. In our use of this approach, the themes presented below establish foundational components of the "core story" of early child development. This core story establishes a baseline understanding to which all subsequent translations for public audiences are accountable.

Core Story Elicitations and Participant Observation at Professional Meetings

FrameWorks attended numerous professional meetings, where leading international experts in the field of child development met to present and discuss their research. At these meetings, FrameWorks' researchers employed two methods to gather data for constructing the core story. First, FrameWorks has had the opportunity at various meetings to conduct sessions designed specifically to elicit the most important and agreed upon elements of the science in this area. Organized as discussions with a set of guiding questions, FrameWorks' researchers moderated sessions in which scientists offered and reached consensus on elements that should be included in the core story. FrameWorks then analyzed these data and synthesized key points and common themes.

More subtly, during general sessions of these meetings, FrameWorks' researchers conducted participant observation—a method of data gathering derived from anthropology in which the researcher looks for patterns and common themes that run through un-moderated discussions and presentations. The result of the participant observation conducted at these meetings was a set of observations and notes about common, though frequently implicit, undercurrents and themes that ran through discussions between scientists, in the papers they discussed, and in questions and responses to research. Participant observation notes were compared between FrameWorks' researchers, and common elements and themes were incorporated into the core story.

In this way, the core story was triangulated from three sources of data. The process of constructing a core science story is discussed in greater detail elsewhere.[3]

RESULTS

COMPARISON #1: AMERICAN AND ALBERTAN CULTURAL MODELS

In the following comparison we first outline the patterns of reasoning that both Americans and Albertans apply in thinking about child development and discuss the implications of these similarities. This is followed by an analysis of the differences in the ways that individuals from these groups think and talk about child development and a discussion of the implications of these findings.

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A. Confirmation

1. Focus on External and Visible—Taking Process for Granted

There was a dominant focus in both the American and the Albertan data on *external observable phenomena*. Both groups operated under the assumption that *what matters is what you can see*—that what is important are the *results* of development rather than its *process*. Interviews demonstrated that Albertans' conceptualizations of child development are largely devoid of a specific understanding of what happens in development. In other words, Albertans are largely unaware of, and lack a working understanding of, *how* development happens and what happens in the body throughout this process.

Albertans, like Americans, agreed unequivocally that development is *important*, but when pushed to talk about the process of development or how development *works*, they (audibly) stumbled and had great difficulty talking at any level of detail or length. Research revealed a familiar, "black box assumption."[4] This assumption refers to the understanding that development consists of an input (the child) and an output (a successful or unsuccessful adult) mediated by some mysterious process occurring somewhere out of sight.

When asked more direct questions about "What goes on during development?" or "What do you think is happening as a child develops?" Albertan informants fell back on the same murky "absorption" model employed by Americans in explaining that the process of development consists of children "just absorbing things from their parents," or that development is "like osmosis." According to this assumption, all that matters is, as one participant said, "What you give your kid." In short, informants largely assumed that the outcomes of development are passively determined by the content and experiences that are "put into" children. Albertan and American informants also employed the same "it's inevitable" explanation in reasoning about the process of development.

> **Interviewer:** Tell me a little more about what's going on during development.
>
> **Informant:** I have no idea what the answer is! But if I had to hazard a guess, and put numbers on it, I'd say your genes would be 30% and your environment would be 70%...Under the age of 1, I only know about colicky babies. I'm not really sure under the age of 1. I'm sure I could be convinced one way or the other, but as of where it stands right now, I have no idea!
>
> *Urban Woman, age 26*
>
> **Interviewer:** What about ages 4-5-6? What's going on with development then?
>
> **Informant:** They absorb the information; they're gonna absorb more, and more, and more, as they get older. So basically, you're reading to them.
>
> *Urban Woman, age 46*

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Interviewer: So, what about a person is influenced by these parts of the environment that you've talked about?

Informant: I think it's osmosis. I don't even know if that's the correct term, but you know, I am who I am because of where I came from.

Urban Woman, age 51

They're just *in*-porting knowledge; it's just programmed into their body. If a child has a clean slate and there's nothing going on medically, mentally or physically then he has possibilities of his future.

Urban Woman, age 45

Interviewer: So what determines how a child develops?

Informant: I want to say it's inevitable! And there is nothing that anybody can do, or should do any differently than they've been doing for hundreds and thousands of years, because it just *happens*.

Urban Woman, age 51

They're like sponges; they don't know they want to see it, but when they see it, it's like they want to see more.

Urban Woman, age 46

2. Damage Done Is Damage Done

Albertans, like Americans, made sense of child development by relying on the underlying assumption that damage occurring during development is *irreparable*.

Experiences create the human being so when you're dealing with a child that has been hurt in different ways—mentally, physically emotionally. It's *so* far into them. It's *so* much a part of that child that they won't be able to help them deal with it.

Urban Woman, age 45

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3. "Ageing-Up"

Both Americans and Albertans also had a strong though highly implicit tendency to age-up the "children" discussed in conversations of child development. In the course of open-ended conversations about "child development" in which no age was explicitly referenced by the researcher, informants, with a striking degree of frequency and predictability, discussed *older* children. The referent "child" that informants most frequently used in discussing "child development," even "early child development," was between the ages of 12 and 16. This was evidenced by the examples that informants used during discussions—like the types of social situations that informants described (i.e., gangs, sports, Cub Scouts) as well as explicit references to grade levels and activities in informants' scenarios and examples.

> My philosophy or belief is, you can tell how much time is invested in a child by the activities that they get into, especially, about junior high school. So that's grade 5 to 8. Elementary school, not quite as much. Junior high, you start to really see them sort of develop their own personalities.
>
> *Rural Woman, age 48*

> I guess that brings us back to the "child development" that we were talking about. Development can be anything from the water and sewer system to the education that's being taught in the schools; to the gangs out on the street; to when hockey, soccer, baseball, and scouts, Cubs; and today there's karate, taekwondo, rock climbing, and 82 other things. So *that's* the early childhood community around them.
>
> *Urban Man, age 45*

> **Interviewer:** How do you think that community affects the way young children develop?
>
> **Informant:** Well let's start when my kids were 10….
>
> *Urban Woman, age 51*

> Her dad passed away when she was 9 or 10, and so her mom was looking for another man, and so consistency went away, and she's got this core kind of instability.
>
> *Urban Man, age 34*

4. Stress Does the Body Good

Another striking similarity between American and Albertan informants was a powerful underlying assumption that adversity and stress, *especially* when severe, are positive factors in development. Analysis of data from the Albertan interviews revealed a strong tendency to view stress and early adversity as "character building" and precursors to being adults who can "deal with anything life throws at them." Put simply, there is a strong underlying belief amongst Albertans that stress and adversity are necessary components of child development.[5]

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Interviewer: What are the short- and long-term effects of that situation—where kids are in a really bad family situation?

Informant: Well, life throws shit at you, and you need to learn how to deal with it.

Urban Woman, age 39

And when the recession and the collapse was happening, we had our discussion; honey you know, what would happen, if everything just collapsed. We had a discussion about that. We could do this! We could survive because we grew up like that…coal-miners' kids!

Urban Woman, age 51

Uncertainty causes stress, but it causes growth too. I have grandparents who were in Europe during the war and they grew up during a really bad time, but you know they learned to overcome that and realize that they could overcome huge challenges and it probably gave them strength later on too. And I think you learn skills to get you through those situations.

Urban Man, age 27

Implications of Cross-Cultural Similarities

» **Black Box Cultural Model Obscures the Role of Public Policy**: Both the Albertan and American publics take for granted that development is shaped by a complex interplay between biology, genes and environments of experiences. This assumption makes it difficult, without careful attention to clarifying and concretizing this process, to communicate about how policies and programs affect development.

» **The Passive Absorption Understanding Limits Thinking about Development as a Dynamic Process:** The "little sponges" passive absorption understanding obscures the realization that development is *a dynamic and dialectic process*—not a static or passive process of "filling kids up." This limits the public understanding on two levels: (1) development gets seen as a "start from scratch" process rather than one in which a child's experiences interact in important ways with biology and genetics and (2) development is seen as parents "pouring" knowledge and experiences into children rather than as a process of building key systems that shape later outcomes.

» **Damage Is Done Assumption Inhibits Thinking about Intervention in At-Risk Populations:** When employing the *damage done is damage done* assumption, Albertans are ill equipped to understand and appreciate messages about the importance of intervention *following* early child adversity. This assumption preferences a powerful "it's too late" orientation that dissuades people from believing that anything can really be done, decreasing support for funding programs

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and policies aimed at remediating the effects of early experiences. Interventions and programs designed to improve outcomes of already at-risk groups are perceived as futile and therefore a poor way to allocate limited public resources.

» **Ageing-Up Confuses Targets as Well as Types of Interventions:** Without careful framing and explicit reference to age and the processes that are occurring in early childhood, communications about science and policies of early child development are likely to be seen as not dealing with "real" development, which given the assumption described here, is believed to take place much later in childhood. Put another way, without information about the development that is going on in *early* childhood and the importance of this critical period, developmental policies that target *early* child development will be classified as of secondary importance when compared with those policies that target development in later childhood and adolescence.

» ***Stress Does the Body Good*** **Makes Policies Addressing Early Adversity and Its Effects on Development Appear Unnecessary:** Messages about stress that do not take the existence of the *stress does the body good* understanding into account, risk activating a "what doesn't kill you makes you stronger" line of reasoning. Once this pattern of thinking is activated, the public is cognitively situated to view the stress and adversity that policies attempt to address, as actually being "good for kids." Therefore communications about the need for policies that limit and reduce repeated and severe stress in children are likely to fall on deaf ears and be seen as pampering children who really need to, as one participant said, "learn from the school of hard knocks." This assumption about the strength-building function of stress and adversity also glosses over the important distinctions that neuroscience draws between *types of stress* and the fact that while some stress *is* in fact beneficial, other stress is toxic and can derail the process of child development. In this case, regardless of the specific lines that scientists draw between types of stress, the public's general assumption leads to a general conclusion—that stress does the body good.

B. Differences

While Americans and Albertans share many of the same implicit understandings of child development, our research revealed a set of key differences. In most cases, these differences are not absolute or binary. That is, it is rarely the case that Americans make assumptions that Albertans *never* do, but rather that many of the cultural models that *dominate* American thinking on this issue are more *recessive* for Albertans and vice a versa. For example, while the family bubble is highly dominant in its frequency and power, interviews with Albertans indicated that it is not dominant in the way that Albertans reason about child development. This is to say that in comparing cultural models between two cultures that share many of the same experiences and contexts and are therefore rather similar, cultural model distinctions are rarely ones of *presence* or *absence*, but rather, of *variation in the degree* to which these assumptions are "dominantly" or "recessively" employed in organizing and structuring thinking. While this may seem like a subtle nuance, differences in the degrees of dominance of cultural models

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can have serious consequences for communications as the relative "strength" of cultural models may determine how the public receives and interprets messages. As such, these nuances are vital knowledge for directing the communications recommendations of child experts and advocates in Alberta who will need to carefully navigate around traps in public thinking in order to create a new public discourse around child development.

Here we delineate the major differences in these implicit assumptions and patterns of reasoning between Albertans and Americans on child development.

1. Contexts of Development

FrameWorks' research on how Americans think about child development has revealed the dominance of what we call the "family bubble" cultural model—the assumption that families are the only context that matters and development takes place within the "bubble" of the family and narrowly within the confines of the home. This powerful assumption structures much of the way Americans talk, think and reason about child development, and in turn how they interpret, incorporate and respond to messages on this issue.

The assumption that families are responsible and homes *are* environments was much less of a focus for Albertan informants, who emphasized the role of *communities* in development. Albertan informants had a wide conception of context and recognized implicitly that families are embedded in communities shaped by funding and access to resources, services and opportunities. Put simply, while Albertans did talk about the importance of families and homes, this pattern was rare and lacked the tunnel-vision effect in narrowing attention that it had in American interviews. Albertans identified parents as playing an important role in child development, *but*, and this is a subtle but monumental difference in perspective, parents were viewed as being *situated in and influenced by their surrounding contexts*.

> It's [what influences development] the tools you provide to your children and the example you set. So on a fundamental basis, our children don't fall very far from the tree. I see a family responsibility in guiding or shaping our children's future. But it's also what can society do, what can the community do? They support the family, whether that's in sporting venues, whether that's living a natural lifestyle, enjoying the arts, and so forth.
>
> *Urban Man, age 45*

This fundamental assumption about what context is and its shaping influence on individuals underlay three more specific themes in the Albertan interviews: responsibilities, influencing factors and where development happens. These specific themes are discussed in greater detail below.

a. Responsibilities

Albertans' discussions of the agents responsible for developmental outcomes and *what* those agents are responsible for were drastically different from those documented in interviews with members of the

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American public. While American informants focused narrowly on parents as the parties responsible for developmental outcomes, Albertans focused on governments and communities. *Albertans talked about how the factor separating positive from negative outcomes is how the government offers services and makes programs available in different locations throughout the province*.

Interviewer: What are the factors that matter in development?

Informant: The government. The ones that set the basic rules and fund the whole bit.

Rural Woman, age 45

Well, I know that it takes a village to raise a child, and without blaming society, I'm gonna say society has a huge role in that. I think we all have a role. We all have a role.

Rural Woman, age 48

Albertans attributed responsibility to the government and society as a whole for providing public services and programs that shape child development. This understanding was structured by the dominant assumptions that development is strongly influenced by environments, that environments are comprised of communities, which give (or do not give) individuals access to resources, and that the government plays a role in shaping communities through the provision of resources. The frequent comments from Albertan informants that the government could do more to provide and make services available are further evidence of the existence of the underlying assumption that government is and should be responsible for how children develop.

This is not to say that Albertans assumed that parents did not matter or were not responsible for the developmental outcomes experienced by their children; informants discussed and acknowledged the pivotal role that parents do play in child development and the responsibility that they have in their children's development. However, Albertans clearly did not operate under the assumption that parents are the *whole* story or the *only* party responsible for how children develop. This suggests a much more balanced presentation of responsibility among the Albertan informants.

Detailed analysis of Albertan discussions of the role and functions of government revealed another interesting difference between the cultural models that Americans and Albertans apply in thinking about social issues. A large body of FrameWorks' research has documented a highly dominant set of cultural models that Americans apply in thinking about "government."[6] In short, the general cultural model consists of assumptions about the inherent corruption of the system, its waste and inefficiency and a powerful perception about the lack of ability of average Americans to both affect and understand the workings of government—on any level.

While narrow in its focus on one social issue, the research described here suggests that Albertans do not

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rely on this same set of assumptions in thinking about their provincial government. Rather, Albertans appear to assume that their government can and should be an efficient machine in improving social conditions. Albertans also do not have the same assumptions about the inherently mysterious workings of government, but rather operate under the assumption that their government is relatively transparent and accessible to the average citizen. This is a major difference unearthed by this comparative analysis with profound implications for communicating with Albertans about public policy and programs.

b. Influencing factors

There was a dominant focus in Albertan discussions on the importance of "programs" in shaping developmental outcomes. For Albertan informants, a child's access to programs, services and opportunities was the key factor implicated in the success or failure of the developmental process.

> **Interviewer:** Are there certain people, certain places and certain things that are important at particular points in a child's development?
>
> **Informant:** I think there's going to be activities for a child. So let's start with things like sports, and there is a whole spectrum of sports that are going to be great for that child's development. And then there's going to be an ability for that child to interact with others, and also there are things like sleepovers for children I think that are positive. And then there's other things like we talked about, spirituality and so on. Cub Scouts and things like that for me, it was great and it was something I'd never done before.
>
> *Urban Man, age 41*
>
> **Interviewer:** So you said the word "programs." What do you mean by it when you say "programs"?
>
> **Informant:** I wouldn't use the word development "courses," but programs being within the school, or outside of the school. Opportunities for the kids to be involved in sports, mentoring, little art projects, going out and doing public service in the community now and then, and what they can do for their community. You know, for me as a single parent, a lot of it comes back to what's offered for either a nominal fee or no fee at all.
>
> *Urban Man, age 45*

When asked about "the factors that influence how a child develops," parents were rarely at the top of Albertan informants' lists. However, society, government, communities and the availability of "programs" appeared most frequently and prominently on these lists. "Activities" were discussed as important factors in development, with the focus being on the degree to which families and children had *access* to these resources.

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Interviewer: Are there any people or places that you think are particularly important in the development process?

Informant: Well, definitely your teachers, definitely your coaches, you know, physical things. Music coaches or teachers.

Rural Man, age 62

Interviewer: So how does child development work? What's involved, and what's the process? What does it look like?

Informant: Well, from my perspective, and it's limited, what I see as child development is basically from the moment a child comes into the world they're uh influenced by their parents, their daycare providers, their schools, their peers, their grandparents and to some extent societal views.

Rural Woman, age 48

The focus on the role of context in determining developmental outcomes brings to light another key difference in the ways that Americans and Albertans approach the topic of child development. For the Americans interviewed, a major determinant of developmental outcomes was the amount of drive and motivation that a child and their parents possessed. The assumption that outcomes are primarily the function of internal motivational states is what FrameWorks refers to as the "mentalist" cultural model. This assumption was largely absent in the Albertan interviews. For Albertans, as discussed above, what were most important were the programs and activities that a child has access to and participates in rather than how hard they try or their degree of internal motivation.

However, some Albertan informants did employ mentalist explanations of child development outcomes. The specific areas of interviews where these types of explanations, although infrequent, did occur were in discussing the distinction between programs being *available* and programs being *accessed*. The former was clearly the government's responsibility, while the latter was sometimes conceptualized with a more mentalist assumption about responsibility as seen in the following quote:

As I said to my children, "You don't have the right to throw that away." My youngest one has struggled all of his life. He was considered at least two years behind. Now he's on par and that's up to *him*. That was his *desire* to do better. He wanted to be equal to everybody else.

Rural Woman, age 45

When these arguments did crop up, they were never the first explanations offered and when probed for additional information and justification, informants fell back on explanations that were highly focused on the role of context and resources as discussed above.

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c. Where development happens?

Albertan informants also talked at length about the importance of environments. In these discussions, there was an implicit assumption that environments include a wide range of factors, from poverty and access to various programs, to education and community spaces.

> It's not just physical things; the environment is also about having access to the tools of development. So it's educational toys or books…
>
> *Urban Man, age 41*

> **Interviewer:** So, you said, "poverty and educational level." What did you mean?
>
> **Informant:** Statistically, the accesses to various programs, and the knowledge of the various programs that are out there to assist people, is correlated with your level of income. If you don't have a lot of money to take the bus to go to the program that will allow you some time to breathe while somebody assists you, and gives you the tools to take care of your child.
>
> So, the educational level, I think, goes along with that because educational level is correlated with income.
>
> *Urban Woman, age 51*

Inherent in the way that Albertans talked about environments was the powerful assumption that *a child's environment is their community and that the presence of and access to resources constitute that community.*

> **Interviewer:** So if you had to say the important factors that figure into development, what things would you select? What are the factors that influence how a child develops?
>
> **Informant:** You have the cultural community around you. You have an Indian community, or you have a small town, quite often they have one set of expectations of their youth, and their youth meet those expectations, but may not exceed those expectations. You go into a larger community, and you have another scope of expectations.
>
> *Urban Man, age 45*

> **Interviewer:** What are some things in the environment that you think affect the way that people are?

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Informant: Can we talk about having access?

Interviewer: You can talk about whatever you want. That's the beauty of this, right here.

Informant: Having access to a rec center with the swimming pool. Having access to organized community sports. Having access to a car so your parents can get you there.

Rural Man, age 62

Interviewer: In what other ways do you think environment might matter?

Informant: Well it's not just the home. It's the access to the other things in the community. And as that child grows older, other people in other parts of community become accessible so there is a bigger environment. And I guess eventually what we're talking about becomes a metaphor for much bigger things or even perhaps other larger community structures, like we talked different types of schooling systems or community systems. It's kind of telescopic in a way, and it can start with the immediate structure and then depending on how much access there is out for that child.

Urban Man, age 41

2. What Gets Developed in "Development"?

One of the most noticeable differences between Albertan and American interviews was the way individuals in these groups talked about the substance or objects of development. Americans focused on children learning how to follow rules, be responsible and adopt and adhere to a general moral code.[7] Albertan discussions overwhelmingly focused on *skills* as the outcomes of development—both things like reading and writing skills, but also skills like being able to cope, navigate social situations and control behaviors. Albertans assumed that what really matters during development is that an individual acquire skills and abilities that they will put to use later in life.

Playschool is like kindergarten. They learn all these skills that are needed. Most children who are at playschool will succeed beyond their wildest dreams in kindergarten and usually are asked to go on to a higher grade. In grade one they will be asked to move on to grade two because they already have those skills…That's really what it's about as development...you want to develop life skills. You want to be able to *do* as many things as you can do that can provide you with pleasure in your life.

Rural Woman, age 45

Interviewer: What determines if development goes well or not?

Informant: Whether or not the kid is signed up for a class a week, or whether they have friends

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outside of it. And it's really beneficial for kids; let's say if they're in Girl or Boy Scouts, to learn life skills.

Urban Woman, age 26

Interviewer: What needs to happen [for development to go well]?

Informant: Well, I just break it down to a simple thing. If they never have any activities or exposure to anything or never try anything they'll never be any good at it because it takes practice. Go back to the shoelace metaphor, right, you don't get it the first time but you've got to sit there and try it over and over till you get it, and then you just don't even know you're doing it anymore. It just becomes easy. I think that's what it's really like in life. If you don't try things, you'll never be able to get better at them. We're not all virtuosos at everything, you know, we can't just sit down and be the best at everything in life. You've got to try things multiple times to be able to be good at it. So if they never do things, they're never going to have that experience of trying that. And I just think the more things that you are able to have, the more life skills you have…We call it "developing life skills," being good in life is going to come from the practice of it earlier in life and getting involved in activities, new activities that they've never done before and activities involving groups of people.

Urban Man, age 41

3. Goals of Development

Related to the theme discussed above, Americans and Albertans had different ways of talking and thinking about the "goals of development." Most generally, both groups expressed the view that the goal of development is to produce a "successful person." While similar at this general level, there were crucial differences between the American and Albertan informants in what it means for an individual to be "successful." American informants spoke of success in financial and professional terms—they talked about how a "successful person" is one who has obtained a "respectable job," makes a "good living" and is financially "independent." For Albertans, success was conceptualized as participating in and contributing to the community or the degree, ease and positivity with which the individual interacted and participated actively in their community. Research showed convincingly that the cultural model used to conceptualize "success" was in fact culturally relative—defined by the degree of achieved *independence* in one context and the extent of *interdependence* in the other.

Interviewer: When development goes well, what's the result?

Informant: To me, a good developmental outcome is that they're quote "a good citizen."

Rural Woman, age 55

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Interviewer: There's a term, "child development," that different people in different areas use that, but when you hear that, what pops into your mind?

Informant: Well, what pops into my mind is, that they actually are productive people for our society, and that's the word I feel is child development.

Urban Man, age 60

Interviewer: So what are the "goals" of development? What are the outcomes?

Informant: Somebody who can make a difference in any small way they can and contribute to the human race.

Urban Woman, age 51

Interviewer: So what are the results? What are the outcomes of development? In other words, what happens when development, you know, when development goes well? What's the result?

Informant: A productive member of society. It's all about that.

Rural Woman, age 45

4. "It's about the Brain"

Unlike Americans, Albertans frequently mentioned "the brain" in discussions of child development. These discussions revealed a tacit assumption that the developmental process involves, as one informant said, "something going on in the brain." However, despite the promising implication of the brain, the *process* in which the brain was involved remained murky in the minds of informants. Put another way, there was "a brain" somewhere in the black box of development, but what happened to this brain remained shrouded in mystery.

Biology was not my strong point. But, you've got your synapses of, you know, different things that are happening in certain areas that are working in consort with others, and perhaps there's a gene that doesn't allow that message to necessarily translate 100% to the brain so that it works the way it's supposed to.

Urban Woman, age 51

You've got to recognize the fact that a sperm and an egg created one brain cell, right? I call that the "eggsispark," which then grows into a brain. That's where you go when you close your eyes and your pure energy is in that center spark, and it grew a body, right, and that brain is developing psychologically.

Urban Man, age 31

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Informant: To me, I guess, if you're gonna get it down to a nutshell, a child develops through stimulation—both mental and physical. And allowing of a child to explore the world around them, and the more options you give a child, the more development you'll see.

Interviewer: So, why is that? How do "options" translate into development?

Informant: Well, if you believe what the doctors say, the different parts of your brain function, or are stimulated by, different things, so if you're gonna have a well-rounded, developed child, you have to stimulate all parts of their brain as much as you can.

Rural Woman, age 55

5. "Experiences Get Carried Forward"

American informants understood child development as a process that unfolds independently of things going on around the child—or as informants frequently said, "naturally." Albertan informants, on the other hand, spoke frequently about the importance of the experiences that a child has and detailed the ways in which the experiences can affect, as one participant said, "things down the road." Closer analysis revealed an implicit understanding—that what happens early in the life of a child has long-term effects.

I guess you hear it all the time, that something happens in somebody's life, and it's traced back to some experience they had in their formative years...So yeah, I think definitely that can be sort of something that's underlying below the surface that you don't recall, per se, but it's there regardless.

Urban Man, age 37

And of course they need that social interaction. If that's not happening and the child is just experiencing the parent having these altercations, or these encounters, and not understanding them for what they are, then that will then be carried forward. When they have these circumstances they're going to respond without any sort of foundation.

Urban Man, age 31

Well I mean babies start out as little scientists, just kind of doing little experiments, seeing if they knock a spoon off a high chair will it fall to the ground. What happens is that they slowly form little rules, then they test them to see if they work, and if they don't, then they form new rules, kind of rules or laws of world works and try to understand more and more.

Urban Man, age 27

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However, despite the dominance of this long-term effects thinking, Albertans did occasionally employ assumptions that more closely resembled the "naturalism" assumption more dominant in American culture—that development just naturally unfolds regardless of what goes on around the child. This suggests that both of these perspectives are available lenses through which Albertans can perceive and make sense of child development—but that the long-term effects understanding appears more dominant in the frequency of its application and power in shaping thinking on this subject.

6. Early Learning Is Real Learning

For Americans, thinking about early education is structured by the fundamental assumption that daycare=babysitting—in short, that *early education is not really education*. Development of social skills, preschool's main contribution, is seen to occur *naturally*, even *inevitably*, and to unfold regardless of whether the child attends preschool. This creates the perception that preschool is little more than a place for parents to "put" their kids so that they can go to work—a view which has obvious implications for how people view the *necessity* of preschool programs and attendance.

Interviews suggested that this assumption is much less dominant in how Albertans reason about early child care settings.[8] Data suggested that Albertans approach the issue of early education from the assumption that "early experiences matter." This assumption structured frequently reported opinions that early education is, in the words one informant, "where children *really* learn." In short, Albertans expressed a belief, structured by a highly shared assumption, that early experiences matter, that early education is in fact education and where children develop "basic" skills and abilities. Since, as discussed above, child development is about skills and abilities, these early learning settings and times are perceived as crucial.

> Well you read about those babies in Romania, left in cribs with no stimulation, no affection. They're fed and changed, and that's it. They suffer a real deficit that they say is lifelong.
>
> *Rural Woman, age 55*

> Teaching the child how to think from that very early age determines the rest of their lives.
>
> *Urban Man, age 31*

In addition, data from the Albertan interviews revealed another theme not present in the American data—that preschool and daycare affect later school performance.

> They have no idea how lucky they are to have a basically a free education system if you take away the taxes. But there has to be an importance put on it, they can't just keep chipping away. And what we went through in the '90s and to some degree today when they chipped away that foundation, the basic foundation of learning with kindergarten; the ramifications of that were just beyond belief. I don't think even the idiot that ran the province knew that it was going to be so

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bad for society in general. He might have saved a few thousand dollars but there's thousands of kids that have now had had to play catch-up.

Rural Woman, age 45

But at the same time Albertans, like Americans, recognized and focused on the view of daycare as an unfortunate by-product of modern life, which has imposed conditions and, as one informant said, "societal expectations" on families that obviate full-time employment from both parents. Put another way, while Albertans saw the time that children spent at daycare as "development" time, they also felt that this time would be *better* spent at home bonding with a parent, because as one participant said, "no one is ever going to love a child like their parent."

In addition, like Americans, Albertans did occasionally focus on the "basics"—they talked about the importance of early learning being that children learn their "abc's and 123's."

In the younger aspect of it, in the north, and in the small communities, there's basically nothing offered in the development aspect. The children are in the home, cared for by the mother, and in some cases the father as well. In the Indian community, in many families, the mother and the father are at home, if they're not actively employed, but the development is primarily in the home, and I've seen two different things happen there. One, the school of thought where we have to prepare our children for school. Read to them often, while they don't read and write themselves at 3 years old, 4 years, 5 years old, they understand what ABC's are, 123 is, what colors are, can identify letters, where we've prepared them to enter the school education process. To the other side of the coin, I've had some discussions with my peers that felt that they didn't have to read to their kids, that they didn't have to prepare their kids to enter the education system. That when their kids went to kindergarten, they were not prepared. They were very reliant on their parents; they weren't able to understand the concepts of 123, or ABC, or that bright color there is yellow, or how that dull color is black because their parents hadn't prepared them, and those kids faired poorly compared to the children that were given the attention in the home.

Urban Man, age 45

Interviewer: What's involved with growing mentally? What all's involved with that?

Informant: Formal/informal education, learning your ABC's, and learning what's right and wrong, learning what hurts and what doesn't hurt.

Urban Man, age 37

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But, the key differences are that Americans did not see even these basics beginning before kindergarten, whereas for Albertans, early learning contexts were contexts of real learning. In addition, the focus of Albertan informants, unlike their American counterparts, did not alight *only* on the basics of numeracy and literacy. The importance of other skills, like self-control and the ability to focus and pay attention, were prominent features in discussions of early learning.

7. A Lack of Focus on Safety

American discussions of development were dominated by a focus and priority on "keeping kids safe"—that the key to development was being protected from and surviving an inherently unsafe world.[9] Albertans, on the other hand, employed the cultural model that the success of development is based on whether or not a child acquires skills and abilities. Put another way, for Albertan informants the priority was not so much protecting children—development was not about "making it through unscathed." Instead, development was about making sure children were involved and had access to programs that provided them with experiences through which they are able to develop skills and learn to relate to others in their communities.

In this way, the Albertan and American models described here generate antithetical views about *what* is important in the developmental process and how this process can be improved. For Albertans, the development process was about skill acquisition and development. Based on this tacit underlying assumption, Albertans talked about how the way to improve development was to increase the number and availability of "programs" and activities. Americans, on the other hand, operated under the shared assumption that development was really about protecting a child so that they could *grow*. Accordingly, American discussions of how to improve and address the developmental process centered on increasing child safety through protectionist policies.

Implications of Cross-Cultural Differences

» **A Broader Conception of "Environments":** The ways that Albertans talked about environments and the fundamental assumptions that underlay these patterns of talk have significant communication implications. The understandings that environments consist of a wide range of factors suggest that one of the biggest roadblocks that prevents Americans from realizing the role of context in shaping outcomes, and thus the importance of public policies in shaping contexts, is not as pervasive, obstinate or impeding in the Albertan context. However, it must be noted, that while clearly not dominant to the extent observed in the United States, there were some informants for whom, at times, the role of context in shaping development slipped from view and focus became trained on families as *the* determinant of developmental outcomes. Advocates should therefore remain aware of the existence of the family bubble as a recessive assumption that may, given poorly framed materials, become active in the way that Albertans think of child development and in so doing derail reasoning about the importance of public policy in this issue.

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» **Focus on Skills and Abilities Promising for Communicating about Executive Function:** The implicit assumption that skills and abilities are what get developed in development suggests that the science of executive function will, relative to a U.S. public, be decidedly easier to communicate to Albertans. Many of the mismatches between the science of executive function and the public's assumption of the importance of moral development that are in place in the U.S. appear not to be present in Alberta. However, caution is warranted here as the Albertan research did not explore, in sufficient detail, more specific aspects of this focus on skills and abilities. Further research is required to drill down into the more specific assumptions and understandings of *the types of skills* that Albertans assume as being the focus and outcome of development. It could very well be that the skills that Albertans relate to development are dramatically different from those emphasized in the science. This would suggest the need for more focused and specific reframing efforts to successfully translate the science on this particular issue.

» **Focus on Observable Skills May Impede Thinking about Internal Components of Development**: Another challenge is that the focus on skill development as development further reinforces and engrains the assumption that development is about the visible and, in so doing, pulls the focus further away from what is happening *in* the body. This externally directed focus, as discussed above, makes it hard for people to be receptive to information about the processes of development going on inside children and the way that genes and environments affect these processes through biology. In short, the focus on skills may be yet another distraction that threatens to inhibit serious consideration of the importance of the biological process of development. If the *result* is all that people see, regardless of what this result is, the process remains taken for granted. Consequently, the inputs into this process, which are what policies and programs have the power to effect, continue to play second fiddle to the visible external results that come out of the black box discussed above.

» **The Promise of Interdependence as a Desired Outcome**: The assumption that success=independence versus success= interdependence is foundational in appreciating how these two groups orient to and understand information about child development. The assumption of interdependence as the desired state means that messages of social responsibility and collective good that are so difficult to communicate in an American cultural context, should be easier to think for Albertans. This hypothesis and the implications that it has for framing will be tested in future quantitative work where data can be gathered from a larger, more representative sample of Albertans.

» **The Opportunity of the Notion that Development Happens in the "Brain":** The fact that Albertans *did* assume that the process of development somehow involved a child's brain is promising and, at the same time, highlights the significant framing work that remains to be done on this issue. Albertans already associated the brain and development, which places less onus on communications to make this connection as the first step in translating the science. Unfortunately, the association is only that—a starting point. The fact that informants remained unclear as to

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how brains are involved, and the importance of this process in the science of child development, illustrates the distance that communications must bridge in order translate and provide a process through which the public can understand what is going on during development. As has been discussed above, this understanding of process is paramount to realizing the importance of specific policies in affecting developmental outcomes through their effect on the developmental process.

» **Child Experiences Have Lifelong Consequences:** The *experiences get carried forward* assumption is highly promising, as it opens the door for scientists to communicate about the importance of early experiences and their long-term impacts. However the existence, despite its recessiveness, of the opposite naturalism assumption—that development "just happens"--points to the fact that communications about early experiences must be strategic and careful in cuing the link between early experiences and later outcomes while simultaneously avoiding the resilience model.

» **Early Child Learning Is REAL Learning:** Advocates and experts can assume that Albertans understand that early learning is real learning and do not have to frame around the damaging and derailing American assumption that daycare is babysitting. However, understandings that daycare is a "symptom" of the modern world are more problematic. This basic assumption, and the views that it engenders—that kids suffer when they go to daycare, and that it would be better if, as one Albertan informant said, "mom could stay home with all her kids"—create a dynamic where attention and blame are trained on those mothers who *do* work rather than more productively on how to improve and create the best out-of-home early learning contexts. This is further evidence that the family bubble assumption is not completely absent in how Albertans think about child development, and, despite its recessiveness relative to the American sample, the importance of its consideration in communications practice.

COMPARISON #2: MAPPING THE GAPS

FrameWorks has worked with child development scientists on the National Scientific Council on the Developing Child to identify a set of principles of development that are critical to changing the public discourse and policy agenda around child development. What has emerged from this partnership is a "core story of development," which FrameWorks has empirically tested and shared with the scientific community. The components of the core story of child development are provided in Appendix B. Our task in this part of the paper is to evaluate the extent to which the substance of that story is consonant with the existing understanding of child development expressed by Albertans in our interviews. That is, we want to "map the gaps" between the scientific and Albertan understandings of child development.

Mapping the Gaps

While we focus below on the *gaps* between expert and public understandings to identify areas that would

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benefit from simplifying models, research did suggest that there *are* many areas of overlap between the way these groups understand child development. These overlaps between the science story and the understandings held by Albertans have strategic implications and represent communications tools—suggesting specific areas and understandings to emphasize in messaging on this issue. However, future framing research must verify the positive effects of these common understandings on communicating early child development policies. Below is a list of these overlaps:

1. **Environments Matter**. There is accord between the understanding employed by Albertan informants that environments matter in the process of development and the importance that scientists place on environments of experiences in determining developmental outcomes.

2. **Resources Constitute Environments**. Albertan assumptions and scientific findings share a similar environmental construct—that *resources* and *access to resources* are key in shaping the quality of environments and, through these environments, developmental outcomes.

3. **Skills Not Content**. Both scientists and members of the Albertan public focus on skills and abilities as the "work" of development.

4. **The Brain *Is* Involved**. While Albertans were unsure of *how* brains are involved in development, they do share a general sense of the importance of brains in this process with scientists.

5. **Success=Interdependence**. The beliefs of Albertans and the findings of scientific research are parallel and closely in line on the notion that individual and social success are dialectically connected.

6. **Policies Matter**. Interviews indicated a general agreement between Albertans and scientists on the role of policy and funding in addressing and improving child development outcomes.

7. **Early Experiences Connect to Long-Term Outcomes**. Finally, the connection that Albertans understood between the early experiences and exposures that a child has and the outcomes that they experience later in life is in close alignment with scientific findings suggesting this same connection.

Figure 1 below summarizes the gaps that exist between developmental scientists and the public on the issue of child development. More generally, an integral part of FrameWorks' Strategic Frame Analysis™ is to first generate this map and then design simplifying models that fill these gaps by cultivating clarifying metaphors that concretize key scientific concepts. Designing simplifying models relies on knowing the *locations* and *characteristics* of expert-lay gaps—it requires a detailed, in-depth understanding of the map. Understanding the locations and features of the specific gaps detailed below is therefore essential as we move from the largely descriptive research laid out in this report to more prescriptive reframing experiments that will follow.

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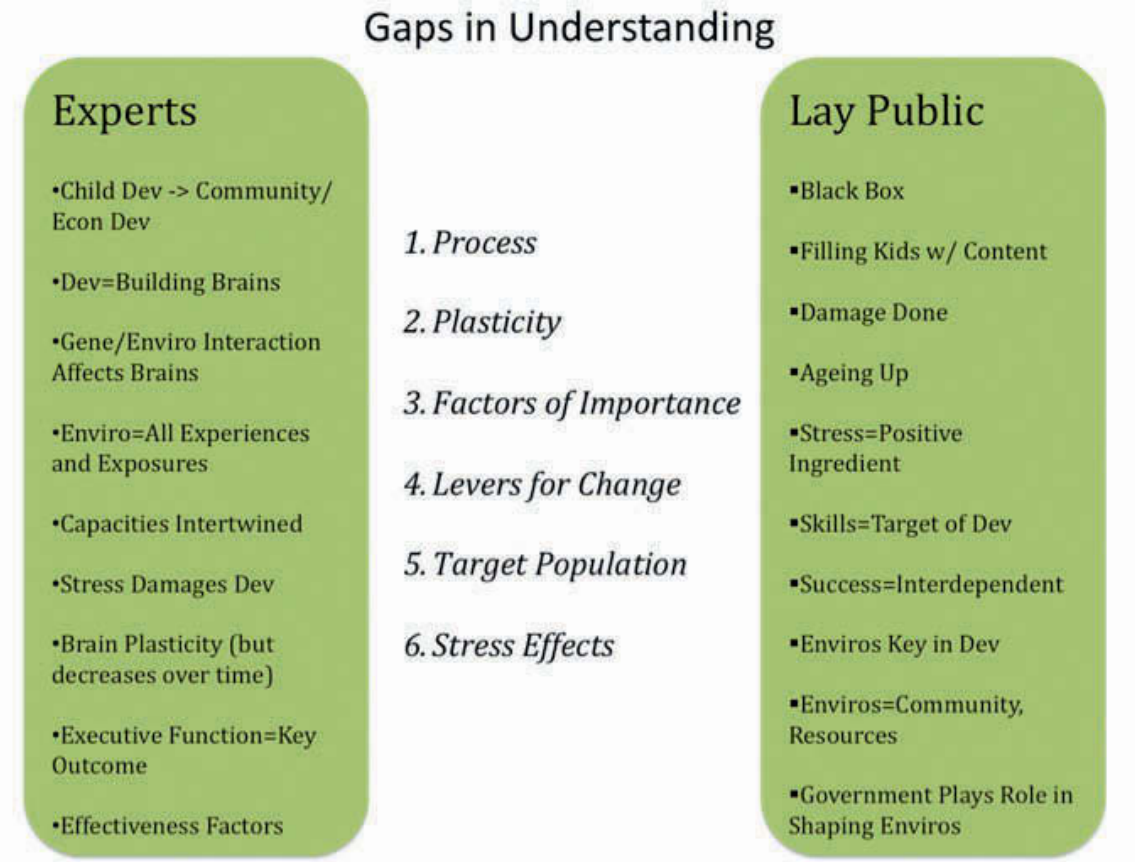
Figure 1. Schematic of the Conceptual Gaps between Scientists and the Albertan Public



Below, we take each one of the conceptual gaps identified in Figure 1 and discuss the communications implications with greater specificity. These gaps suggest that many of the frame elements that have been developed and tested in the US also have promise and need to be empirically tested in the Albertan context.

1. ***Process***. The science of early child development is based on a detailed understanding of *how* children develop—that brains are built through a complicated confluence and interaction between genes and environments. Albertans did not profess, assume or understand the process by which children develop. If the gap between this common view and that of the scientific understanding remains unfilled, the importance of policy in affecting the developmental process will never be fully realized. Perhaps even more importantly, without an understanding of this process, it is exceedingly difficult for Albertans to understand how development can be affected, the factors that should be targeted to improve the developmental process, and the likely outcomes from such interventions.

2. ***Plasticity.*** Scientists have a nuanced understanding of "plasticity"—that brain architecture can change, but that this capacity is unevenly distributed over an individual's life course, with brains being most susceptible to both positive and negative influences in the early years of

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childhood. Albertans, on the other hand, assumed, with striking predictability, both that early experiences matter and that "once the damage is done it's already too late." Messages about the ability to remediate negative effects on a child's development, based on the plasticity of the developing brain, are therefore likely to drop into this gap and either have little effect on the public's thinking or cue the dominant understanding of the intractability of negative experiences.

3. ***Factors of Importance***. While scientists focused intensely on the interactions between genes and environments and saw these two broad categories as *the* factors that matter in the developmental process, Albertans focused rather narrowly on programs and activities in the environments of children and access to these programs in accounting for developmental outcomes. The result of the gap will likely be considerable difficulty presenting *gene*-environment interaction as a determinant of developmental outcomes.

4. ***Programs.*** For scientists, not all programs are created equal—there are programs that are effective in facilitating more positive development as well as programs that are less successful and largely ineffective in affecting this process. Science also points to a set of characteristics that differentiate the effective from the ineffective programs. While Albertans focused intensely on programs and spoke ad infinitum about their importance, interviews revealed the assumption that "programs are programs"—that all programs *are* created equal and it is *the number* of programs that a child is involved in that determines outcomes. This gap presents a challenge for communicating about the importance of *programmatic quality,* as Albertans are likely to assume that it is the participation in any program that shapes development.

5. ***Target Population.*** For scientists, child development starts before birth and the focus of much of scientific discussion is about very early childhood. Albertans have a natural, implicit and tacit understanding that they bring to bear on understanding child development—an assumption that focuses conversations about "child development," even "early child development," on *pre-adolescents*. These different understandings obviate specific communications techniques and recommendations suggested and discussed above, but most importantly show the likelihood of miscommunication and misinterpretation if unframed messages about "child development" are dropped into a public that assumes a very different understanding of the "child" being discussed than do scientists.

6. ***Stress Effects.*** For scientists, certain types of stress wreak havoc and are highly detrimental to the developmental process, while for Albertans, stress is a necessary ingredient in the process, without which, many of the desired outcomes—strengths and skills—could not be realized. The presence of this gap obviates careful attention to the way that messages about the effects of stress and the policy implications of the relationship between chronic and severe stress and development are communicated so as not to have unintended, oppositional effects on how the public understands the roles of toxic stress in the lives and development of children.

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PRELIMINARY AND FUTURE DIRECTIONS

There remains considerable prescriptive research to be done both in verifying the effectiveness of communications recommendations this research highlights as promising and in determining how to most strategically communicate this issue in Alberta—especially in addressing the challenges posed by patterns of understanding not present in the U.S. Despite the necessity of this future research, the following have emerged as preliminary strategic communications recommendations:

1. **Shine a Light in the Black Box:** While a formidable challenge, FrameWorks has addressed the black box and absorption understandings in previous reframing research in the U.S. The fact that both groups lack a working model through which to understand development, suggests that communication research in Alberta should test the effect and effectiveness of past recommendations and frame elements designed to address this challenge in the U.S. Therefore, future testing of the following frame elements in Alberta is recommended: ***Brain Architecture, Skill Begets Skill*** **and** ***Serve and Return***.[10]

2. **Create Space to Think About Brain Plasticity:** Similarities between Americans and Albertans in the application of the *damage done* assumption suggest that the following frame elements derived from the American research base also hold promise in Alberta: ***Brain Architecture*** **and** ***Pay Now or Pay Later***. In addition, the dominance of *damage is done* thinking points to the need to shift away from a deterministic understanding and towards a perspective and understanding that recognizes and incorporates the concept of ongoing (although decreasing) plasticity of physiological systems—that damage done *can* be addressed through intervention, and that therefore there is merit in programs that target children who have experienced early adversity.

3. **Age Down the Conversation:** The strong and highly implicit presence of the ageing-up assumption suggests that considerable communications work needs to be done to shift the population on which Albertans focus when thinking about early child development. ***Brain Architecture*** and ***Skill Begets Skill*** are promising frame elements in refocusing the discussion on the early childhood years.

4. **Structure the Realization that Some Stress Is Toxic to Development:** ***Toxic Stress***—a simplifying model designed to address the *stress does the body good* assumption—has been highly effective in U.S. communications. Because of the similarity between Albertans and Americans in the application of this understanding in thinking about child development, the simplifying model is also likely to be effective in Alberta, facilitating the understanding that some stress damages the developmental process and its outcomes.

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5. Activate the Following Existing Features of the Albertan Cognitive Landscape:

a. Skills and abilities are the "things" developed in development

b. Success=Interdependence

c. Context=communities, resources, programs

d. Government as responsible and potentially effective in improving developmental outcomes

e. Development involves brains

f. Early experiences shape long-term outcomes

g. Early learning is real learning

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CONCLUSIONS

This report examines the cultural models used by Americans and Albertans to understand early child development and then compares those ways of understanding development to the scientific explanations of this phenomenon. This research was a necessary step in the descriptive phase of our work because it lays the foundation upon which we will build and test reframing strategies.

The formidability of illuminating the process of development is considerable, but is a task on which FrameWorks has already spent considerable time and effort. Despite the numerous areas where cultural understandings of child development differ between Americans and Albertans, the striking similarities in certain fundamental assumptions between these groups suggest that many of the challenges that face scientists and communicators in the U.S. are faced by their counterparts in Alberta. Furthermore, because of these similarities, many of the frame elements that FrameWorks has developed and tested to deal with communications challenges predicated on U.S. patterns of understanding and assumptions appear promising as means of translating the science of child development and the policy implications in Alberta. This research has revealed both differences and similarities between the way that Americans and Albertans understand child development. Similarities, while similarly challenging, are reassuring as they suggest the utility of applying already vetted frame tools. Differences suggest both unique opportunities as well as unique challenges posed by the variability and relativity of cultural models.

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APPENDIX A: THEORETICAL FOUNDATIONS

The following are well-accepted characteristics of cognition and features of cultural models that figure prominently into the results presented in this report and in FrameWorks' research more generally.

1. Top-down nature of cognition

Individuals rely on a relatively small set of broad, *general* cultural models to organize and make sense of information about an incredibly wide range of *specific* issues and information. Put another way, members of a cultural group share a set of common general models that form the lens through which they think and make sense of information pertaining to many different issues. This feature of cognition explains why FrameWorks' research has revealed many of the same cultural models being used to think about seemingly unconnected and unrelated issues—from education to health to child development. For example, FrameWorks' research has found that people use the *mentalist* model to think about child development and food and fitness—seemingly unrelated issue areas. For this reason, we say that cognition is a "top-down" phenomenon. *Specific* information gets fitted into *general* categories that people share and carry around with them in their heads.

2. Cultural models come in many flavors but the basic ingredients are the same

At FrameWorks, we often get asked about the extent to which the cultural models that we identify in our research and that we use as the basis of our general approach to social messaging apply to ALL cultures. That is, people want to know how inclusive our cultural models are and to what extent we see/look for/find differences across race, class or other cultural categories. Because our aim is to create messaging for mass media communications, we seek out messages that resonate with the public more generally and, as such, seek to identify cultural models that are most broadly shared across society. We ensure the models are sufficiently broad by recruiting diverse groups of informants in our research who help us to confirm that the models we identify operate broadly across a wide range of groups. Recruiting diverse samples in our cultural models interviews often confuses people who then think we are interested in uncovering the nuanced ways in which the models take shape and get communicated across those groups, or that we are interested in identifying different models that different groups use. To the contrary, our aim is to locate the models at the broadest possible levels (i.e., those most commonly shared across *all* cultural groups) and to develop reframes and simplifying models that advance those models that catalyze systems-level thinking. The latter does not negate the fact that members of different cultural groups may respond more or less enthusiastically to the reframes, and this is one of the reasons why we subject the reframes that we recommend to our clients to rigorous experimental testing using randomized controls that more fully evaluate their mass appeal.

3. Dominant and recessive models

Some of the models that individuals use to understand the world around us are what we call "dominant"

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while others are more "recessive," or latent, in shaping how we process information. Dominant models are those that are very "easy to think." They are activated and used with a high degree of immediacy and are persistent or "sticky" in their power to shape thinking and understanding—once a dominant model has been activated, it is difficult to shift to or employ another model to think about the issue. Because these models are used so readily to understand information, and because of their cognitive stickiness, they actually become easier to "think" each time they are activated—similar to how we choose well-worn and familiar paths when walking through fields, and in so doing these paths become even more well-worn and familiar. There is therefore the tendency for dominant models to become increasingly dominant unless information is reframed to cue other cognitively available models (or, to continue the analogy here, other walking paths). Recessive models, on the other hand, are not characterized by the same immediacy or persistence. They lie further below the surface, and while they *can* be employed in making sense of a concept or processing information about an issue—they *are* present—their application requires specific cues or primes.

Mapping recessive models is an important part of the FrameWorks approach to communication science and a key step in reframing an issue. It is often these recessive patterns of thinking that hold the most promise in shifting thinking away from the existing dominant models that often inhibit a broader understanding of the role of policy and the *social* aspect of issues and problems. Because of the promise of these recessive models in shifting perception and patterns of thinking, we discuss them in this report and will bring these findings into the subsequent phases of FrameWorks' iterative methodology. During focus group research in particular, we explore in greater detail *how* these recessive models can most effectively be cued or "primed," as well as how these recessive models *interact* with and are *negotiated* vis-à-vis emergent dominant models.

4. The "nestedness" of cultural models

Within the broad foundational models that people use in "thinking" about a wide variety of issues lay models that, while still general, broad and shared, are *relatively* more issue-specific. We refer to these more issue-specific models as "nested." For example, in our past research on executive function, when informants thought about basic skills, they employed a model for understanding where these skills come from, but research revealed that this more specific model was nested into the more general *mentalist* cultural model that informants implicitly applied in thinking this issue. Nested models often compete in guiding or shaping the way we think about issues. Information may have very different effects if it is "thought" through one or another nested model. Therefore, knowing about which models are nested into which broader models helps us in reframing an issue.

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APPENDIX B: THE CORE SCIENCE STORY OF EARLY CHILD DEVELOPMENT

1. Child development is a foundation for community development and economic development, as capable children become the foundation of a prosperous and sustainable society (Prosperity).

2. The basic architecture of the brain is constructed through an ongoing process that begins before birth and continues into adulthood (Brain Architecture).

3. Brains are built from the bottom up (Skill Begets Skill).

4. Interaction of genes and experience shapes the developing brain, and relationships are the active ingredient in this Serve and Return process (Serve and Return).

5. Cognitive, emotional, and social capacities are inextricably intertwined, and learning, behavior and physical and mental health are inter-related over the life course (Can't Do One Without the Other).

6. Toxic stress damages the developing brain and leads to problems in learning, behavior, and increased susceptibility to physical and mental illness over time (Toxic Stress).

7. Brain plasticity and the ability to change behavior decrease over time and getting it right early is less costly, to society and individuals, than trying to fix it later (Pay Now or Pay Later).

8. We have the capacity to measure effectiveness factors that make the difference between programs that work and those that don't work to support children's healthy development. Identifying those factors and explaining how to replicate them and then bring them to scale should be the work of a rigorous enterprise that is devoted to evaluation science.

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ENDNOTES

[1] Quinn, N. (2005). *Finding Culture in Talk: A Collection of Methods* (1st ed.). New York: Palgrave Macmillan, p. 16.

[2] See Glaser, B. G., & Strauss, A. L. (1967). *The Discovery of Grounded Theory; Strategies for Qualitative Research.* Chicago: Aldine Pub. Co. and Strauss, A. L., & Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park, CA: Sage Publications.

[3] Bales, Susan N. (2005). *Talking Early Child Development and Exploring the Consequences of Frame Choices: A FrameWorks Message Memo.* Washington, DC: FrameWorks Institute.

[4] Bales, Susan N. (2005). *Talking Early Child Development and Exploring the Consequences of Frame Choices:A FrameWorks Message Memo.* Washington, DC: FrameWorks Institute.

[5] This assumption about stress is another example of contradictory cultural models. On the one hand, Americans and Albertans assume that damage done during development is damage done, yet at the same time—frequently in the same interview—the same informants employ assumptions about the positive effects of stress—that negative experiences and adversity are actually beneficial in development. This is additional evidence of the parsed and parceled nature of cultural models—that they are discrete bins we use to organize and process information and that therefore multiple, apparently conflicting assumptions can be applied in thinking the same issue.

[6] See Bales, Susan Nall. (2006). *How to Talk About Government*. Washington, DC: FrameWorks Institute and Kendall-Taylor, Nathaniel & Bales, Susan. (2009). *Like Mars to Venus: The Separate and Sketchy Worlds of Budgets and Taxes*. Washington, DC: FrameWorks Institute.

[7] For more on how Americans think about the results of development and basic competencies see: Kendall-Taylor, Nathaniel, McCollum, Chris & Manuel, Tiffany. (2009). *Caught between Osmosis and Environments: Mapping the Gap between the Expert and the Public Understandings of the Role of Executive Function.* Washington, DC: FrameWorks Institute.

[8] Interviews employed multiple terms to introduce questions about and in the course of discussing the topic of early education, including early education, preschool, daycare, and nursery school.

[9] Bales, Susan N. (2006). *Framing Lessons in Elevating Prevention Policies for Children: A FrameWorks Message Memo*. Washington, DC: FrameWorks Institute.

[10] Bales, Susan. (2009). *Translating Research into Narrative: A FrameWorks Message Memo for the Center on the Developing Child at Harvard University.* Washington, DC: FrameWorks Institute.

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