

Cultivating Nature

Mapping the Gaps Between Expert and Public Understandings of Early Development in Australia

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A FrameWorks Map the Gaps Report

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Introduction

John Locke (1632–1704) believed that ‘the goal in child rearing is to produce a good and rational adult, capable of fulfilling her or his role in the niche marked out by social rank’¹. Jean-Jacques Rousseau (1712–1778) thought that we should let ‘a child grow up in accordance with the dictates of nature, not being told things, but learning that fire burns and that stones are hard’². Such public debates over what good child development looks like and what children need to develop well have raged ever since the acknowledgement of childhood as a discrete period of life. And yet, because public perceptions of child development rest on deeply seated assumptions about childhood and about human nature itself, the terms of this debate have remained surprisingly stable over time, and across continents. Public perceptions of early development in Australia in 2019 are still built on, and expand on, the fundamental tension between two conflicting views of development: the view of development as a natural but largely passive process of growth, and the view of development as an actively cultivated and contingent process of learning.

This report presents findings from research conducted with CoLab, a partnership between the Telethon Kids Institute and the Minderoo Foundation. It maps the terrain of public thinking about early development to understand how public thinking overlaps with and differs from the thinking of experts in this area. In tracing these patterns in public thinking, we identify the challenges for communicators looking to translate the expert understanding of early development. This research is part of a broader project, building on previous work on early childhood development and on parenting in Australia, to develop a comprehensive *core story of early childhood development* to effectively communicate about this issue in Australia.

Communicating effectively about early development first requires a clear sense of what must be translated—the core ideas that experts would want the public to grasp about what early development is, how children develop, what factors support or threaten development, and what needs to happen to better support early development in Australia. The report begins with a distillation of this ‘untranslated story’ of early development, which summarises findings from interviews with experts. This untranslated story represents the content to be communicated to the public through a reframing strategy.

We then describe the cultural models—shared assumptions and implicit ways of thinking—that underlie how the Australian public understands and reasons about children, prenatal and early development, child mental health, and play. Working from hundreds of pages of interview transcripts, we identify the different ways of thinking about early development that are available to the public. Some are productive and can be used to communicate key ideas that those in the field want to make more accessible. For example, the public understands that a child’s first years of life are an intense period of development and growth. They are also able to think productively about the role of play in supporting children’s development and see how financial issues can shape a child’s developmental outcomes.

Some of these ways of thinking, however, are deeply unproductive. When the public thinks of early development as a process of natural growth, they struggle to see the need for active interactions between a child and their caregivers or the need for structural supports to foster good outcomes for children. On the other hand, when people think of development as a process of cultivated learning, they are able to recognise the need for such interactions and, to some extent, structural supports, but still struggle to understand how these environments interact with biology. They also have a hard time thinking of health as a key outcome of good development in addition to learning and skills acquisition. This lack of connection between the natural and the cultivated views of development undermines public support for policies and practices that aim to address this interaction between biology, context, and experience as a way to improve outcomes. Because the public sees language as a prerequisite for a child to start experiencing emotions and mental states, people struggle to even engage with the concept of mental health in early years, especially in infancy. Finally, people's deeply held view that parents—and all the more so pregnant women—are the main responsible for a child's developmental outcomes contributes to the stigmatisation of groups and communities that do not fit people's models of 'good' parents and undermines support for collective action to support healthy development. Taken together, many of these patterns in public thinking make it difficult for members of the public to fully grasp key aspects of early development. They can block support of the kinds of policy solutions that experts recommend.

In the final part of the report, we map the gaps between expert and public perspectives, examining points where these understandings overlap and where they diverge. This highlights the key challenges in communicating about early development in Australia. We then, based on this analysis and previous framing research conducted in Australia, offer a set of preliminary framing recommendations and a set of specific 'dos and don'ts' for communicators. We conclude by outlining tasks for the next stage of the project.

A description of research methods and participant demographic information can be found in the appendixes.

The Expert Story of Early Development

This section presents the themes that emerged from analysing 15 one-hour interviews with Australian and international early development experts. These points represent the ‘untranslated story’ of early development in Australia: the understandings that experts want to communicate to the public. Importantly, this is not a communications strategy; it is a set of content points that need to be communicated. At a later stage of the project, FrameWorks will recommend a strategy for how the field can communicate these ideas. The untranslated story is organised around the following questions:

1. What is early development and why is it important?
2. How do children develop?
3. What threatens positive development?
4. What supports positive development?
5. How can we support healthy early development in Australia?

What is early development and why is it important?

Early development encompasses physical, socio-emotional, cognitive and motor development from the prenatal stage to 3–5 years of age. According to experts, the prenatal (during pregnancy) and perinatal (immediately before and after birth) periods and the first three to five years of life are key stages of development. During these periods of life the foundations are laid for long-term health and wellbeing. Experts also recognise the continued potential for change across the life span and thus the importance of continued support in early years and beyond—especially during adolescence.

Early development is a highly ‘plastic’ time of life. According to experts, one of the most significant features of human biology is the capacity for systems to change in response to environments and experiences. They explain that there is an especially high degree of this ‘developmental plasticity’ in the first 1000 days of life. Starting from conception, biological systems are responding to changes in the environment and altering their structure and function accordingly. After the first 1000 days, biological systems do retain plasticity, but the systems that are under construction change and the general level of plasticity reduces.³

During early childhood, changes in the brain and other biological systems are interconnected. In discussing development, experts focus on the brain. More specifically, they focus on certain areas of the brain (e.g. hippocampus, amygdala, prefrontal cortex) that experience the most significant changes. They explain that in addition to these areas growing or becoming more complex, connections are established between these regions of the brain and with biological systems in other parts of the body. Experts emphasise that the brain is not a standalone system: it is connected to other systems, including the immune, endocrinal, metabolic, gastrointestinal, cardiovascular, enteric and musculoskeletal systems.

Together, these systems shape each other and function as an integrated whole. This means that prenatal and early childhood development is not only about the neurological system, but concerns a wide range of biological systems and their developing interconnectivity.

Early development is characterised by the rapid acquisition of a wide range of skills. Experts explain that from birth, children develop highly visible skills in mobility (motor control), thinking (cognition), and communication (language). They also develop less visible emotional and self-regulatory skills, such as the ability to experience and express different emotions, as well as the capacity to manage and cope with a variety of feelings. Experts highlight the importance of the development of self-regulation—the ability to control and regulate a broad range of life skills, competencies and behaviours. For example, the skills involved in self-regulation are inhibitory control, working memory and cognitive flexibility.

The foundations of mental and emotional health are established in early development. Experts explain that along with physical health, mental health is a key area of early childhood development. This includes the development of social and emotional skills, a sense of security, and confidence. Experts emphasise that young children are capable of deep and intense feelings of sadness (including depression), grief, anxiety, and anger, in addition to joy and happiness. They define child mental health as a child's ability to organise their emotions, respond to experiences, and function in productive and developmentally appropriate ways (e.g. infants building attachments with their caregivers).

How do children develop?

The interplay of genes and environments drives development. According to experts, development is driven by the interactions between genetic constitution and environmental forces that occur through biological processes. They explain that developmental outcomes and individual differences result from the interplay between genes, experiences, and environments. For instance, emotional development occurs through the interaction of a child's experiences—shaped by the environments in which they live—and their genetic make-up.

Children's innate sensitivity to context influences how they develop. According to experts, the degree to which children are influenced for better or worse by their environmental experiences depends, in part, on their innate sensitivity to context. A child born with high sensitivity to context is disproportionately affected by the quality of experiences and the surrounding environment. These children are more vulnerable to adverse experiences but are also more likely to benefit from highly supportive environments.

Relationships drive development. Experts see interactions and relationships with parents and caregivers as the primary way in which environments interact with genes to shape children's developmental outcomes: their confidence, resilience, and physical and mental health; their capacity for self-regulation and empathy towards others; their ability to form relationships; their academic and eventual employment

outcomes; their subsequent behaviour and effectiveness as parents themselves. Experts explain that these relationships are formed from the moment of birth, as infants are born with the capacity to connect with parents and caregivers.

Skill begets skill. Experts focus on the process by which simple skills gradually build into more complex ones—how more complex skills are built on, and out of, simpler and more basic operations and capacities. They explain that this gradual acquisition of skills happens through a process of ‘scaffolding’, whereby the adults and caregivers with whom a young child interacts provide opportunities for exploration and play in a skill-appropriate context, with appropriate support and feedback.

What do children need for positive development?

Having access to necessary resources in supportive and stable environments promotes positive development. Being free from poverty and having access to resources, for instance, makes it more likely for parents and children to live in secure housing and a toxin-free environment, to consume healthy foods that support good nutrition from the prenatal period onwards, and to have access to green spaces and playgrounds that support free play, learning, and physical activity. When parents have sufficient support, they are more likely to be able to support their children’s early development. Children are then less likely to be exposed to chronic stress through adverse experiences like trauma, neglect or abuse, and, when stress is present, parents are better equipped to buffer the effects of adversity.

Effective parenting and caregiving supports healthy early development. Experts emphasise that caregiving and parenting practices are integral in supporting early development. These practices—which can be learned over time with access to necessary supports—include the ability to: respond to a child’s individual and changing needs in order to address challenges (e.g. discomfort, anxiety, confusion) and build strengths (e.g. insights, talents, ambitions); foster learning and skill-building; help build a child’s confidence, efficacy and resilience; set predictable boundaries while giving room for exploration; access support (i.e. knowing which supports to access and how, when help is needed).⁴

Healthy early development depends on the quality of a child’s relationships within and outside the home. According to experts, having reciprocal interactions and secure attachments with at least one supportive parent, caregiver, or other adult creates emotional wellbeing early in life and paves the way for positive health and learning later on. Individuals outside of the family—with childcare providers, teachers, and other adults in the community—can all be valuable sources of positive and supportive relationships. Experts also explain that the responsiveness, scaffolding, and protection provided by such relationships not only buffer children from the negative effects of adverse experiences, but also help them build key skills to respond adaptively to subsequent adversity. These skills include the ability to plan, monitor and regulate behaviour, and set and pursue goals.

Play supports healthy early development by facilitating the acquisition of key skills and capacities.

Experts explain that play⁵ is a basic human instinct, and that children begin to engage in play—by themselves, with their parents or caregivers, or even with peers—in infancy. Play has been found to support early childhood development in wide range of ways:

- free (i.e. unsupervised) play is essential for developing social negotiation, creativity, and executive function skills
- other forms of play (e.g. guided play, modelled play) support learning and help children to develop cognitively, socially, and emotionally and expand their knowledge of the world.

Experts argue that play facilitates the development of social skills (through negotiations with peers and parents or caregivers), critical thinking and problem solving, mental health, confidence (through productive risk taking), happiness, and self-discovery (through self-guided exploration).

Play can protect young children’s socio-emotional development. Experts emphasise that in addition to promoting positive development directly (see previous point), play can also protect children against the effects of adversity. For instance, pretend play helps young children process and make sense of life events and experiences both big and small (e.g. making sense of being scolded by one’s parents by, in turn, scolding their stuffed animals). More specifically, experts explain that play can have therapeutic effects, notably for children who have experienced adversity: child therapists often engage in play with young patients in order to help them work through trauma and to gain a window into what they are thinking.

Digital technologies play a complicated role in early childhood. Experts explain that the quality of the media used and the type of support provided by caregivers and other adults determine the effects of digital technologies on early development.

- When used in excess and without the proper support, technology can be a threat to development. For instance, prolonged screen time (e.g. watching TV, or using tablets and smartphones) can deprive children from the outside stimuli, social interactions, and real-life play they need for their brains to develop well^{6,7}. It is also believed to delay language development.
- When used collaboratively, with the active engagement of caregivers and other adults, digital technologies can support early development in productive ways⁸. Young children can use digital technologies to learn about sounds and images, and to develop critical thinking and problem-solving skills⁹.

What threatens positive development?

Social conditions underlie most threats to early development. Experts explain that social and environmental factors—known as ‘social determinants’—are the underlying causes of most threats to early development. They are far-ranging and include: low-quality education or poor access to educational opportunities (for children and adults); poor work conditions for parents; absence of neighbourhood and community networks; poor public transport infrastructure; low-quality housing; lack of access to green spaces; lack of affordable healthy food; and discrimination. These factors threaten early childhood development in the following ways:

- **They can *directly* affect development.** For example, crowded housing or air pollution have direct detrimental effects on the health and development of young children, as well as on the health of their parents. Experts also emphasise the direct effects of severe and chronic stress on development. They explain that adverse experiences—such as violence, abuse, neglect and poverty—when persistent and unbuffered by parents or caregivers, can lead to the over-activation of a child’s stress response systems and cause physical damage to developing biological systems. According to experts, the over-activation of these stress response systems alters processes of development and leads to long-term negative consequences in multiple life domains, including learning, health, and social functioning. In the prenatal period, exposure to chronic maternal stress—notably in cases of domestic violence—has been shown to affect fetal growth, the development of the baby’s brain and nervous system, and length of gestation, which increases risk for a number of problems in the child’s later years. These later problems can include issues with physical and neuromuscular maturation, behavioural and emotional development, and cognitive development.
- **They can *indirectly* affect development** by shaping behaviour and limiting individual control. For example, the absence of freely accessible green spaces and playgrounds reduces opportunities for young children to engage in free play, which, in turn, may challenge development in core areas such as executive function. Experts also emphasise that chronic stress and psychological pressure can affect development indirectly by restricting parents’ capacity to support early development through effective parenting practices and responsible care. In turn, this can increase children’s likelihood of experiencing emotional or behavioural issues, and derail positive development. Experts show that when parents’ wellbeing and mental health is negatively affected—for example, as a result of severe poverty or through some developmental challenge that they themselves experienced as children—they may not have the necessary ‘bandwidth’ to support their children’s early development. In some cases this may even lead to situations of neglect or abuse.

Poor nutrition and exposure to drugs, alcohol, or smoking can threaten development. According to experts, poor nutrition influences development beginning in the prenatal period through adaptations in gene expression, known as ‘metabolic imprinting’ or ‘metabolic programming’. Poor prenatal nutrition has been found to increase risk for obesity, hypertension, and insulin resistance later in life, as well as

adult chronic diseases like cardiovascular disease and diabetes. Exposure to alcohol, drugs and tobacco in utero can impact structural and functional neurodevelopment, leading to cognitive impairment and other neurodevelopmental disorders (e.g. Fetal Alcohol Spectrum Disorder). Experts point out that nutrition—including initiation and duration of breastfeeding—continues to influence a child’s development after birth.

How can we support healthy early development in Australia?

Change the social environment to reduce adversity and build positive supports. This strategy involves efforts to improve the conditions under which parents and caregivers are raising children by addressing the social determinants of health and wellbeing and reducing social inequities. Experts argue for making structural changes to the social factors that threaten early development; they encourage the building of contexts that support positive development. Such changes include:

- creating job opportunities and fair working conditions for all
- ensuring a healthy standard of living for the entire population
- supporting health by developing positive living environments (e.g. access to healthy food in the community, an affordable transportation system, bicycle lanes, parks)
- empowering communities
- reinforcing health prevention.

Make changes to the *physical* environment. Experts emphasise that building and sustaining parks, playgrounds, and libraries can encourage free play, structured play, and learning in early childhood, and can also support parents and parenting by facilitating parent socialisation and mutual learning (see next point).

Create social support networks for parents of young children. Experts focus on finding innovative ways to help parents and families engage in social interaction and benefit from social support. For example, they talk about integrating family, child care, early education and community centres into single locations where parents can network, support and learn from each other. Building support involves providing places where parents and their children can meet, socialise with, and learn from other parents and children. According to experts, providing this more consistently to all parents is key to improving the conditions in which families are raising young children.

Create opportunities for play, and intentionally facilitate play experiences for learning. According to experts, this effort should involve:

- intentionally designing spaces that allow children to play in multiple settings: in the home, in their living environment (e.g. learning landscapes¹⁰) and in educational contexts (e.g. Montessori method)
- providing professionals who come in regular contact with young children (e.g. educators, health practitioners) with training, practice, and support for creating contexts for play and facilitating play for learning outcomes
- better integrating play in schools by removing existing obstacles. This includes: rethinking the way in which educational achievement is assessed to account for the fact that play is, by nature, difficult to define, measure, and evaluate; adding ‘play competencies’ to the list of desired outcomes for early development in school; and reducing class sizes to give children more freedom and opportunities to play
- supporting parents’ use of play principles in their everyday interactions with their children.

Provide services to support early development *directly* and *indirectly* (i.e. through supporting parents and caregivers). Experts point to the importance of services that support children’s development directly, such as high-quality child care and improved primary health care (including improved pregnancy planning, antenatal care, and perinatal care). They also explain that services can support positive development more indirectly, by supporting the physical and mental wellbeing of parents and caregivers. Parent and caregiver wellbeing has a significant impact on attachment, the development of positive parenting styles, and the creation of positive parent–child relationships. Examples of services that have these positive but indirect effects can include: paid family-leave policies, flexible work arrangements, work support programs, services directed at the resolution of parental conflict, substance abuse programs, and mental health services.

Intervene earlier on child and parental mental health. According to experts, developmental outcomes can be improved through the creation of systems that address child and parental mental health issues as early as possible in a child’s life. According to experts, such efforts should:

- ***provide pre- and perinatal mental health support for parents.*** Experts stress that support and interventions during pregnancy are unique opportunities to establish the conditions for healthy attachment and a supportive relationship between child and caregiver
- ***build workforce capacity for early identification, assessment, and clinical treatment of infant, child and parental mental health,*** across agencies and disciplines that work with young children and families (e.g. teachers, child and family health nurses)
- ***offer child mental health supports in non-mental health settings during early childhood*** (e.g. child protection, education, child health), to increase the opportunities for diagnosis of infant and child mental health issues. This involves, for example, building expertise in early development

and mental health within child-protection agencies, to assess and respond to children who have been victims of serious maltreatment.

Design programs that are culturally sensitive and responsive to families' abilities and challenges.

Experts emphasise the need for a strategic and well-integrated effort to reach underserved children and families specifically, alongside a broader effort to provide inclusive environments and services for all families in Australia. This requires:

- acknowledging and making efforts to address the barriers that currently prevent some marginalised and vulnerable populations from accessing existing services and supports (i.e. with culturally sensitive care delivery)
- advancing efforts to end racism and discrimination against marginalised populations, by conducting 'unconscious bias' training with practitioners who come in regular contact with children and families, and by increasing public understanding of the impact and prevalence of discrimination in society.

Make sure that all policies are based on evidence and made with an eye to their impact on early development. Experts advocate for using the science of early development to improve policy and program decision-making. They call for 'closing the gap between what we know and what we do' by using knowledge of the factors that affect development and research on effective interventions to guide policymaking and implementation. They also call for the use of a developmental lens to examine *all* public policies—even those not traditionally connected to early childhood—for example, economic policy, housing policy, and environmental policy and regulations.

The Expert Story of Early Development

What is early development and why is it important?

- Early development encompasses physical, socio-emotional, cognitive and motor development from the prenatal stage to 3–5 years of age.
- Early development is a highly ‘plastic’ time of life.
- During early childhood, changes in the brain and other biological systems are interconnected.
- Early development is characterised by the rapid acquisition of a wide range of skills.
- The foundations of mental and emotional health are established in early development.

How do children develop?

- The interplay of genes and environments drives development.
- Children’s innate sensitivity to context influences how they develop.
- Relationships drive development.
- Skill begets skill.

What do children need for positive development?

- Having access to necessary resources in supportive and stable environments promotes positive development.
- Effective parenting and caregiving supports healthy early development.
- Healthy early development depends on the quality of a child’s relationships within and outside the home.
- Play supports healthy early development by facilitating the acquisition of key skills and capacities.
- Play can protect young children’s socio-emotional development.
- Digital technologies play a complicated role in early childhood.

What threatens positive development?

- Social conditions underlie most threats to early development. They can affect development directly and indirectly.
- Poor nutrition and exposure to drugs, alcohol, or smoking can threaten development.

How can we support healthy early development in Australia?

- Change the social environment to reduce adversity and build positive supports.
- Make changes to the physical environment.
- Create social support networks for parents of young children.
- Create opportunities for play, and intentionally facilitate play experiences for learning.
- Provide services to support early development directly and indirectly (i.e. through supporting parents and caregivers).
- Intervene earlier on child and parental mental health.
- Design programs that are culturally sensitive and responsive to families’ abilities and challenges.
- Make sure that all policies are based on evidence and made with an eye to their impact on early development.

Public Perceptions of Early Development

In this section, we present the dominant cultural models—the shared but implicit understandings, assumptions, and patterns of reasoning—that shape public thinking about early development in Australia. These are ways of thinking that are available to people when thinking about early childhood and development. However, different models may be activated at different times, producing different opinions and attitudes about an issue. In exploring cultural models, we look to identify *how* people think, rather than *what* they think. These findings thus differ from public opinion research, which documents people’s surface-level responses to questions, by looking beneath responses to the deep, often tacit assumptions that structure how people think about development.

It is important to emphasise at the outset that people are able to think about early development in multiple ways. They switch between models, thinking with different ones at different times, depending on context and conversational cues. Some of these ways of thinking are dominant (more consistently and predictably shape public thinking), while others are recessive and play a less prominent role. Some models are productive, facilitating a fuller understanding of early development, allowing people to access and engage with ideas from the untranslated story presented previously and, in turn, support solutions that align with expert recommendations. Other models are unproductive, getting in the way of key ideas from the sector and reducing support for solutions.

In addition to these cultural models, there are ‘cognitive holes’ and ‘black boxes’ around certain issues. These are areas where the public either lacks ways of thinking about an issue altogether (a cognitive hole), or doesn’t understand the process at work in a given area (a black box). These represent areas where understanding must be filled in. By seeing the cultural models available to the public, as well as the black boxes and cognitive holes in people’s thinking, communicators can frame messages to activate productive models, background unproductive ones, and fill in understanding where needed.

Cultural Models

Cultural models are deep patterns of thinking about a topic that are shared across a culture or a population. They are taken for granted, implicit assumptions that people rely on to interpret, organise, and make meaning of the world and process information. We all hold multiple cultural models about an issue. Some are more front of mind and powerful (dominant models) and others are more in the background (recessive models).

Cognitive Holes

Cognitive holes are areas where the public lacks immediate ways of thinking about an issue—where people don’t have ready understanding of how something works. These holes in thinking can be filled in by communications strategies to increase the understanding of an issue.

Black Boxes

Black boxes are areas where the public is aware of the existence of an issue or a concept, but does not understand the process of how they work exactly. New explanatory strategies are needed to clarify this process and foster deeper public understanding in an area.

By mapping the landscape of cultural models, we are able to understand the features of thinking that prevent people from accessing the ideas in the untranslated story discussed earlier. We are also able to identify opportunities—existing ways of thinking that can be activated to provide a fuller understanding of the issue. This map of cultural understandings provides communicators with a critical resource, allowing them to steer around unproductive ways of thinking, fill in holes in thinking, and frame messages in ways that effectively communicate ideas.

- We begin by describing the cultural models the public uses to think about **children** in general.
- We then explore **two overarching views of child development** held by the Australian public: development as a **natural process**, and development as the **cultivation of skills**.
- Next, we show how public understandings of **play** bridge these two understandings of development, creating productive thinking about the role of children in their own development.
- We then explore the Australian public's views of **child mental health**, highlighting and explaining difficulties in thinking about this issue.
- Finally, we review public thinking about **what can be done to better support early development** in Australia and show how this thinking stems from dominant cultural models.

Foundational Cultural Models of Children

The Australian public holds deeply ingrained models of young children that fundamentally shape their thinking about early development and child mental health.

▶ **The Idealised Worlds Cultural Model**

Members of the public frequently see children's worlds as fundamentally distinct from the world of adults. They often understand childhood in idealised terms. They think that childhood is a time that should be worry-free and 'unpolluted' by the kinds of roles and responsibilities that cause adults stress (e.g. job performance, financial worries, relationship problems¹¹). This way of thinking rests on the assumption that human nature is fundamentally good and pure, and that it is society that 'corrupts' us as we grow up.

Because people define happiness as the absence of all problems, they reason that happiness and joy are essential features of childhood and key factors supporting a child's development. In the interviews, one top-of-mind concern for participants was that too much pressure is put on children to perform well, too early in their lives, at a time when they should not be burdened with such adult-like concerns. Worries pollute childhood. A child's only focus should be fun and happiness.

Participant: When I think about children, I think about school, playful, laughter, innocence. Just kids mucking around being kids. Not having to worry about the restraints of adult life and the bigger issues that take hold once people start growing up, and moving into the real world, and out of the protection of their families and that environment.¹²

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Participant: They haven't been stuffed up by stuff at school and little groups and stuff like that. [...] Their innocence isn't polluted might be the word. Polluted with day-to-day crap I suppose.

—

Participant: I definitely don't think that children experience stress, or anxiety, or any of those things that sort of plague people in their adult life and that's because they don't have any worries really. They don't have any responsibilities.

If children lead carefree lives with no significant responsibilities, it follows that their world is fundamentally less complex than that of adults. People reason that the younger a child is, the simpler their world. According to this assumption, the influences on people become gradually more numerous and complicated as they grow older. The influences on a two-year-old are reducible to their parents and their home environment, whereas the factors that affect older children and adults are many and complex, including worries about school, work, and peer relationships.

Participant: It just becomes a little bit messier as we get older. It's almost like going through a stage where you start off and it's relatively contained because as a child it's quite a simple lifestyle. And then as we get older it becomes a bit messier because there's so many different things that are coming into our lives and, as we get older, probably around the mid 20 to 30s, is how it all starts to come together.

—

Participant: Young children are just living; they are doing the growing stuff, and learning the movement and stuff. Their little world is a goldfish world: they're just living time by time.

When relying on this model to reason about emotional and mental health, people logically assume that because young children live simpler, worry-free lives, their emotions are very basic, their considerations and concerns limited, and their stress levels low.¹³ Participants talked about love, happiness, sadness and fear as the four broad types of emotions that young children could feel, and often related these to whether children were having their basic needs met.

Researcher: Let's think about sort of babies up until the age of three. Do they feel emotions?

Participant: Absolutely. They know when they're in a caring environment and when they're not, I'm sure.

—

Participant: I think children can feel a lot of happiness, frustration, anger, disappointment. I think they're probably less refined than other emotions, and often they don't understand exactly what emotions they're feeling themselves.

▶ **The *Wild Thing* Cultural Model**

According to this way of thinking, children are naturally out of control and have to be disciplined in order to become well-mannered, orderly members of society. In contrast to the *Idealised Worlds* cultural model, the *Wild Thing* model is grounded in the assumption that human nature is fundamentally unruly and needs to be tamed. Good behaviour and respect for authority are achieved by taming children's naturally chaotic natures. Otherwise, the thinking goes, children are likely to get into trouble. This model leads people to focus on children's need for discipline and moral instruction.

Researcher: So, what comes to mind when you think about children?

Participant: Screaming. [LAUGHTER] Aside from that, poor manners.

—

Researcher: When you think about child development, what comes to mind?

Participant: A nice, calm environment, which can be really difficult for families. Because when they've got little kids, kids are just crazy. They're just manic. They just go absolutely crazy.

While this model was not as dominant as the *Idealised Worlds* model, it did appear frequently in participants' talk, providing an alternative, conflicting way of thinking about the relationship between children and society.

▶ **The *Language = Consciousness* Cultural Model**

Australians assume that language holds the key to consciousness, memory, and, in turn, personhood. This cultural model explains critical aspects of Australian thinking about early childhood.

Language is understood as what allows young children to be aware of themselves and their environment, and what enables them to be active and intentional. Because conscious action and awareness of self and others are seen as core dimensions of personhood, this model leads people to reason that infants in the pre-verbal phase are not fully human. Participants referred to children without language as 'blobs' or 'food processing machines'.

Participant: Going from being a bundle which knows just about nothing and has no ability to influence the world around them except by crying, to a child who's learning to talk, to control their body, to control their behaviour, to influence the adults around them and the other children around them, of course. That's what I would see as development. Not being a child expert or anything.

—

Participant: Just watching them from when they stopped being food processors, and start exploring the world, their world, and becoming people.

Researcher: So, when you think about early childhood, what ages do you have in mind?

Participant: Early childhood? I suppose I'm thinking from 12 months, I suppose, until 12 months onwards.

Researcher: You said, 'At some point they stop being food processors'. How does that happen?

Participant: I guess it's when they start verbalising why. It's when they start asking questions. And I

guess the other thing is when they're reaching for things and trying to start working out how things work [...]. Talking and starting to investigate their world.

The model leads people to think that mental health and emotional development only start once children have basic language abilities. Having words to identify and name an emotion or a mental state is implicitly understood to be a prerequisite to being conscious of it and remembering it, and therefore to being affected by it in a durable way. As a result, participants assumed that while young children can have emotions and mental states, they are largely unaffected by them because they are unable to name them, identify them, remember them and truly experience them. It is not until children have adequate vocabulary to describe a range of emotions—around the ages of five or six—that they are understood as truly having mental health.

Researcher: Let's talk about the young kids, under three. Can they have mental health?

Participant: I don't think at that age, no. Their happiness and sadness can be a 30-second thing. It can change that quickly, but I don't think that's mental health. I think it's not until you're getting to at least maybe five, sixish at the absolutely earliest.

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Participant: Emotions. As babies, pure instinct. You know, they're hungry, they're wet, they're in pain, whatever you call it, colic or whatever. Emotions come with words, maybe, as in: are you happy, are you sad, how do you feel, does that hurt? Maybe emotions come with words. Because otherwise how do you know what you're feeling unless you put a word on it? So, maybe it's when children start to verbalise.

This model also shapes how the public reasons about prenatal development. If a child isn't born yet, the logic goes, they are even further removed from language and from being 'a person'. This makes it virtually impossible to think about fetal emotional and mental development. Participants sometimes argued that, just as what happens after death is a mystery, it is not possible to know what happens before birth, especially when it comes to the emotional and mental development of the fetus.

Researcher: Are there things that happen before a child is born that influence how they develop?

Participant: No one knows, do they? It's a bit like: is there life after death? Is there life before birth?

► **The *Every Child is Different* Cultural Model**

Participants frequently emphasised that all children are unique, using this idea to eschew generalisations about children and development. When using the *Every Child is Different* model, people assume that children's innate individual specificities—their talents, interests, personality traits—are the overriding factor in children's development. In turn, people assume that individualised attention to the specific needs of each child is necessary to ensure good development.

Researcher: What would you say it means for a child to be developing?

Participant: Those different learning stages, really. And everyone develops at different times.

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Participant: I think them learning in a positive way, happily and socially. I think them enjoying it for the most is the most important. And that doesn't mean the same way for everybody.

The perceived importance of individualised attention leads people to reason that the best place for young children to develop is at home with their parents—especially their mother—who can give them individualised attention and focus on their individual needs. When thinking in this way, people understand child care as a substandard form of babysitting, and schools as substandard places for learning, precisely because neither allows for each child's individual specificities to be attended to.

Participant: Getting back to the child care, you might have two teachers to 15 children. So, therefore, you can't give one-on-one time. If you've got five children crying, and there's only two people there, you can only stop two children at a time and three are left out.

Participant: I think they need to know their ABC's and counting before they get to school because once they get to school, it's very hard to focus, because they're so many children in classes. It's very hard to get alone time with the teacher.

▶ **The Ageing Up Cultural Model**

When participants were asked open-ended questions about early childhood, they consistently focused on school-aged children and adolescents, not infants and toddlers. The equation of 'childhood' with later childhood was apparent in the stories people told and the examples they gave in the interviews, which consistently focused on things like going to school, playing sports, bullying, and use of technology. People do, of course, recognise that infants and toddlers are children, but the default image that comes to mind when people think about 'children' and 'childhood' is of an older child and a later time.

Implications for Communicators

- **The *Idealised Worlds* cultural model supports an anti-interventionist approach to development.** By fostering a view of childhood as a world that is simple, happy, and discrete from the world of adults, the *Idealised Worlds* cultural model can lead people to resist policies and interventions in early childhood as potential threats to the 'purity' of children's lives. Similarly, this cultural model leads to an oversimplification of the role of parenting in early childhood: caregivers are mainly held responsible for protecting children against threats from the outside world, which is, in turn, primarily viewed negatively, as a source of danger.
- **The *Idealised Worlds* cultural model makes it hard to think about stress in early childhood.** The model leads people to think about a child's world as simple and carefree, which means, when people use this model, there is little space for thinking about stress during early years. In turn, the model undermines recognition that chronic stress in early childhood is a serious problem.

- **The *Wild Thing* cultural model impedes thinking about how healthy development can be actively promoted.** In fostering a negative, almost punitive, attitude towards children, the *Wild Thing* cultural model makes it difficult for people to think about how caregivers and environments can positively cultivate growth and development. In other words, the model makes it difficult for people to understand how people and places can *enable* rather than *constrain* development.
- **The *Idealised Worlds* and *Wild Thing* models obscure the role of environments.** While these models paint very different pictures of children, both visions are understood as natural, growing out of realities inherent in human nature. By privileging the natural, both models make it difficult for people to see how environments affect development. Communicators need strategies for relocating the sources of opportunity and challenge, happiness and harm, in the environment around the child, in order to enable productive thinking about how environments can be deliberately designed to promote healthy development.
- **The *Language = Consciousness* cultural model makes it hard for people to see early years and the prenatal period as important windows of mental and emotional development.** This way of thinking makes it difficult for members of the public to acknowledge that children below the age of two actually experience emotions and mental health. In turn, this model undermines recognition of the importance of these periods. To increase the salience of the pre-verbal and prenatal periods in people’s minds, communicators will need effective strategies for getting around this pattern of thinking. This may require offering an alternative explanation about how language and mental states are connected, although further research is needed to determine whether this is the case and, if so, how such an explanation could most effectively be given.
- **The *Every Child is Different* cultural model short-circuits reception of expert knowledge on early development.** This model opens people up to the idea that supporting children and their development is a complex and dynamic process that needs to be tailored to the needs of each child. However, for this very reason, it can lead the public to distrust scientific or expert messages about early development—which inevitably concern trends and generalisations across individuals. When people are focused on the need for tailored support, it can be hard to see how common supports might be useful across varying situations involving different individuals. Addressing this challenge requires communication strategies that help people simultaneously recognise and hold in mind the individuality of children and general truths about child development. Strategies must also explain how the same supports can help different kinds of people in different situations without erasing or ignoring their differences.
- **The *Ageing Up* cultural model puts early childhood out of mind.** Due to the tendency to ‘age up’ children when thinking about childhood, the public can easily misunderstand messages about young children (as they will interpret the message as applying to older children). When communicating about young children, communicators must be explicit about the age they have in mind to avoid misfiring.

Cultural Models of Early Development

In the interviews, participants alternated between two very different ways of thinking about how development works. At times, they thought about development as a *natural process of growth*. According to this way of thinking, development happens by itself, as a natural process that requires little input or support above the basics. A caregiver's job is to provide love and basic needs while allowing the natural process of development to run its course. This way of thinking was more dominant the younger the child in question and was particularly prominent when participants thought about prenatal development and the very earliest periods of childhood.

At other times, the very same participants thought about development as a *cultivated process of learning*. According to this way of thinking, development must be actively and constantly supported by caregivers, whose job is to help children and foster their learning so that they can become a functioning adult. This way of thinking focuses on the things that children need and the actions that are required of caregivers and other adults, who are seen as responsible for the process of development and its outcomes. But it makes this way of thinking makes it hard for people to think about health as a key outcome of good development, in addition to learning and skills acquisition. This way of thinking was more prominent when participants thought about older children, but was also present, to some degree, in discussions about younger children.

Each of these deep and foundational ways of thinking consisted of a set of more specific assumptions (cultural models), which we describe in the next two sections of the report. While Australians are able to think about development as a natural, passive process *or* as one that is active, responsive and cultivated, they struggle to integrate these two ways of thinking in ways that align with the nuances of the untranslated story of the early childhood sector. In other words, people toggle between thinking about the process as essentially natural *or* essentially cultivated¹⁴, but have a hard time thinking about how nature and nurture *interact*.

It is important to note that in both these overarching views of development, members of the Australian public consistently associate the concepts of 'early development' and 'brain development'. This was significantly less prominent in the research with the Australian public on early childhood that we conducted six years ago.¹⁵ We open this discussion of the public's perceptions of early development by presenting a dominant model that people use to think about the brain. We then detail the cultural models that make up the natural and the cultivated views of early development, and highlight the role assigned to the brain in each of these overarching 'stories' of development.

► **The Brain = Learning Organ Cultural Model**

Members of the Australian public consistently talk and think about the brain in terms of 'learning'. In other words, people have a strong, but implicit understanding that the key function of the brain is to enable children to acquire knowledge and skills (sometimes social and emotional skills) and cognitive

abilities. This definition was operant whether people thought about development as a natural and passive process, or as one of active cultivation. In other words, whether the brain's growth was thought to occur naturally or to require proactive engagement, participants collectively assumed that the main function of a child's brain and its development was to allow them to learn new things and develop skills.

Participant: There are a few different phases of development. Development in a physical form would be actually growing larger, hair growing, teeth growing, your whole body growing and adjusting as you get older. Development mentally means your brain starts functioning more, you start being able to absorb more information and you can also find ways of getting what you want with your brain.

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Participant: [Early childhood] is the stage where their brains grow the most and they probably learn more than they will in their entire lives.

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Participant: Each time they're learning something new, the brain fires and so it grows and develops from there. Things like memories kick in and all that sort of stuff as well.

While participants were consistent in their associations between the brain and learning, they were rarely able to go beyond this general association and talk about 'how' brain development happens. Our research showed little understanding of the key processes at play in brain and biological development, and of the role of the brain in promoting good health for children. In important ways, brain development thus remains a black box for the public, and this lack of conceptual understanding signals the need for continued work in explaining key processes of brain and biological development to the Australian public.

Implications for Communicators

- **The *Brain = Learning Organ* model highlights the importance of the brain in development, but leaves out health.** The strong and implicit association between the brain and learning likely reflects the success of the early childhood sector in raising awareness about the importance of the brain in development. It also clearly shows how this awareness needs to be deepened and expanded in future communications. Communicators need new strategies to clarify that while development—of the brain and other biological systems—certainly involves learning, it also a process in which the foundations for lifelong health are established. As discussed below, making connections between the brain and other biological systems might be an effective strategy for pushing discourse and thinking on early development beyond learning to include health and health outcomes.

The 'Natural' View of Early Development

The following cultural models share the common assumption—or, as psychological anthropologists say, are 'nested' within the more foundational model—that development happens naturally and automatically as children grow. While the models share this deeper assumption, they do not align perfectly—for

example, they differ in how much attention they give to environmental influences. These differences shape their communications implications.

▶ **The *Natural Growth* Cultural Model**

When thinking with this cultural model, members of the public understand development as a natural process of growth. They reason that as long as caregivers provide for a child's basic needs for shelter, food, safety, and love, children will develop—or grow—naturally. While this model provides a way of thinking about all types of development—including cognitive, emotional, and social development—it focused participants' attention on physical growth. When people used this model to think about brain development, they saw it as the process through which the brain grows bigger in size, with the rest of the body.

Researcher: Why does a child develop the way they do?

Participant: I think it's just in line with who we are [as] humans. You grow at the speed of who you are as people.

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Participant: Developmentally, I'm sure things just happen naturally. That people pick up language at around about a certain age. I think there's just panic about how specific that age should be. Maybe children get misdiagnosed with a learning disability and I don't think that's always the case.

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Researcher: When you talk about the brain developing, how does that happen?

Participant: How does that happen? Just by magic, actually. It's a miracle. [LAUGHTER] It's a miracle.

This cultural model was most dominant when people had very young children in mind, especially those who haven't started speaking yet. The younger the child, the more salient this *Natural Growth* model was in people's thinking. In discussions of prenatal development, it was really the only model of development that people relied on. When asked about fetal development, participants described a process of physical growth fuelled by the mother's intake of nutrients.

Participant: The child begins to grow from a small embryo in the womb, [...] for nine months and then the child is what we call born where it comes out of the mother. During the pregnancy, the child is nurtured within the mother's physiology and grows within her to a certain size from virtually nothing to all the way up to what the average weight of a child is now. So, over nine months that's what happens inside that human being.

▶ **The *Sponge* Cultural Model**

When asked about how children develop, participants often assumed that children naturally and directly 'absorb' knowledge and behaviours, as if 'by osmosis', as one person put it. This is a dominant model of development for the Australian public. Many participants relied explicitly on the image of the 'sponge' in interviews. This is a passive way of understanding development, as children are believed to acquire a behaviour or a piece of information simply by virtue of being exposed to it. This sponge-like quality is often attributed to children's brains, which is what enables children to absorb information and norms.

Participants assumed that it is because a child's brain is growing bigger in size that they can learn new things and develop skills. They suggested that the size of a child's brain determines how much information they can take in, or how imaginative they can be.

Participant: [It's important to] read to them so they slowly absorb because kids obviously are like a sponge particularly at a young age. Their brains are growing at an incredible rate.

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Participant: The information is going into the child's head and you mightn't realise the things you say or the things they see are actually being mapped in their mind. A kid picks up the English language—or their language—within a couple of years. Not through any formal education, but just by hearing and listening.

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Researcher I heard you mention the brain. What happens there?

Participant: I know the brain develops from what I understand until about 25, but I believe from the formative years that it does grow at a very quick rate and they can take in so much information just because the brain is growing so rapidly.

When thinking with this model, people assume that any and all experiences will be effectively taken in and assimilated. This way of thinking led participants to argue that parents and caregivers must give children access to as much knowledge and information as possible, so it can be 'soaked up'.

Participant: I feel like we don't start early enough with things like languages. I think we don't give them enough credit, we don't make use of that time where they're sponges. I would like to see them given more of a chance really.

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Participant: Well, I've got a left-over belief that I haven't actually fact-checked with any sort of science that they're very good at absorbing knowledge when they're young like that. I remember talking to teachers and saying that they were receptive to new ideas [...]. Give them more information and if they soak it up, great.

The public also relies on the *Sponge* model to explain how children acquire behaviours and moral character. They suggest that children absorb behaviour they see in their environment—from parents and caregivers in particular—and mirror it. When thinking this way, participants took a pessimistic view of the effects of adversity. They reasoned that if children grow up in an unsafe environment, where there is parental abuse or drug use, those behaviours are absorbed by the child and become the 'norm' for them, thereby leading to a generational cycle of abuse and adversity.

Participant: Kids pick things up—they are like absorbent stuff. They see what happens in their life. [...] Someone pulls in front of you and you scream at them, the next time a kid takes your dinky toy out of the playground or something, that's what you do. You fire up. The influence of the parents is pretty big.

▶ **The Direct Transfer Cultural Model**

When the discussion moved from early development to prenatal development, participants shifted from an ‘absorption’ model that views development as a process of taking in different types of influences from the broader environment to a ‘direct transfer’ model that focuses exclusively on physical substances and the pregnant woman. According to this model, prenatal development—understood as physical growth only—happens through the transmission of substances from the pregnant woman to the fetus. In short, whatever is consumed by the mother (food, alcohol, other drugs, etc.) is physically absorbed by the fetus (through the umbilical cord). If the mother provides the fetus with all the nutrients it needs, it will develop well. If the mother consumes alcohol, then the fetus consumes alcohol; if the mother uses drugs, drugs enter the fetus and the baby will be addicted to drugs when it is born.

When relying on this cultural model, participants had a clear tendency to focus on the harmful substances—such as alcohol, tobacco, or drugs—absorbed by the pregnant woman, which could threaten the fetus’s development.

Participant: Anything that’s attached to something else, that influence is going to go through to that child. It’s attached to you. It’s got an umbilical cord that’s attached. That’s where the child is getting its nutrition from the mother. So, the mother has to be healthy and well in order to have a very, very healthy child.

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Researcher: You mentioned alcohol. What effect does it have on the child’s brain?

Participant: I think it goes through the bloodstream of the mother which feeds the fetus. The actual damage afterwards, I’m no doctor so I don’t know. But I’m presuming it’s like someone who’s on heroin, then the baby would have withdrawals. And I have heard of children being born with alcohol addiction in some form, as well.

Implications for Communicators

- **The ‘natural view’ of development, and the *Natural Growth* and the *Direct Transfer* models more specifically, help people see aspects of the biology of development, but make it hard for people to appreciate the role of environments and experiences in prenatal and early development.**

Productively, the natural view of development brings into view the fact that biology undergirds key developmental processes. This view is, however, thin on how exactly this works. In foregrounding the natural aspects of development, these ways of thinking make it hard for people to recognise that contextual factors (other than substances the mother consumes) influence prenatal development, that healthy development must be intentionally and actively cultivated, and that development can be supported through effective interventions.

- **The *Sponge* cultural model makes it hard for people to understand the importance of actively supporting development.** This cultural model is promising insofar as it leads the public to see early

childhood as a time of intense development during which the contexts in which children are placed have a strong influence on future outcomes. However, by reducing influence to passive exposure, this way of thinking impedes understanding of the need for *active* and *interactive* support. Because ‘absorption’ is assumed to happen automatically, this model blocks recognition of adults’ roles in facilitating and participating in positive experiences. It also obscures the need to engage children as active participants in interactions.

- **The public’s focus on the harmful substances that can be passed through to the fetus during pregnancy makes it hard for people to think about the need to support positive prenatal development.** Members of the public currently focus on what can damage the development of a fetus rather than on what can support healthy development. Communicators need strategies to explain why the prenatal period is not only a time of threat and vulnerability, but also a period of opportunity that can be leveraged to create positive developmental outcomes. There is also a need to extend people’s understanding of the ways in which maternal experiences and environments can affect fetal development, beyond consumption of drugs and alcohol.

The ‘Cultivated’ View of Early Development

In this view, development is a process that must be actively guided. This is an active and intentional view of development. It assumes that caregivers and parents have a responsibility to intervene in ways that assure skills are developing, and it gives the child agency in their own learning. While the models that comprise the view share certain implications, they are also different in ways that affect their implications for those communicating about early development.

▶ **The *Learning Adulthood* Cultural Model**

According to the *Learning Adulthood* cultural model, development is the process through which children prepare for adulthood. In this way of thinking, development is understood to be a multifaceted process involving the learned acquisition of skills whose ultimate goal is for children to become successful, functioning adults.

When Australians think about what it means to be a successful adult, they focus on independence from others and self-confidence. In the minds of the public, a successful 21st century adult in Australia is someone who no longer needs help or external validation to function in society, and who can face the challenges and threats of the modern world. A child who has developed successfully is able to provide for themselves materially and achieve self-fulfilment by reaching their full potential in life.

Participant: You want to nurture that child and give them the confidence and independence to be able to go out into the world and be self-sufficient and a happy, well-rounded person.

Participant: I think the ideal thing is to have an intelligent, independent, confident—all those good traits of a person—their development is building to that point. Where they're confident in their own skin, confident at school.

Although understanding of different aspects of development was generally thin in the interviews, participants drawing on the *Learning Adulthood* model paid attention to the range of facets of development—physical, motor, mental, emotional, spiritual, and brain or cognitive development—without being prompted to do so. They defined 'good development' as doing well in school (by 'taking in' information), having a moral compass to determine right from wrong, having the ability to respond appropriately to situations, and being able to relate to others in productive ways.

Researcher: Are there different types of development?

Participant: Yes, there are. There's behavioural, there's physical, there's emotional, cognitive, what else is there? I guess social. They're the main ones I can think of.

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Participant: When you're a little kid, you're almost set up to be prepared to go to primary school. Then when you go to primary school, they're teaching you the next level of what secondary school is, and up to pretty much the age of 18 you're going up different levels in terms of learning, not only at school but in your social interactions, your own personal interactions with family, friends, and obviously your body changes later in that secondary. But it's all a learning process. You start off as almost an unknown, and then you get to another level, and you realise that you've done it.

While the *Learning Adulthood* model generally expanded people's view of relevant areas of development, this effect was less pronounced when the conversation focused on very early development. In these cases, participants focused primarily on motor and language skills, as they reasoned that these were the very first steps not only towards adulthood, but also towards personhood (see the *Language = Consciousness* cultural model on p. 17).

Participant: I think that [a] child is a well-developed child because they have developed their concentration skills, they have developed their reading skills. I think also interacting with other children and playing nicely. Someone who can accept other children. Not be bullies.

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Participant: Developing well? There's some key boxes you're ticking as a child. Like learning how to speak. So you speak and talk and walk and it's almost an expectation of when this is meant to happen. So, when you're hitting that, I guess you are developing well in that sense.

► **The Moulding Cultural Model**

According to this cultural model, children come into the world as blank slates, or 'unformed clay', and need parents and caregivers to give them the right 'shape' as early as possible, before the clay sets. Like the *Sponge* cultural model, the *Moulding* model provides a way of thinking about how children acquire traits. But while people use the *Sponge* model to reason about the acquisition of both knowledge and behaviours,

they mainly rely on the *Moulding* model to think about how children adopt behaviours and develop their moral character.

This model of development gives parents and caregivers a more active role to play than the *Sponge* model does, but it assigns a very passive role to the child in this process.

Participant: A child's personality can be moulded by how they're treated, the love that they get from their parents and other people, and stuff like that.

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Participant: Parents need to help kids to understand how to navigate the world. How to interact with people. The certain dos and don'ts in the world. Things that are right and wrong. And once you get through those formative years of moulding them as a person, their beliefs, and that sort of thing, it's then about trying to encourage them and not to stand in their way.

When thinking this way, people understand that the early years are of great consequence. They see children—and their brains—as more malleable in the first years of life, and they reason that first experiences are more central and foundational and leave a more durable imprint than subsequent ones. This often led participants to a deterministic view of development: early experiences shape individuals forever. Some participants took this logic to its end point and argued that all development is set for good by the time a child reaches the age of seven.

Participant: As a parent you can become involved but I think that when you have got the more access to them, you've got this really, really malleable brain and I think those first years are absolutely vital.

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Participant: The way I picture it is there's a blank framework. What happens around you during early childhood, your parents, your society, that then creates the map for how you then develop. There are people, which might not be a parent, [who] can have huge effects later in life because they met them in early childhood.

When they relied on this model, participants also took a deterministic view of adversity. They reasoned that the experience of adversity in early childhood leaves an indelible imprint, so stressed children will become stressed adults, and aggressive children will become aggressive adults.

Participant: It's a developmental thing because they're going through life with all this stress on them. They might be able to work through it in years to come. But it could cause them to be stressed later on in life. Usually higher strung kids end up being high strung adults too.

▶ **The Conditioning Cultural Model**

Members of the public assume that a key way in which a child develops behaviours, values, and self-confidence is through external validation, specifically from parents and caregivers. In this way of thinking, behaviours and moral values are validated—or invalidated—by the reactions of the people in a child's

environment, or by the consequences incurred by the child. If the behaviour is positively reinforced by the people around a child, it will be repeated and adopted; if, on the contrary, the behaviour leads to reprimands or negative consequences, it will be abandoned. When thinking this way, participants reasoned that parents and caregivers can incentivise children to learn and adopt good behaviours by giving them praise and love.

Participant: They are learning what's right and what's wrong and if you do something wrong there are consequences to doing that. If you do something right there are rewards [for] doing right.

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Researcher: Why do you say that touch is important?

Participant: I think the child feels loved. If you enjoy something you will do well at it. If you don't like something you tend to look ill against it. By being touched they realise, 'Mummy loves me, Nanna loves me. So, therefore, I will learn what they want to teach me. And hopefully they'll love me even more'.

Participants also reasoned that self-esteem is developed in childhood through demonstrations of love and attention from adults. In other words, a child is thought to develop and cement their sense of self through positive reinforcement and demonstration of love from the people around them.

Participant: It's just, obviously, we love our children and also that side of encouraging them to learn new things, and be confident in themselves, and to love themselves as little big boys will, but just mostly knowing that they're safe and happy in themselves and just giving them that confidence in themselves that they can go out into the world and feel good about themselves and hopefully be nice to other people as well.

► **The Trial and Error Cultural Model**

According to this cultural model, children learn and develop by doing and by making mistakes—in other words, they learn through trial and error. This model gives children significant agency, though parents and caregivers still have a clear lead role: they give children opportunities to learn, help them make sense of their experiences, and guide the process through which they learn from mistakes.

Participant: Allowing the child to be a child, but, also, allowing the child sometimes to fail within a safe environment so the child can understand that sometimes things are not all rosy and lovey-dovey.

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Participant: We have this thing at home where we say, 'What was your highlight for the day?' And we talk about the highlight and then we say, 'What was the not-so-fun part of the day?' And then we talk about that as well. It's all open and on the table all the time. They always feel that they can talk and be able to express themselves.

This was a recessive model in the data, especially when participants were asked to focus on early childhood. When people drew on this model, they tended to significantly 'age up' the conversation and focus on teenagers rather than young children, because they assumed that younger children need more

guidance and stronger direction. However, when thinking with this model, participants recognised that children—even younger children—need to play an active role in their own development.

Implications for Communicators

- **The ‘cultivated’ view of development backgrounds the biological basis of development but gives people ways of thinking about how healthy development must be actively nurtured.** When thinking with the models that comprise this view, people recognise the need for caregivers and, to a limited extent, society as a whole, to take intentional and active steps to support healthy development. Communicators can leverage this existing line of thinking to explain what steps Australia must take to support healthy child development for all children. However, these ways of thinking are largely disconnected from the constitutional and biological bases of development, and they reinforce the understanding that the brain is mainly—if not only—an organ of learning. Communicators will need strategies to help people better understand how environments and genetics interact via biology to influence development, so that they can focus on health as a key outcome of good development.
- **The *Learning Adulthood* model’s focus on skill-building is productive and should be leveraged in future communications, but a strong emphasis on individual outcomes can backfire.** The model orients people towards the skills that children need to develop and the need for intentional action—especially by the adults in children’s lives—to help children learn these skills. While the understanding of skills and how they are built (especially emotional and cognitive skills in infants) needs to be deepened, the existing understanding that children must learn a set of interrelated skills as they develop is productive cultural material that can be productively built upon. However, too strong a focus on self-confidence and independence as the ultimate goals of development can lead people to understand development primarily at an individual level—caused by individuals with individual outcomes and individual solutions. Future communications strategies that leverage the *Learning Adulthood* cultural model should systemically place their argument in a collective context, highlighting that there are collective and intentional steps that can be taken to promote healthy development.
- **The *Moulding* cultural model makes it hard to think about development as an interactive process, occludes understanding of the principle of plasticity, and can generate false fatalism about experiences of adversity.** In attributing agency solely to parents and caregivers, the model makes it hard for people to recognise the fundamentally interactive nature of child development. In addition, by figuring children as unmoulded clay, the *Moulding* model obscures the role of constitutional factors in shaping developmental processes and outcomes. Moreover, the model leads people to reason that early experiences of adversity leave a deep and eternal imprint on a child and reinforces the sense that ‘damage done is damage done’. This gets in the way of people understanding the idea of plasticity—that early stages matter, but so do later ones. The model thus makes people less likely to support policies and programs to help children who have experienced adversity early in life, as such measures seem a pointless waste of resources. Given all of these unproductive patterns of thinking, communicators must take care not to cue this model by using the language of ‘moulding’ or ‘imprinting’.

- **The *Conditioning* cultural model helps people recognise the importance of interaction, but constrains thinking about children’s agency in their own development.** Unlike the *Moulding* model, the *Conditioning* cultural model leads people to focus on the interactions and relationships between a child and their caregivers. However, the model makes it difficult for people to think about the active role that children play in their own development because it keeps the public’s thinking at the level of behaviours only. By casting children’s reactions as virtually automatic—children adopt and internalise adults’ praise or admonishment—it makes it hard to see how children process and learn from experiences in complex ways. When talking about validation, communicators should be careful to explain how children process these responses as part of learning skills and norms.
- **The *Trial and Error* cultural model is the most productive model available to the Australian public to think about relationships between children and caregivers.** It emphasises the crucial role of interactions in supporting good development, leads people to think about the role of parents and caregivers in productive ways, and helps people understand the child’s role in the learning process. In short, it provides a way of thinking about development that closely approximates the ideas that those in the early development sector want to communicate. It also provides a productive mental space to consider key principles from the science of early childhood. The problem is that it is currently a recessive model that is mostly used to think about older children. Communicators need strategies to pull this model forward in people’s thinking, and to find ways of helping the public apply it more consistently to *early* development.

Australians’ View of Play: the *Play = Childhood* Cultural Model

At a very fundamental level, Australians understand play as the essence of childhood: it is not simply the prototypical activity of the world of childhood, but the element by which childhood is best and most clearly defined. In other words, for the Australian public, ***Play = Childhood***. This is the overarching model on which people rely to reason about play and its relationship to development. It rests on three complementary assumptions, which we discuss in detail in this section:

1. ***Play is a natural state.***
2. ***Play is child-led.***
3. ***Play is covert learning.***

This overarching *Play = Childhood* cultural model offers a promising yet imperfect opportunity to expand understandings of early development in general. It is promising because it weaves together aspects of the natural and the cultivated views of development in consistent ways, and adds to the story of development by endowing children with real agency. Play is assumed to be children’s natural state—it is characterised by fun, happiness, and a lack of constraints. Play is also—at the same time—understood as a key mode of learning and developing skills through the process of trial and error, and not through passive absorption

or ‘moulding’. In this way of thinking, children have a central role in their development and learning, in contrast to most of the cultural models discussed earlier.

Yet the *Play = Childhood* cultural model does not provide a representation of early development that perfectly matches the expert perspective. The public’s thinking about the exact processes through which play drives early development remains thin. For example, when people understand play as a natural state, the mechanisms by which play works and supports learning and other developmental processes remain taken for granted and opaque. This matters because people’s ability to support practices and policies that facilitate play is contingent, in part, on their ability to understand how play works, what it does, and what is required to better support it. Furthermore, when people focus on children’s activity and agency, they have a hard time thinking deeply about the role of adults and environments in facilitating play. Finally, when thinking about *what* develops in early childhood, members of the public struggle to see beyond the acquisition of motor skills and basic knowledge of the world.

Here, we review the three key assumptions underlying the *Play = Childhood* cultural model, explain how the *Play = Childhood* model conditions how the public thinks about the influence of technology in early development, and then discuss implications of this overarching model of play for future communications.

► **Assumption 1: Play is Children’s Natural State**

Members of the public assume that play is the natural state of children. Play is defined by fun, imagination, and the absence of rules and constraints. It is the polar opposite of adult life (characterised by worries and responsibilities) and the symbol of the idealised world of childhood (happiness and imagination). As a result, people see play as what all children are naturally meant to do, and what they should devote most of their time to in an ideal world.

Participant: I just think of having fun. It’s just about being a little bit silly. It’s learning to develop and grow. But it’s more about having fun and doing it with a smile. Trying different things that you wouldn’t normally do just walking down the street. It’s about just having fun. That’s what play should be.

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Participant: As a kid, you’re meant to enjoy life like that and meant to play. It’s better than going to work.

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Participant: Playing and development are really linked because that’s how they spend most of their day. I mean, they’re not going to work, obviously. They’re not doing the chores. This is how they experience life.

This way of thinking often muddled distinctions between different types of play for participants, who argued that because play is children’s natural way of experiencing life, they could play with anything, anywhere. People would also often include children’s activities which could be considered ‘fun’, but might not be classified as play by experts, such as watching TV, going camping, or reading a book.

▶ Assumption 2: Play is Child-Led

When talking about play, participants worked with the assumption that it is child-led. Playing is the time in a child's life when they are truly in charge. Play is understood as the prototypical activity of the world of childhood, so it only makes sense that children, not adults, should be the ones in charge of play.

Participants often painted a much more active picture of children when asked about play than when asked about development more generally.

Participant: For babies, it could be something as simple as you put them in an open space and let them take the reins so to speak. The child, they just pick up something and explore it, or they'll crawl around and explore this big world that they have no idea about yet. It can be anything because for kids everything is new and different and so, it doesn't need to be something like an activity, or a particular park, or you know, anything special. It can just be a wide open space and kids have a huge imagination to make something of whatever is in front of them.

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Participant: I think the kids drive [play]. My boy will say, 'Can you drive me up to the oval? I'm going to have a kickaround with Kento and someone else', and they're just going to go and have a kick around with the ball, or go for a bike ride. They initiate that less formal organised thing. They're not organised. It's mainly them.

In this way of thinking, parents and caregivers can take part in play, but their role is seen as peripheral; in essence, they need to provide the child with opportunities to play. The more that participants thought of children as in charge of play, the more difficult it was for them to see parents and caregivers playing a facilitating role in the process.

Participant: If you're a parent playing with your children it does help form a strong bond with them because you're on their level. You're physically and mentally down at their level playing a game of them riding on your back or whatever. Which is a big game. You think this is ridiculous, they think it's fantastic because you're a horse, if they know what a horse [is].

▶ Assumption 3: Play is Covert Learning

Because the public assumes that play is the natural way in which children experience life, they also reason that play is the preferred way in which children learn the skills and knowledge they need to develop well. Play is thought to be a different world in which exploration can happen freely, especially in preparation for children's entry into the 'real world'. As a consequence, participants reasoned that play facilitates learning because it allows children to acquire skills and knowledge of the world through trial and error.

Participant: [Play] physically develops the body depending on the level of play. It develops the mind. It tests their boundaries. They will learn from mistakes or falls or trips or whatever. They'll learn that you do something this way or you do it that way, it's not gonna work. It's their major learning phase and we call it play, but it's actually learning. They learn behaviour, they learn how to socialise, they learn how to conduct themselves in different situations with different people. And they learn with animals and how to interact with the environment in which they live.

While this way of thinking enables people to think about children's role in development, it's interesting in that it did not lead to an expanded understanding of *what* develops. Participants talked about how, through play, children can learn problem-solving skills, develop their ability to regulate their emotions (by learning to win or lose, or by waiting their turn in a game without throwing a tantrum), and understand social conventions and real-life situations by acting or re-enacting them in make-believe play (this is clearly evidence of the *Ageing Up* model, as these discussions were *not* focused on very young children). But the *Language = Consciousness* model shapes people's thinking about play. As a result, people reason that play in early childhood mainly serves to develop motor skills; they don't see these activities as having cognitive, social or emotional functions.

Participant: It is not as if a six-month-old baby can start kicking footballs. Their level of play would be hitting something that's floating over them, or rolling on the ground to get to something over here that they want to touch or play with. It could be a coloured soft toy, bird, or something like that. It's stimulating them physically to get there so they strive to get to what they want to do and it's giving them movement.

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Researcher: What do really young children learn when they play?

Participant: As I said before, hand-to-eye skills, coordination.

While members of the public deeply associate play and learning, they also think that play is fundamentally distinct from formal education, which is assumed to violate key dimensions of play in that it is structured, adult-led, and 'not fun'. This explains why participants had so much difficulty thinking about play in formal education settings and unanimously argued that play at school can only happen on the playground, during recess, and very rarely inside the classroom.

Participant: I think they play when they're outside. I don't know how much play they have inside. I know in primary school you have a little bit more play in the classroom than you do as you get older into high school. But I don't think they have enough fun in school as they should.

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Participant: It's a stress relief in schools going for recess and lunch, it's a break away from learning.

► **Technology is Anti-Play**

Technology is top-of-mind for the Australian public when thinking about play, but is understood as the antithesis of the *Play = Childhood* cultural model: technology is, in every possible way, the polar opposite of what play should be. Children using technology are assumed to be *passive* in front of a screen, not *active* as they should be. Screen time is seen as not only solitary, but also antisocial: it threatens the development of social skills for children, who no longer interact with their peers as they should. Screen time also prevents children from developing their imagination, because whole worlds, images, and stories are given to them by the technology.

When thinking in this way, participants were prone to blame parents—explicitly or implicitly—for relying on technology as a modern-day ‘babysitter’ when they cannot, or do not want to, take care of their children.

Participant: I don’t see it as necessarily a bad thing that children are in front of screens all the time. I worry about the long-term effects of it—whether there’s an eyesight thing or whether it does stunt creativity because you’re fed all the visual and oral information. With a book you have to make the images. With an imaginary friend, you have to imagine the speech. With an app, you’re given all of that and it’s very detailed.

Participant: The sad part is that on the iPad, kids now watch kids play with toys. So, you go on YouTube and you’ll see two little girls playing with their Shopkins. And that’s what my granddaughter Isabella watches. So, you’re watching kids play. And to me, I think that’s bad. [CHUCKLE] You should be there playing with the toys, not watching somebody else play with them. But it’s all the rage.

Researcher: Is this teaching them anything, or not so much?

Participant: I tend to think it’s a babysitter.

Implications for Communicators

- **The *Play = Childhood* cultural model provides an active model through which to think about development.** In contrast to other models used to think about development, which consistently place children in a passive position, when people think about play, they recognise the active role that children play in their own development. Communicators can build a recognition of children’s agency into public thinking about other aspects of development by framing play as a crucial part of development more broadly and talking about the links between play and other types of activities. In short, play seems a productive and promising way to frame a more general conversation about development.
- **Thinking about play as *natural* highlights the importance of play in the process of development, but may block the idea that play requires opportunities, environments and, in some cases, facilitators to function optimally.** When thinking with the *Play = Childhood* cultural model, the public recognises that play is and should be an essential part of children’s lives. However, the assumption that children can play with anything, anywhere, anytime makes it hard to understand how environments and people can facilitate or impede play. In turn, this model is likely to undermine support for policies and programs designed to expand children’s opportunities to play in Australia. Indeed, the view of play as natural might support the idea that interventions designed to support play are *detrimental*, as they get in the way of something that people understand occurs naturally and works best when it’s left alone. When talking about play, communicators must be intentional in bringing attention to environments and explaining how they can enable play.
- **Defining play as child-led can obscure the role of adults and caregivers.** While this assumption is, like the overarching *Play = Childhood* cultural model it underlies, highly productive in getting the public to see children in a very active role, it can undermine recognition of the ways in which active adults and

caregivers can support development by guiding and modelling forms of play. Communicators can counteract this by explaining how adults and caregivers can facilitate healthy play.

- **The assumption that play is covert learning productively connects play and skill-building.** This assumption provides an easily accessible way of thinking about learning as an active process, although people are not always clear about how different types of play facilitate different aspects of development. The tendency to oppose play and formal education limits people's recognition of how play can be connected to learning across different domains of life. In order to build support for programs and initiatives that aim to strengthen the role of play in schools, communicators need strategies to explain the distinct values of free play and guided play. Communicators also need strategies to break down the dichotomy between learning through play and academic learning.
- **The assumption that play is covert learning backgrounds health as a key outcome of good development.** While this assumption is in many ways productive for people's thinking about play and development, it also reinforces the *Brain = Learning Organ* cultural model. This obscures the fact that health is, along with knowledge and skills, an important outcome of good development, and makes it less likely for people to prioritize initiatives and policies centred on health rather than on the promotion of skills and learning among children in Australia.
- **The public's unanimous acceptance that technology is anti-play makes it hard for people to see that digital technologies can promote healthy development.** The Australian public holds such a negative view of the effects of technology on early development that it is very hard for them to recognise how the right kinds of technology, used with appropriate support from adults and caregivers, can facilitate learning and development. People are also very unlikely to support tech-based initiatives aimed to promote healthy development.

Cultural Models of Child Mental Health

Our research shows that the public simply does not think about child mental health in deep or productive ways. In interviews, the concept of child mental health was often misunderstood, or mental health was dismissed as irrelevant or non-existent for young children. This inability to engage with issues of child mental health is a direct result of the foundational models that Australians use to think about children. Two models in particular—*Idealised Worlds* and *Language = Consciousness*—make it difficult for people to recognise that young children even *have* mental health. These models create difficulties for engaging with the concept of child mental health in two different ways.

- The *Idealised Worlds* model creates a picture of children as inhabitants of a simpler, worry-free world. In this idealised world, children don't experience stress and are assumed to be happy, due to the simple and unperturbed nature of childhood. This makes it hard for people to imagine

children as being able to have mental health issues, as these issues are associated with worry, stress and strife.

- The *Language = Consciousness* model leads people to assume that in early childhood, before the acquisition and development of language, children cannot be durably affected by negative experiences. Whereas the *Idealised Worlds* model makes it hard for people to imagine children experiencing adversity, the *Language = Consciousness* model leads people to assume that young children will not be mentally or emotionally affected in a lasting way by any adversity they do experience.

While participants generally struggled to think about child mental health, there were a few thin models that surfaced in interviews.

▶ **The New Issue Cultural Model**

Participants often thought that mental health issues in general, and, by extension, among children, have become more widespread and more serious than they used to be. They frequently pointed to increased discussion of mental health issues in public discourse and inferred that greater concern must stem from an uptick in the frequency or severity of the problem or, more frequently, that issues that were not once called ‘mental health issues’ have now been classified, by the medical establishment, as such.

Researcher: What comes to mind when you think about children and mental health?

Participant: I do understand that children younger and younger are experiencing mental health issues. There have been children as young as nine who have committed suicide here in Australia.

Participant: I think that it’s affecting children a lot younger these days. You know, kids as young as five, six have body image issues for example. I think mental health is more of an issue from a younger age than perhaps what it was, or at least we’re seeing more of it. I think it’s affecting the kids from a younger age than what it used to. It was never talked about when I was younger. It was never talked about at all to be honest. Not until well until adulthood.

This way of thinking is closely connected to the widespread assumption that features of modern life are currently threatening the Australian way of life and undermining children’s development (see the *Threat of Modernity* cultural model discussed p. 49).

▶ **The Mental Health as Cognitive Abilities Cultural Model**

A significant number of participants associated the term ‘mental health’ with cognitive abilities, particularly when talking about children. Because they understood the brain mainly as a organ of learning (as discussed p. 21), they reasoned that ‘mental’ health referred to the health of the brain, and meant being able to reason and learn well. This association of mental health with cognitive abilities was particularly evident in participants’ tendency to categorise cognitive disorders like autism or learning disabilities as mental health issues. FrameWorks has found a similar pattern in public perceptions of adult mental

health (as cognitive abilities) in the US, which suggests that the association with cognition—and this understanding of the brain as an organ of learning—extends beyond the early childhood period.¹⁶

Researcher: What comes to mind when you think about child mental health?

Participant: There are children born with mental disabilities, I believe. I don't think it's as common as people think it is.

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Participant: I think some little kids have mental health challenges from the get go. You think of kids with autism, or on that spectrum. I've got another friend whose little grandson from the very beginning is really difficult, and no matter how his parents try to parent him, he'll be up in the middle of the night throwing things, and life is really problematic because he's way up on the autistic spectrum.

In addition, in trying to think about and make sense of child mental health, participants occasionally drew on several more general models of mental health. Even though these models were occasionally evoked, participants struggled to apply to apply them to thinking about children and child mental health. We review these models next.

▶ **The Absence of Illness Cultural Model**

Participants overwhelmingly defined mental health, in general, in negative terms. When asked about mental health in general, and child mental health specifically, they consistently focused on mental health 'issues', mental health 'problems', and mental illnesses (from clinical depression and anxiety, to schizophrenia and bipolar disorder). Even when explicitly asked to talk about what *good* mental health is, participants fell back on the idea of mental health as the absence of mental health problems, rather than as a positive state of its own.

Researcher: How would you explain mental health to someone from another planet?

Participant: Mental health? Someone with psychological or emotional issues.

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Participant: I guess it's an absence of wellness in their minds.

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Participant: Just like people have health issues like genetic health issue[s], or acquired injuries, the brain can also experience those and that's where I think schizophrenia or clinical depression kicks in. Through some kind of genetic problem, or some imbalance in the brain.

This general pattern of thinking about mental health makes it difficult for the Australian public to think about and engage with the idea of *child* mental health. Because people assume that children live in an idealised world in which happiness and fun are the default, thinking about mental health in terms of issues and illnesses consistently led participants to focus on older children and adolescents, not children under three or four years of age. If mental health is characterised by significant problems and childhood is characterised by the absence of problems the two ideas are hard to bring together in thinking. When pushed, participants explained that the only reason a young child might experience mental illness would

be an extreme case of abuse, violence, or trauma—in other words, an aberration in the natural order of things.

Participant: I would like to think that children don't have mental issues by the [age] of two unless they're traumatised by horrible things.

▶ **The Mental Health as Self-Control Cultural Model**

According to this way of thinking, good mental health is defined by the capacity to control emotions and cope with everyday life, and poor mental health involves the loss of this control. If self-control is lost and not regained in a timely manner, emotions or illnesses become 'out of control', take over and lead to extreme behaviours, in the form of aggression or wild swings of emotion or mood. This way of thinking often led participants to equate good mental health with 'normal' reactions and levels of emotions, and poor mental health with extreme, 'abnormal' reactions and emotional levels.

Participant: Mental health is the ability to live day by day—and I'm going to use the word—in a 'normal' environment. Poor mental health is someone who is just not coping with lots of little things. It's little things that would set them off.

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Researcher: You described 'mentally unwell'. Can you also describe 'mentally well'?

Participant: I guess it's expressing emotions in a normal way and responding to input, processing them, and then reacting in a normal way.

Thinking about mental health as mastery and control of emotions makes it hard to think about children as having mental health. The sorts of emotions that can get out of control are, in people's thinking, complex and associated with adolescents or adults. Because young children are assumed to experience a much more basic range of emotions, mental health issues (assumed to arise from complex emotions) simply aren't in play for children.

Researcher: What about the really young kids? Do you think they could have good or poor mental health?

Participant: I don't think so because I think poor mental health is probably a construct of really advanced and overlapping emotions, which I don't think they necessarily have at that point. It's literally just happy, sad, hungry.

▶ **The Daily Functioning Cultural Model**

Participants sometimes understood mental health as the ability to make 'good' choices and carry out daily tasks successfully—in short, as the ability to function well in life. In this way of thinking, mental health means being able to exercise one's agency and independence in a way that is beneficial to the self and to society. Given that the public thinks of infants and young children as fundamentally dependent, they frequently assume, when using this model, that mental health is not an applicable or relevant concept in early childhood.

Participant: I think mental health is being unable to make the right choices, for yourself.

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Participant: I don't think children—not as early as zero to three—have good or bad mental health. Because they haven't developed the habits in their decision-making to lead them to good or bad choices.

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Participant: For a child, [mental health] is how they interact with each other and how they react to situations. An adult's life is much more than a child. So for an adult it translates into an ability to get a job and hold a job and raise their own children. A child has a much less independent life, so mental health manifests itself in fewer things.

Implications for Communicators

- **Models of children and mental health come together to make it difficult for people to think about *child* mental health.** As a result, people have a hard time engaging with the very notion of mental health in early years, which is often dismissed as non-existent or as an irrelevant and certainly unimportant concept. This is a key finding of this report, and a deep challenge. Further research is needed to identify strategies to communicate effectively about the central nature of mental health in early childhood and the connection of child mental health to child development in the early years.
- **The *New Issue* cultural model obscures the causes of child mental health issues.** By leading people to attribute mental health issues to features of modern life, the model obscures the enduring social and biological causes of mental health issues and creates the impression that these would go away with a return to the 'good old days' when parents did not have to work so much and 'kids could just be kids'. Communicators will need to explain the enduring sources of child mental health issues in order to shift people away from the idea that these are new problems stemming from some recent feature of Australian life.
- **The *Mental Health as Cognitive Abilities* cultural model is a serious obstacle to effective messaging about child mental health.** The connection made between the term 'mental health' and cognitive abilities could lead to basic misunderstandings of messages about child mental health. Communicators need strategies to clarify what they are talking about when they talk about child mental health and child mental health issues.
- **The *Absence of Illness* cultural model makes it hard for people to think about the need to support stable and healthy child mental health.** The public's consistent associations between mental health and mental health problems makes it harder for people to think about and support programs and policies meant to support and foster *positive* mental health, as opposed to interventions that address existing issues or protect children who might already be at risk.
- **The *Mental Health as Self-Control* cultural model may lead to misunderstandings about what self-regulation means and how it is cultivated.** At a surface level, the concept of mental health as the ability

to control one's emotions seems close to experts' definitions of child mental health. However, the characterisation of people with mental health issues as 'out of control' is pejorative and furthers stigmatisation. Moreover, in understanding control as an attribute of the 'normal' self, this way of thinking leads to the assumption that it is the individual adult or child who is responsible for gaining or regaining control. When communicating about the development of self-regulation in early childhood, communicators should give positive examples of what this ability constitutes and emphasise the roles of positive relationships and support in fostering its development. Focusing on children's inability to regulate their emotions and self-soothe as a sign of poor mental health is likely to reinforce the public's assumption that children with poor mental health are 'abnormal'.

- **The *Daily Functioning* cultural model is a potentially productive starting point. People often struggle to apply this model to child mental health.** When they do, they apply it in a narrow way. Despite this, the model could potentially be leveraged to help people understand how children who regulate their emotions tend to grow into high-functioning adults (adults with good mental health). In other words, communicators may be able to use the existing conceptual link between 'functioning' and 'mental health' to illuminate how mental health begins in childhood, when skills and capacities necessary for functioning are actively developing.

Cultural Models of Influences on Early Development

When thinking about the factors that shape children's early development, participants toggled between highly individualistic ways of thinking and more ecological ways of thinking. The individualistic view places the responsibility for child development squarely on parents. The ecological view considers a broader set of factors that may influence child development. These factors include a family's financial circumstances, and access to opportunities. In the next two sections, we detail these two overarching views of the factors that shape development: the individualistic view, and the ecological view.

Our findings for these two sections are consistent with, and expand on, our existing research on early development and parenting in Australia. There are also new and important findings about prenatal development.

The 'Individualistic' View

We begin by presenting the models that make up the individualistic view of influences on early development. We discuss the specificities of each model, and highlight what they have in common—including their joint tendency to obscure systemic influences on early development and to stigmatise parents and caregivers for their children's poor developmental outcomes. While these models share crucial affinities, which warrant thinking of them as a group or family of models, each model provides a

distinct way of thinking about what shapes development, foregrounding particular considerations, relying on specific assumptions, and yielding distinctive—if overlapping—implications.

▶ **The *Family Bubble* Cultural Model**

According to this foundational model, discussed at length in prior FrameWorks research¹⁷, the most important influence on child development is the family. The public widely assumes that family relationships and conditions are the primary determinants of a child's outcomes. When thinking in this way, the family is understood as a private space where child rearing happens, and parents are thought to bear most of the responsibility for a child's development. Parents are responsible for: protecting their children against outside threats; preparing them for future encounters with the outside world; providing for their material, emotional, and cognitive needs; and instilling in them good values and morals.¹⁸ In the interviews, this model was particularly pervasive when participants were asked questions about early childhood specifically: the younger the children that participants were talking about, the more dominant this model was.

Participant: I think [parents] shield the child. They put them in a bubble. But inside that bubble [are] not just the good things in life. They carefully control how the child is introduced to the negative things they're going to be—that we all have to deal with. Such as pain, disappointment, loss. But carefully controlled.

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Researcher: Who is responsible for children developing well?

Participant: Parents. It starts and ends with them, to be honest. I mean, there are other factors. Parents aren't with their kids all the time. But it does start with the parents and I think, generally, if the parents have good values, and bring up their kids in the right way, and make sure they teach them good manners, and aren't always saying yes, and teach them discipline and the right things, then I think they'll generally be in a reasonable place. I think that's largely down to the parents, first and foremost.

▶ **The *Pregnancy Bubble* Cultural Model**

When asked about prenatal development, members of the public overwhelmingly rely on a more restricted version of the previous model, moving from a *family* bubble to a *pregnancy* bubble. They reason that the healthy development of the fetus during pregnancy is exclusively the responsibility of the pregnant woman. She is understood to be the sole 'gatekeeper' to the fetus—she controls what the fetus is exposed to through the decisions that she makes about what to consume or not consume, which, in turn, is thought to fully determine fetal development and wellbeing (see the *Natural Growth* model discussed p.23).

As a result, people see minimal (if any) roles for outside influences in fetal development. When asked about outside influences, participants focused on specific elements that can reach the fetus directly through the womb, such as voices or music.

Participant: It's really the stage of development when you are going from a single cell to many cells. So the mother is almost like the shell of the seed: she protects the embryo, provides nutrition and provides a safe environment for all of these developmental stages to occur.

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Participant: Pregnancy is where this very little human being is inside the mum, and the mum has to protect and nurture that being until it comes into this world. To eat the right foods, to be in the right environments, not being around cigarette smoke and that sort of thing. Just to make sure that child has the right chance for when they're born to be safe and healthy.

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Researcher: Are there things in the environment that influence how the fetus develops, or not so much?

Participant: Not so much. I know it's putting a lot of pressure on the mum, isn't it? [...] But I'll stick with my initial feeling. It's mostly the mum being the environment.

Participants strongly emphasised that a pregnant woman should live in the service of the fetus's healthy development, to the point of assuming that her own health and wellbeing are no longer important in and of themselves. Participants often explicitly talked about pregnant women as 'vessels', 'incubators', or 'quarries'. People thought that fathers have to support women during pregnancies, but men were never identified as directly responsible for the wellbeing of the fetus.

Participant: Building a body from scratch takes a lot of energy and takes a lot of ingredients. And if the quarry is lacking in materials, then building that part of the body is impossible. Or whatever the body is made of—proteins and what not—you need enough of that available. Otherwise, you'll have small walls, you'll have small limbs, weak arms, soft heads.

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Participant: The woman's going through a massive thing. She's having the life sucked out of her. [...] I guess the main priority is ensuring that the baby develops, so the mother's needs should take second fiddle because it's the baby—if the mother's feeling something it's probably because the baby is requiring something. That's my sort of understanding of it.

▶ **The *Natural Love Cultural Model***

Participants assumed that a child needs to feel loved and cared for to develop well, and that parents are the most natural—and most powerful—sources of love and care for a child. This way of thinking was particularly prominent when people relied on the 'natural' view of early development detailed earlier (see p. 22): love and care were seen as two of the main factors necessary to ensure that a child would grow—or develop—optimally.

Participant: Kids are just seeking the love of their parents. They need that to develop.

This model is related to the dominant assumption, identified in FrameWorks' research in Australia on parenting¹⁹, that once someone becomes a parent, they naturally love and care for their child, which automatically makes them a good parent. Parents who fail to adequately support their child's development

are seen to be violating this natural precept of love; instead, they must be selfish, care more about themselves than their child, and be unwilling to sacrifice for their children.

Participant: [Parenting is] just a natural thing. But what happens is that some people out there can't afford it or I think selfishness is a bigger thing. Compared to what my mum and dad had to do in their lifetime. They were quite—I don't know what the word is—unselfish. I've known a lot of people today that are a lot more selfish.

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Participant: There are times where parents should reign their kids in, but for whatever reason they don't. I think that people are a bit more selfish now. They don't care about others, they don't think about the world around them and how they're behaving. They just think 'oh yeah, Bailey—or whatever name they have now—wants to go run around, let him be', rather than think about the impact that has on everyone else surrounding them.

This cultural model reinforced the assumption that daycare is a substandard form of babysitting, because it does not give children access to the amount of love and care they need to develop well.

Participant: [In child care, t]hey don't have that maternal love that they should be receiving at home. A lot of kindy teachers are very good people and all the rest of it. They just have 20 kids. They can't be giving a certain amount of love to one kid.

Discussions of prenatal development and pregnancy allowed for a deeper exploration of the assumptions at play in this model. Participants thought that the emotional connection between a parent and a child happens naturally and almost 'by magic', and that its roots are in the prenatal period. They focused more specifically on the role of the mother, assuming that because of her biological connection with the fetus during pregnancy, she is the best person to provide the love and care a child needs.

Participant: I think it's just an emotional energy that happens between the mother and the baby. I think there [are] connections that you just can't explain. There's nothing that you will ever see. There's nothing that you will ever feel or hear, speak, say—whatever it is. It's just pure energy that—it's almost like trying to describe what life is. It's beyond description.

► **The Genetic Determinism Cultural Model**

People use genetics and the innate characteristics of a child to explain exceptions to the rule— situations in which parenting, money, and 'environments' do not have the expected effect. Genes are understood to be set in stone and determine the basis of a child's personality and, to some extent, their ability or inability to learn. People assume that when a key characteristic is genetically programmed into a child from birth nothing can be done to prevent its consequences.

Researcher: When a child doesn't develop so well, why is that?

Participant: It could be a whole raft of reasons. The kid may have developmental difficulties potentially. It just may not be anyone's fault. They just may not be able to process information as quickly.

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Participant: There's a genetic component. So, they're born with, you know, they seem to be more intellectual, or more physically adept, to have a personality that's kind of warmer.

Participants sometimes drew on this model to explain why some children are more resilient when faced with adversity than others, and why some have an innate drive to overcome their circumstances. This allowed them to explain why some children born in poverty, or having suffered abuse, might experience more positive development than others in the same situation.

Participant: I believe that most kids have got their own personalities. People say that it's all how they're treated and all the rest of it, but you can see that some kids are just treated absolutely terribly and still come out good at the other end. And vice versa.

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Participant: If there's a child in a house where the mother is an alcoholic for instance, and they're not attending to their needs and that stress is repeated on and on and on, then they just learn that – I think they become biologically stressed and that's just how they are.

Implications for Communicators

- **The *Family Bubble* and *Pregnancy Bubble* cultural models place responsibility for early development squarely on parents and on pregnant women, and obscure the role of context.** When thinking with these models, the Australian public sees families or pregnant women as the main determinants of developmental outcomes. This makes it hard for people to see the role of context, policies, or programs in shaping development, especially in early years and the prenatal period. These models are a primary barrier to people's understanding of the importance of systemic causes; this way of thinking can also inhibit people's enthusiasm for systemic supports for children and families.
- **The *Natural Love* cultural model makes it hard for people to think of parenting and early attachment as skills that can be learned, and can undermine support for childcare services.** When people assume that good parenting and emotional attachment emerge naturally from the love and care that any 'normal' parent feels for their child, they are unlikely to see that these are skills that can be learned and practised. They are therefore unlikely to support policies and programs aimed at fostering those skills. A parent—especially a mother—struggling to establish healthy attachment with their child is likely to be stigmatised as uncaring and morally unfit. This model also leads people to see child care as a subpar environment for early development, because it cannot provide children with love and care that parents—mothers—have.

- **The *Genetic Determinism* cultural model makes it hard for people to see that genetics and environments interact in early development; the model obscures the need for systemic solutions.** The public assumes that there are aspects of development that are exclusively determined by genes, so they have a hard time seeing how genes and environments interact to shape outcomes in early childhood. Additionally, if people assume that what is genetically determined is set in stone and cannot be changed, they are unlikely to support policies and interventions that are intended to improve those very outcomes.

The 'Ecological' View

The ecological view of influences on early development is made up of cultural models that allow people to recognise the ways in which money, community, and access to health care and support services shape early development. These models focus attention on certain dimensions of the environment and provide, at best, a partial understanding of how context shapes early development. Even within this ecological perspective, there is a residual degree of individualism, as the ultimate responsibility for healthy development remains with parents and caregivers.

As with the individualistic models, the ecological models make up a family of models that have things in common but also distinctive implications. Despite their limitations, these models provide a promising starting point for communicators and have the potential to be leveraged and expanded to enhance understanding of what shapes development.

▶ **The *Culture of Poverty* cultural model**

Members of the public often explain poverty and the adversity that accompanies it by talking about culture and values. According to this cultural model, one key reason why some communities are unable to support children's development is that their culture does not hold the right values. When thinking with this model, members of the public assume that intergenerational poverty is caused by immersion in a toxic way of life: those who live in poverty are in poverty because they have been acculturated to values and practices that have led them to make poor choices, such as depending on welfare, using drugs and alcohol, and even, in some cases, abusing children.

Researcher: How do you think poverty impacts a child?

Participant: The impact is enormous. Families that are and have been on welfare for a long time—those children grow up thinking that is the norm. You know, a lot of them break that cycle, but poverty affects the way they think, the way they operate. It's just very, very unfair.

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Participant: I see stuff on TV. Like some pretty crappy places and I don't think those kids will get the nurturing that really is required, and you can see it become endemic in families. The parents are pretty hopeless, the kids become hopeless, don't go to school. It becomes a generational type thing. It's widespread in Australia, I think.

Participants often used this cultural model to stigmatise Aboriginal communities for not providing for their children’s needs—sometimes in only thinly veiled terms. Some went as far as to argue that because children born into Aboriginal communities were caught in a cycle of poverty, the best way to give them a chance at good development would be to remove them from their home communities. While people understood how problematic such a solution was—especially in the context of the Stolen Generations—they nonetheless saw this as the logical conclusion to their way of thinking about the problem.

Participant: Indigenous communities are—and I’m speaking very broadly, I do know Indigenous people at work who... I think the problems the Indigenous have are definitely generational, addiction to alcohol, and they’re just born into welfare, and they’ll just stay in welfare for their whole lives. And it, I don’t know, it worries me. It really does.

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Participant: No kid should have to be scared of living, I don’t think. [Tennant Creek] happened months ago and nothing’s been done—and I think stuff with the Indigenous is a big problem. My personal opinion is that the Indigenous society hide behind the fact of being Indigenous. I really think they should just walk in and take the kids away. [I]f they can’t look after their own kids, they shouldn’t have them. That’s a bit political I suppose.

▶ **The Environments = People cultural model**

As noted in FrameWorks’ existing work on early development in Australia²⁰, participants were able to ‘perforate’ the Family Bubble more easily and more frequently than we found in similar research conducted in the United States. Participants were sometimes able to think about responsibility for children’s development and wellbeing more expansively, using the image of concentric circles of influence that included the child’s extended family, teachers and schools, as well as—occasionally—the community as a whole.

Researcher: Besides parents, is there anyone else responsible for children’s development, or not so much?

Participant: Immediate family—those that you spend the most time with outside of the parents, obviously. We’re talking about aunts and uncles, cousins, and then the teachers have a huge influence as well. The way they treat the kids and the way they interact and potentially inspire and give them confidence. Parents, the immediate family, and then probably the teachers and the school environment. Top three.

However, even when using this cultural model, people’s understanding of the role of environments in supporting children’s development remains fairly thin. By ‘environments’, participants consistently meant ‘the *people* who come into contact with the child regularly’ at home and at school, and very rarely used the term to refer to the role played by broader social and systemic factors.

Participant: Why do they develop the way that they do? Many kids are a mirror of their parents. Their parents and their environment, you know—maybe day care, school, other influencing factors—whoever they’re spending time with.

▶ **The *Financial Constraints* cultural model**

According to this cultural model, money—or lack thereof—is an important factor that shapes children’s development in Australia. Members of the public assume that money gives access to the things parents need to support good—or better—child development, and that a lack of the necessary financial means can undermine children’s chances of developing to their full potential.

Participants often focused on the negative consequences that a lack of money can have on a child’s development. They explained that families who struggle financially are often unable to support their child’s positive development because they do not have the money to provide for their children’s basic needs for food, shelter, and safety (necessary for their natural growth) or learning opportunities (necessary to cultivate skills).

Researcher: Are some children, do you think, less likely than others to develop well, or not so much?

Participant: Unfortunately, low income. People who come from neighbourhoods [...] with high crime, not being able to go outside. [...] I guess with low income you’re not getting sort of the same opportunities. You know, public versus private is always a big topic with a lot of people. What is right for children and whether they’re getting the right sort of education, or if they need the extra special education or extra—someone, like a tutor. With low income there isn’t money really to afford a tutor to increase their learning and educational experience.

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Participant: There are parts of Sydney where socio-economic groups are a bit disadvantaged. They don’t have the financial means, even if it’s just to go and play soccer on the weekend, because that’s all developmental. It’s social, and it’s in a team environment, and all of those things that go towards your intellect as well. So, I think for financial reasons a lot of kids are disadvantaged, and also because of financial reasons they may not be eating a healthy diet which affects how you learn in school, your concentration.

Even though members of the public use the *Financial Constraints* model frequently, it remains relatively weak in the sense that people are likely to default to arguments about parents’ individual responsibility. For instance, after arguing that money can shape children’s development in important ways, many participants quickly went back to asserting that parents are responsible for determining whether they are financially able to have a child in the first place or that parents should be less concerned with material goods and lifestyle, and spend more on their children instead.

Researcher: Who, or what, is responsible for making sure that children develop well in Australia?

Participant: Again, in my opinion, I always think the parents. Because they’re the ones that made the choice to have children or they should make the choice to have children. Not just have children for the sake of hav[ing] a bigger family to give you presents at Christmas. If you can’t afford them, don’t have them.

► **The Threat of Modernity cultural model**

When thinking with this model, members of the Australian public assume that features of modernity are currently threatening the Australian way of life and undermining children's development as a result.

Concern about three perceived aspects of modernity emerged in the interviews: (i) the increasing cost of living, (ii) the increasingly dangerous world in which children are growing up, and (iii) technological advances.

Most participants were acutely aware of—and deeply concerned about—significant increases in the cost of living in Australia and the effect of these increases on families. They often focused on housing costs, low-paying jobs, and the cost of child care, which together mean that, in most households, both parents have to work full time in order to make ends meet. This led participants down memory lane to 'better' times when one caregiver—inevitably the mother—could stay at home and care for their children full time.

Participant: People have got to work a lot harder now than in the old days. My mum didn't work for 15 years while she was bringing us up, me and my brothers. So she was there all the time. Whereas now in a lot of cases you've got two people working flat out just to make ends meet. The kids get somewhat put on the back burner, I suppose, because you're chasing that dollar to pay the rent or to keep the mortgage going.

Participants also expressed concerns that the world had become more dangerous for children to grow up in. People cited media reports about cases of violence against children, as well as more systemic threats to future generations, such as global warming. They argued that children have to be protected more now than before and cannot live worry-free lives and become independent the way former generations did.

Participant: I worry about kids these days. Growing up in such a crazy society, with what's going on in the world.

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Participant: I think in the olden days kids were more sacred, they weren't to be touched. Whereas now I don't deem that to be the case. You watch the news and there's quite a bit of that stuff happening. That Daniel Morcombe from Queensland, and now that little kid at Kendall that disappeared out of his front yard.

Finally, participants expressed serious concerns about social media and new technologies, which they reasoned lead to more bullying and can threaten the development of social skills for children. Once again, thinking about modernity in this way led people to muse about a technology-free past when interactions were easier and children's lives were simpler.

Participant: My life was very simple growing up in the 70s and 80s. There was no technology. Their life is really technology driven. The way that they communicate is technology driven. Even their face-to-face interactions are different because of technology. So, it's just a different world for them than it was for me.

Researcher: And what do you think that means for them?

Participant: I feel a bit sad for them, because that life is a lot more complicated and they don't have simple pleasures and the freedom that we had.

Implications for Communicators

- **The *Culture of Poverty* cultural model obscures structural inequalities and contributes to the stigmatisation of parents.** This model prevents people from seeing the structural factors and inequalities that make a child more or less likely to experience and be affected by adversity. As a result, the experience of adversity in early years—and the poor development that ensues—is likely to be interpreted as an ‘us vs them’ issue: a problem for specific communities that do not hold the right values, not a problem for society as a whole. Communicators need strategies to bring into view the ways in which structural factors and power dynamics in society perpetuate poverty and shape early development. By using these strategies effectively, communicators may avoid activating the assumption that poverty (and the negative influences on development that accompany it) is the result of some communities simply having deficient values.
- **The *Financial Constraints* cultural model brings socio-economic factors into view.** When active, this model allows people to see that parents and caregivers need access to resources in order to be able to support their children’s early development. Because this model is currently weak in people’s thinking and easily taken over by stronger assumptions about individual responsibility, future research should explore ways to reinforce this model in people’s thinking. Communicators also need to expand the model to help the public think of other non-financial ways in which contexts shape and constrain the decisions caregivers make, and how the provision of other supports and resources might improve developmental outcomes.
- **The *Environments = People* cultural model is a starting point for talking about contextual influences, but it needs to be expanded.** This cultural model highlights the range of people in a child’s life that have important roles to play in shaping development. As it stands, however, the tendency to equate environments with people makes it hard for the public to take a more systemic view of the physical, social, cultural, political, and economic factors that shape early development of children in Australia. Communicators need strategies for building on the public’s existing ability to recognise interpersonal influences outside the family; communicators must also focus on bringing systemic influences into view.
- **The *Threat of Modernity* cultural model leads to nostalgia and fatalism.** When thinking with this model, people look to Australia’s past, when life was purportedly simpler, safer, and naturally more conducive to positive child development. Yet because a return to the past is impossible, this way of thinking ultimately produces fatalism, as people assume that the issues currently threatening children’s early development in Australia are the unavoidable result of progress and modern life. The *Threat of Modernity* cultural model is thus likely to depress public support for the innovative policies and interventions put forward by experts, as people will assume no policy can overcome the threats built into modern life.

Thinking about solutions

During interviews, participants were able to generate a set of solutions that they thought could improve early development in Australia. Each of these ideas flows from one or more of the cultural models discussed previously.

Solution 1: Educating and Increasing Awareness

The public believes that better education of parents will lead to better child development. People reason that providing more information about child development to parents would improve their parenting, which would improve outcomes for children. Participants sometimes took this thinking a step further, arguing that people should be educated about the responsibilities of parenting before they become parents, so that they can make informed decisions about whether to have a child in the first place.

This solution is driven by individualistic assumptions about parenting and pregnancy. If child development is primarily shaped by parents' choices, then the best thing society can do is to try to inform those choices by providing information and education. Providing information to parents—and future parents—is seen as a way to improve decision-making. Importantly, this way of thinking takes people's attention away from the resources, supports, contexts, services, opportunities, and adversities that affect families, shape parenting, and influence child development.

Participant: Given that the child's development is important to start off with, I think there should be a big focus on the development of every child. Not just the ones that can afford it. There needs to be some sort of education about how if you don't have any money it's gonna be very difficult to have a child. You know, so that people just don't get pregnant on a whim.

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Researcher: What could be done in Australia to support children's development at that early age?

Participant: For parents who find it difficult, I think there's a lot of miseducation. I've had this discussion before about whether you should have a parenting licence. It's kind of tongue-in-cheek, but there's a part of me that really likes the idea of having that.

Solution 2: Providing Government-Led Basic Supports for Parents

Participants frequently suggested that the government has a role to play in promoting healthy child development, but these suggestions were coupled with the insistence that the government cannot be held responsible for children's development if parents do not do their part. Most participants remained fairly vague about what the government's role should entail beyond key responsibilities to fund schools and ensure children have a good education, and to provide pregnant women with access to health care. But regardless of how much detail they provided, they agreed that the only way for government action to have an effect in the country is for it to build on parents' deep involvement in their children's development.

This view of government responsibility grows out of the tension in public thinking between the idea that families' financial circumstances can make it harder to support healthy development (see the *Financial*

Constraints cultural model addressed p. 48) and the strong belief in parents' individual responsibility (see the *Family Bubble*, *Pregnancy Bubble*, and *Natural Love* cultural models addressed p. 42 and onwards). This tension also explains why participants became sceptical of government assistance as soon as they thought it would limit the responsibility of individuals to support children's development.

Participant: I think the government needs to mainly make sure that the schools and preschools are well funded. I don't know what else you can do, because public funding of things doesn't always help a situation. You've got to get the people involved or the parents involved.

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Participant: I believe that 'it takes a village'. Because of the realities of life, there is a responsibility on the government and the education system to help raise the children. Personally, having seen the ambivalence towards raising children that some parents have, I would love there to be a way to give the opportunity for parents to be more involved outside of school. I think many families rely too heavily on the system to raise their children, but there's definitely an equal shared responsibility there.

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Participant: I think they should be doing more support for places like foodbanks to give better quality food to families in need. And I don't mean the drug-addicted ones that can't get a job. Just because you're unemployed doesn't mean you've got a right to go to the foodbank. I think you should just get yourself a job and support your children. It's made too easy for fathers and mothers to just stop working and not pay for their children, and not give their spouses any money for their children.

Solution 3: Helping Disadvantaged Communities

When thinking about government support for children's development, the public reasons that help should focus on disadvantaged families and communities. Disadvantage was understood in terms of ethnicity (Aboriginal communities were often referred to explicitly) or geographical location (remote regions of Australia). This solution made the most sense when participants were thinking about the unequal distribution of opportunities for good development across Australia. In some cases, this focus on disadvantaged families and communities also reinforced the notion that poor developmental outcomes are primarily 'those' people's problems and can be traced to the deficient values at place in disadvantaged communities (see the *Culture of Poverty* cultural model addressed p. 46).

Researcher: What do you think needs to happen in Australia for kids to have the best opportunities and to develop as best as they can?

Participant: I think some government initiatives as far as that goes. Especially in outback **Australia**. They just don't have those opportunities. Just looking at more funding, and education, and things like that. Just basically all the things that we have here. Giving them the equal opportunity to be able to experience that stuff. Basic infrastructure.

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Participant: There needs to be a whole lot more support services. There's this group of Australians who are fine. Then there are groups that are really disadvantaged. So, we're saying, the Indigenous population, disadvantaged families—by finance, by health issues, disability issues. We know who all

those people are. So I think there needs to be much more support. This all takes money, and it takes trained professionals, and it takes trying different ways.

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Researcher: What would you say needs to happen in Australia to support good development for children?

Participant: I think that's probably a more important question for the lower socio-economic groups. People that are reasonably well off, they're nurturing parent types.

Solution 4: Australia's Already Great ... What More Can We Do?

When discussing solutions, participants frequently suggested that Australia already provides for the needs of its population in more than adequate, and even exemplary, ways. In these comments, participants explained that the services and subsidies available in Australia are already generous, and that there is not much more that can or should be done. This opinion sometimes stemmed from comparisons that participants made between Australia and other countries—which led to the conclusion that Australia is a 'pretty good place' and is doing more than enough for its people. This line of thinking is likely reinforced by a combination of national pride and individualism. People know that Australia does provide various supports for its population, and national pride makes people assume that these must be sufficient. And the reality that some families and children are not doing well despite these supports can be explained by the assumption that these families must be making poor choices and failing to take adequate advantage of the services that exist.

Researcher: Do you think [the solutions you described] exist in Australia now?

Participant: I think if you look at us compared to the rest of the world, we're in a pretty good place.

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Researcher: Would you say that all children in Australia have enough opportunities to play, or not so much?

Participant: Generally I think there's play opportunities and, you know, you look at the things the city council offer[s] and it's free. There's the little kids' corner at the library, you can sit there and read a bit and you can take books home, that's all free. There's plenty of free stuff. I think there are opportunities.

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Participant: If you're just not coping and you yourself need medical help, I'm sure there's places out there you can get help. There's no excuse in today's society not to have any help. There is plenty of help. I think, too, you've got to ask for it.

Implications for Communicators

- **Communicators should avoid focusing on education and awareness as the solution.** While education and information provision are important, talking about them as the only or even primary way to improve developmental outcomes is likely to reinforce stigmatising thinking about parents and

communities and distract public attention from the systemic changes required to better support healthy early development.

- **Messages need to be specific about how the government can support early development.** The public's recognition that the government has a responsibility to support healthy child development is promising and a communications asset. But communicators must be explicit in talking about the range of policies and programs needed to support parents; they must help people connect the dots between these measures and healthy development. In order to make an effective case for these programs, communicators will likely need to explain the full range of contextual influences on development and how programs address these factors.
- **Arguments in favour of culturally sensitive policies should be made with an eye towards the danger of the 'us vs them' dichotomy at play in the public's thinking about developmental outcomes.** Communicators need strategies that emphasise how disadvantaged communities are inalienable parts of Australian society, in order to avoid the public's tendency to 'other' or stigmatise certain groups. For instance, they should rely on inclusive pronouns (such as 'we') as much as possible. Communicators should avoid systematically referring to disadvantaged groups in the third person ('they') and with determiners that emphasise distance and disconnection from the speaker (e.g. 'that', 'those'). When appropriate, communicators can also highlight how culturally sensitive policies, or the provision of more intense support for communities who need it the most, are complemented by policies and initiatives that support all families in Australia.
- **When mentioning the programs and policies that are already in place to support early development, communicators should explain how they need to be strengthened and expanded.** Failing to do so will leave space for the public's sense that Australia is already doing a lot for its population, and that there is very little left to do that isn't already in effect. Communicators should take a two-pronged approach to this challenge: when focusing on how existing programs and policies are currently unable to meet every child's and family's needs, they should *always also* make it clear that there are concrete solutions that can be implemented to improve how the system works. Focusing only on the urgent need to rehaul the system risks generating a strong sense of fatalism among members of the public. Only by combining a sense of *efficacy* with a sense of *urgency* can communicators ensure long-lasting support for new and improved measures and initiatives promoting healthy early development in Australia.

Mapping the Gaps: Key Communications Challenges

In this report, we have reviewed how experts understand early development in Australia and the patterns of thinking that shape how the Australian public understands this same topic. In this section, we compare these two perspectives. We identify overlaps that point to strategic opportunities and also map the gaps to reveal important communications challenges for those working in the field of early development.

Overlaps in understanding

There are important points of overlap between expert and public understandings of early development in Australia. These overlaps represent common ground that communicators can build on to communicate key ideas about and increase support for programs and policies. Experts and the public share the following understandings:

- Early childhood is a time of significant and rapid development.
- Development is a multifaceted process that involves the body, the brain, and the mind.
- Nutrition is a key determinant of fetal development.
- Skill acquisition is an important part of development (e.g. social, emotional, and problem-solving skills).
- A family's financial resources shape a child's opportunities in ways that can affect development.
- The adults a child interacts with shape developmental outcomes.
- Play is a basic human instinct and is essential for positive development; children are active during play; and learning happens through play.

These are areas where public thinking is productively aligned with the ideas that the sector is trying to communicate. Communicators can build on this common ground to advance understanding of key ideas about early development, move support for solutions, and build will for change.

Gaps in understanding between experts and the public

In addition to these overlaps, we found a set of significant gaps between expert and public understandings. These gaps represent key areas that must be addressed in efforts to improve public understanding of early childhood and build support for change.

1. **Early Childhood as a Key Window of Development: One of Several vs One and Only.** According to experts, the pre- and perinatal periods and the first three to five years of life are foundational periods of development, but they are not the only period of intense development in a child's life. Experts explain that adolescence is another key window of development. While members of the public think

the early years of life are characterised by an almost infinite ability to absorb knowledge and skills, they also assume that this window of opportunity closes for good around the age of seven.

2. **Nature and Nurture: Both vs Either/Or.** Experts view development as a process shaped by the interplay of genetic, biological, and social influences. Members of public tend to think about development as a process driven by either natural growth or active cultivation. Australians generally struggle to integrate these two fundamental influences on development.
3. **The Body, the Mind, and the Brain: Interconnected Systems vs Discrete Units.** Experts explain that the mind, the body, and the brain are systems that shape and are shaped by one another, function as an integrated whole, and are key objects of development during early childhood. While the public is able to think and talk about development as a multifaceted process that involves physical, cognitive, emotional, and social development aspects, and has come to recognise the importance of brain development, the specific ways in which brain development happens and is interconnected to other aspects of development remain black boxes. As a result, the public's understanding of the brain as an organ of learning makes it difficult for them to focus on overall health as a key outcome of development.
4. **Language: Milestone vs Threshold.** For experts, language acquisition is one of many important milestones in early development. In the expert view, many key developmental processes are already in process well before a child starts to speak. The public, on the other hand, sees language acquisition as a threshold; to acquire language is to start becoming 'a person', and before they start to speak, infants are almost 'pre-human'. This is a deep gap that limits people's ability to think about key aspects of pre-verbal development (including infant mental health) and especially prenatal development. This undercuts support for the policies and interventions recommended by experts during these early periods of development.
5. **Early Mental and Emotional Health: Complex and Fundamental vs Simple or Non-Existent.** Experts explain that the foundations for children's mental and emotional health are laid during early development, and that children can feel intense emotions and be deeply affected by them as early as infancy. The public, on the other hand, lacks productive ways of thinking about child mental health in the early years, and assumes that children only start being affected by mental states, emotions, and stress in a durable way around the ages of five or six. Given the depth of this gap, it is likely to be one of the most challenging to address.
6. **Effects of Adversity: Real but Reversible vs No Harm or 'Damage Done is Damage Done'.** Experts argue that adversity in early childhood can have substantial and durable impacts on developmental outcomes, but emphasise that, with the right supports and interventions, children who experience adversity can experience positive outcomes. Members of the public, by contrast, toggle between thinking that adversity does not meaningfully impact young children, because of their lack of language and memory, and thinking that adversity makes an indelible imprint on children, which dooms them to negative lifelong outcomes.

7. **Influences on Prenatal Development: Context vs a Woman's Choices.** Experts emphasise that providing women with the supports they need to be healthy during pregnancy is critical to healthy prenatal development. The public, on the other hand, sees fetal development as shaped purely by a woman's choices—namely, what she chooses to consume—and thus think of pregnant women as wholly responsible for healthy fetal development.
8. **Parenting: Learned Skillset vs Natural Instinct.** Experts emphasise that effective parenting requires a set of skills that all parents can develop through experience and support. They also explain that healthy attachment can be developed in the same way (experience with support). The public, on the other hand, assumes that good parenting is natural, not learned. In public thinking, good parenting emerges automatically from the natural love felt by all 'normal' parents for their children. Similarly, attachment is assumed to flow automatically from the biological connection between mother and child.
9. **Play in Early Childhood: Multifaceted Skill-Building vs Motor Skills Development.** For experts, play in early childhood can facilitate the development of social skills, critical thinking, mental health, self-regulation, confidence, and self-discovery. They point out that as early as infancy, different forms of play support specific areas of development and that play can serve a therapeutic function. While the public understands the importance of play in the early years and thinks of it as a key mode of learning and skill-building, they think that play in early childhood—especially before language acquisition—mainly serves to develop motor skills and very basic knowledge of the world.
10. **Adults' Role in Play: Active and Essential vs Peripheral.** According to experts, adults and caregivers have a significant role in young children's play. Adults not only provide opportunities to play, but also facilitate, scaffold, and guide certain forms of play that are essential to early development. While the public clearly sees children as very active in their own development when playing, they struggle to think deeply about the role of parents and caregivers, who are at best assigned a peripheral function.
11. **Environments: Structural Factors and Relationships vs People and Money.** Experts argue that early development is shaped by a wide range of socio-economic and structural factors, as well as relationships and interactions. While the public thinks that 'environments' influence children's development in early years, they have a narrower understanding of what these factors are. In people's minds, 'environments' primarily mean the adults in children's lives, and perhaps their ability to pay for things children need. In other words, the public has a less systemic, less structural understanding of environments.
12. **Who is Responsible? Society First vs Individuals First.** According to experts, Australians have a collective responsibility to support good development for all children in the early years. They advocate for policies and interventions that would change the socio-economic environment and reduce social inequalities, create a physical environment that supports development directly and indirectly, and improve social systems' capacity for early intervention. While the public agrees that the government has a role to play in supporting good developmental outcomes for children, they have only a vague

understanding of what that role should entail, and assume that parents and caregivers are primarily responsible for their children's development.

- 13. Who Needs Better Support? Everyone According to their Needs vs the Underserved.** Experts argue for the development and implementation of a strategic effort to reach underserved children and families specifically, alongside a broader effort to provide inclusive environments and services for all families in Australia. The public, on the other hand, reasons that help should focus only on underserved families and communities in the country, because of a deeply seated belief that poor developmental outcomes are 'those' people's problems.

Initial Recommendations

Communicators face serious challenges in cultivating broad public support for the policies and programs needed to better support early development in Australia. While the public sees early childhood as a period of intense development and possibilities, they still lack clarity about what development involves (what drives it, how it works, and what outcomes it shapes). Moreover, people have a hard time even thinking about emotional and mental health in children under the age of five. People’s thinking about early childhood tends to background environments and contexts, and makes it hard for people to recognise the need for structural supports to foster positive outcomes for children. Instead, people tend to hold parents responsible for child development—a tendency that is highly dominant when thinking about very young children, and at its strongest in thinking about prenatal development. These assumptions, coupled with toxic understandings about Aboriginal communities and people living in poverty, contribute to the stigmatisation of parents who face challenges.

Yet these unproductive cultural models sit alongside more productive—though typically recessive—ones, which can be leveraged and expanded to create a more open, engaged and productive public conversation about early childhood. Communicators can capitalise on the existing association between development and skill-building, as well as understandings of the role of play in development, to cultivate the sense that development is an active, contingent and dynamic process. Members of the public recognise that financial issues can shape a child’s developmental outcomes in certain ways, and communicators can cue and expand this existing way of thinking to generate greater understanding of how socio-economic factors influence families and shape child development.

While further research is required to develop a comprehensive reframing strategy that addresses the gaps mentioned earlier, there is a clear set of framing recommendations that emerges from this work.

► **Continue using tested frames to address key gaps in understanding.**²¹

The findings presented in this report show that public understanding has changed in important ways since FrameWorks’ previous work in Australia on early development—most notably, an increased association between the concepts of ‘early development’ and ‘brain development’—which likely reflects the communications activities of the sector since the early 2010s. However, the persistence of many of the same gaps identified in early research signal the need for continued work in explaining key processes of brain and biological development to the Australia public. Using existing evidence-based frames and strategies can help the field continue to strengthen its impact and increase public understanding of the science of early development in Australia. Key recommendations include:

- Lead with the value of **Collective Prosperity** to give audiences a sense of what is ‘at stake’ and why the issue of early development matters to Australian society as a whole. Australians have

been found to respond best to an investment model in which allocating resources to children, and improving early childhood development programs, will create a better society.

- Use the **Brain Architecture** metaphor to communicate the idea that brains are built over time through an active and intentional process, with early periods of development being particularly important for later outcomes.
- Use the metaphor of **Serve and Return** to help people understand that relationships with supportive caregivers are critical parts of the brain-building process.
- Use the **Toxic Stress** metaphor to address the general lack of attention given by members of the public to the potential ways in which chronic stress affects early development.
- Use the **Outcomes Scales** metaphor to explain how genetics and contextual factors interact to create developmental outcomes.
- Use the **Navigating Waters** metaphor to show how parenting is affected by context and environments, rather than being entirely natural or innate.
- Avoid the **Parent Trap**. Don't make parents the centre, or the starting point, of the story of early development. Instead, present parenting as a key means to the end of good development.

► **Focus communications on the interconnection between the brain and other biological systems to get health into the discussion of development.**

To get the public to understand that development is not only about learning, but also about building the foundation for good health throughout life, communicators can emphasise the interconnection between the brain and other biological systems. This will help the public to see the brain as more than 'just' an organ of learning, and help them see that developmental outcomes are not only about skills and knowledge, but also, importantly, about health.

► **Emphasize that there is potential for change across the life span.**

When explaining that early childhood is a key window of opportunity for development, communicators should emphasise that the brain and biological systems retain some plasticity throughout life. This will counter the public's assumption that a child's life outcomes are fully determined by the age of 7 (see the Moulding cultural model discussed p. 27). Communicators can, for instance, explain that adolescence is another key window of opportunity for development. They can also show how mental health can be worked on and evolve throughout a person's lifetime, given the appropriate supports.

► **Develop and use concrete examples of how children are affected by experiences before they are able to speak.**

In order to counter the assumption that infants and pre-verbal children lack durable emotions or mental states and that their experiences are of little consequence, communicators should give examples of situations in which infants can experience and be affected by specific emotions. By being explicit about the nature of emotions and mental states that can be experienced by children from birth, and giving concrete examples of how those emotions and mental states can emerge, communicators can address the assumption that development is only of consequence after children can speak.

► **Define child mental health as a positive state before describing challenges to it.**

Given the potential misunderstanding of the term ‘mental health’ in Australia, communicators should provide a clear definition of child mental health at the beginning of their message. This should be done with as much frequency and repetition as possible, since establishing an accurate sense of what child mental health means is a prerequisite for expanding the public’s understanding of why it is an essential component of early development and how it can best be supported in Australia. In addition, communicators should be sure to talk about child mental health as a positive state, using inclusive terms that can apply to all children, to shift people away from a purely negative conception of mental health as the absence of mental illness or mental health issues.

► **Avoid the word ‘control’ when discussing child mental health.**

If people are able to see that young children and infants can have strong enough emotions to require self-control, a discussion of child mental health as the ability to ‘control emotions’ will likely be interpreted individualistically. If the problem is identified as lack of control, the logical solution to this problem is for the individual child to ‘take control’ again. Reliance on the term ‘control’ can also trigger stigmatising thinking about ‘those’ children who are ‘out of control’. Communicators should either avoid using this and other similar terms or explicitly specify how they understand these concepts when introducing them, to avoid unintentionally cuing unproductive thinking.

► **Avoid telling individual stories without context.**

- To avoid reinforcing the deeply seated assumption that fetal development is the responsibility of the pregnant woman and the pregnant woman alone, communicators should tell stories in which prenatal development is shaped by systemic causes and can be better supported by collective solutions. Social science research has found that stories that are narrowly and exclusively about individuals reinforce individualistic thinking²²: in the case of prenatal development, they risk focusing people’s attention on a woman’s individual willpower and character as the main factor

shaping a fetus's outcomes. Making programs, social factors, and systems characters in stories about prenatal development can help the public see the role played by social determinants and systemic supports in this critical period of development, and will decrease the inclination to blame individual women for negative outcomes.

- When talking about issues that affect children in disadvantaged communities—especially Aboriginal communities—more than others in the country, communicators should emphasize the role played by discrimination, racism, and lack of access to structural supports. This will prevent the public from assuming that the reason children from certain communities are more affected by issues like neglect or poor developmental outcomes is due to their community's lack of good values or lack of moral fortitude (see the *Culture of Poverty* cultural model, addressed p. 46).
- When leveraging the *Learning Adulthood* cultural model, communicators should systemically place their argument in a collective context, highlighting that there are collective and intentional steps that can be taken to support skill-building as part of healthy development. If the argument only focuses on individual stories of children who became self-confident and independent adults, it will lead people to think about development at an individual level—caused by individuals with individual outcomes and individual solutions.

► **'Lift the hood' on play: explain how certain play experiences drive certain aspects of development and learning.**

Members of the public already understand that play is a natural human instinct and value its role in child development. Communicators do not need to devote time and energy to convincing people of this. Instead, they should use concrete examples to deepen understanding of how different kinds of play foster different, complementary aspects of early development. Examples should focus on elements of play that the public currently do not think deeply about: how play in early childhood (and at the pre-verbal stage) supports the development of more than just motor skills (e.g. how rough-and-tumble play supports the development of self-regulatory skills); how adults and caregivers can facilitate and actively participate in healthy play (e.g. guided play in school to support learning; 'serve and return' interactions with infants that build connections in their brains); and how play can support mental health and emotional development as early as infancy (e.g. child therapists who often engage in play with young patients, in order to help them work through trauma and to gain a window into what they are thinking).

► **Avoid messages that focus exclusively on the dangers of technology-based play and screen time.**

Members of the public are already acutely aware that technology and excessive screen time can harm children's development. Communicators who wish to address this issue should avoid wholly negative messages, as these are likely to trigger nostalgia for the 'good old days' when iPads did not exist, and mothers could stay at home and take care of their children. Messages focusing only on the dangers of

technology will also stigmatise parents or caregivers whose children engage in significant screen time. Instead, communicators should provide practical, specific advice in their messages. For instance, they might include recommendations about the type and the duration of screen time that might be appropriate for each stage of a child’s development, and the types of supports children might need from adults and caregivers.

► **When talking about prenatal development, strike a balance between stories about positive outcomes and stories about risk and negative outcomes.**

In order to overcome the public’s current association between the prenatal period and vulnerability to a multitude of threats, communicators should present prenatal development as a key opportunity to support healthy development at least as often as they talk about threats and risks that are specific to this period. They should especially avoid focusing exclusively on the harmful chemicals that can harm the fetus during this time (e.g. mainly messaging about the dangers of alcohol, drugs, and cigarettes). Instead, they should use concrete examples of how prenatal development can be leveraged to support positive development during pregnancy and throughout childhood, and tell more stories that highlight positive outcomes.

► **Use inclusive language to talk about disadvantaged communities.**

Communicators need strategies that emphasise that disadvantaged communities are inalienable parts of Australian society, in order to avoid the public’s tendency to ‘other’ and stigmatise certain groups. As noted earlier, communicators should be intentional about their use of pronouns. When possible, communicators should use ‘we’ language and talk about ‘our communities’ to emphasise that supporting children’s healthy development is something that is important to all of us, not just to ‘those’ people. This may sound like a minor shift, but using pronouns to combat the strong propensity to other certain groups and communities is likely to have significant effects on advancing public thinking.

► **When calling to action, strike a balance between urgency and efficacy.**

As mentioned earlier, when focusing on the need to take action to better support early development in Australia, communicators should *always also* make it clear that there are concrete solutions that can be implemented to improve how the system works. This might mean explaining how existing policies can be strengthened and expanded, or which new policies need to be implemented and what they would achieve. Focusing only on the urgent need to act by highlighting what doesn’t work risks generating a strong sense of fatalism among members of the public. If people think that the problems they face are too momentous and too far-reaching, they are likely to give up on the issue and lose all willingness to act. Only by combining a sense of urgency with a sense of efficacy—by highlighting what can be done—will communicators ensure long-lasting support for new and improved measures and initiatives promoting healthy early development in Australia.

Future Research

Communicators can use these initial recommendations to create more effective messages about early development. Further research is needed to identify additional communications strategies capable of overcoming the deepest and most challenging gaps. The following is a prospective ‘to do’ list for future framing research. Frames have to be able to take public thinking:

- **From ‘body, mind, and brain as discrete units of development’ to ‘body, mind, and brain as interconnected systems’.** The goal of this task is to expand the public’s understanding of the specific ways in which brain development happens and is interconnected to other biological systems and other aspects of development. This will notably expand the public’s understanding of the key outcomes of good development to get them to focus on health as well as on knowledge and skills.
- **From ‘natural growth vs cultivation’ to ‘biology and environments’.** In other words, get the public to think beyond the natural growth vs cultivation of skills dichotomy, and see the way in which biology and environments interact to shape early development in fundamental ways.
- **From ‘language as threshold’ to ‘language as milestone’.** The goal of this task is to convey to the public that language acquisition is one of many important milestones in early development, but it is not the gateway to personhood. This means getting the public to see that many key developmental processes (cognitive, mental, emotional) are already in progress well before a child starts to speak, and that language enhances and supports these processes, but is not an absolute prerequisite for them to start.
- **From ‘Play = Childhood’ to ‘play drives development’.** The goal is to refine and expand Australians’ understanding of play in early development by building on current productive thinking on the issue. This will require strategies to show: how play in early childhood drives development by providing motivated opportunities to engage key skills and capacities well beyond motor skills; that play is always voluntary but not always only child-led, as adults and caregivers have significant roles in young children’s play; and that play and classroom learning can, and should, be better integrated.
- **From ‘parents (especially mothers) shape development’ to ‘context shapes development’.** In other words, emphasise the role of context and environments in shaping early development in Australia, and de-emphasise the responsibility assigned to parents—especially mothers—for shaping early development through their own personal choices.
- **From ‘the government has some role to play’ to ‘here are all the things the government should do’.** The goal of this task is to generate public support for policies and interventions that would:

change the socio-economic environment and reduce social inequalities; create a physical environment that supports development directly and indirectly; and improve social systems' capacity for early intervention.

- **From 'there's nothing (more) we can do', to 'we must act, and there are concrete solutions we can implement'**. The goal is to generate a sense of urgency and a sense of collective efficacy around the possibility to better support healthy early development in Australia. This means getting the public to see that there is a need to take action and make change, and that there are concrete solutions that can help.

Appendix 1: Australian Cultural Models of Parenting

COMMON ASSUMPTIONS AND BELIEFS AMONG THE AUSTRALIAN PUBLIC ²³	IMPLICATIONS FOR COMMUNICATING ABOUT PARENTING
<p>Happiness is key: people assume the goal of parenting is to create happy children.</p>	<p>Although happiness is important, reasoning from this assumption limits people’s understanding of what healthy development looks like—including the development of skills—and excludes key dimensions of effective parenting.</p>
<p>Natural parenting: people assume good parenting comes ‘naturally’.</p>	<p>When triggered, this way of thinking leads people to resist the idea that parenting practices can be improved and undermines support for evidence-based parenting resources.</p>
<p>Filter vs wall: in these competing models, people assume that external environments offer positive experiences when properly <i>filtered</i> by parents or, conversely, that external environments are threatening and that a parent’s role is to act as a <i>wall</i>, protecting children from harm.</p>	<p>The filter model helps people think productively about a parent’s role in scaffolding children’s learning, whereas the wall model blocks people from understanding an enrichment perspective—that <i>positive</i> development can be facilitated through supportive environments and experiences.</p>
<p>Determinism: people believe that people’s parenting is determined by how they were parented as children and that there is little that can be done to change this pattern.</p>	<p>This way of thinking is highly fatalistic and restricts people’s ability to see how programs to support parents can make a difference to outcomes.</p>
<p>Choice point: people view good parenting as a choice that is up to the individual’s discretion and willpower.</p>	<p>This perception puts the onus on the individual to overcome challenges and leaves little room for people to think about how context and circumstance limit and shape people’s choices.</p>
<p>Social contexts matter: people recognise that social environments can be a source of either stress or support for parents.</p>	<p>This model can be activated to help people think more deeply about the systems and structures that shape parents’ lives.</p>
<p>Threat of modernity: people blame modern life and ‘Australia today’ for many of the challenges parents face and hold a nostalgic view of how parenting ‘used to be’.</p>	<p>A sense of nostalgia for a mythic past lost and gone forever activates fatalistic thinking, shuts down people’s ability to imagine solutions and causes them to disengage.</p>

<p>One-way parenting: people see parenting as something adults <i>do</i> to children, which children <i>receive</i> in a one-way transaction.</p>	<p>When people view parenting in this unidirectional way, they have trouble thinking holistically about the parent–child relationship and recognising the influence that children have on parenting.</p>
<p>Men are important, but women are responsible: though people generally think of parenting in gender-neutral terms, they overwhelmingly blame women for poor parenting outcomes and hold women responsible for fixing problems that arise.</p>	<p>These gendered assumptions undermine men’s role in parenting, disparage women, and make it difficult to foster productive conversations about men’s <i>equal</i> role in parenting responsibilities.</p>
<p>Ageing up: in thinking about child development, people tend to focus on older, school-aged children and have trouble keeping young children in mind.</p>	<p>Unless age is made explicit, the Ageing Up model leads people to misunderstand communications about early childhood development as being about older children.</p>
<p>Infinite and absolute variation: people believe that each human being is, like a snowflake, unique.</p>	<p>The focus on every individual’s singularity weakens people’s support for evidence-based approaches that can be applied across varying situations and individual differences. The thinking goes: if every child is unique, what can we really say about effective parenting?</p>
<p>Three models of government: people have contradictory ways of thinking about the government and parenting—as an intrusive and unwanted supervisor, as an incompetent problem solver, or as a supportive partner in the parenting endeavour.</p>	<p>Whereas the supervisory and incompetent models block people’s receptivity to policy-based solutions, the support model facilitates thinking about how public programs and infrastructure can be changed to create better parenting outcomes.</p>

Appendix 2: Research Methods and Demographics

Expert Interviews

To explore experts' knowledge about the core principles of early development, and more specifically of the science of play, FrameWorks conducted 15 one-on-one, one-hour phone interviews with participants whose expertise included research, practice, and policy. Interviews were conducted from July to August of 2018 and notes were taken by the interviewers for analysis. FrameWorks compiled the list of interviewees, who reflected diverse perspectives and areas of expertise, in collaboration with CoLab at the Telethon Kids Institute. Findings from these interviews were complemented by an extensive literature review of key topics in early development.

Expert interviews consisted of a series of probing questions designed to capture expert understandings about what early development is, why it is important, and what the role of play is in early development. In each conversation, the researcher used a series of prompts and hypothetical scenarios to challenge experts to explain their research, experience, and perspectives; break down complicated relationships; and simplify complex concepts. Interviews were semi-structured in the sense that, in addition to preset questions, researchers repeatedly asked for elaboration and clarification and encouraged experts to expand upon concepts they identified as particularly important.

Analysis employed a basic grounded theory approach²⁴. Researchers pulled common themes from each interview and categorised them. They also incorporated negative cases into the overall findings within each category. This procedure resulted in a refined set of themes, which researchers also supplemented with a review of materials from relevant literature.

Cultural Models Interviews

The cultural models findings presented in this report are based on a set of interviews with members of the public. To understand the Australian public's current thinking, FrameWorks conducted 26 in-person, in-depth interviews with members of the public in August and September 2018 in Sydney, Melbourne, Perth, and Brisbane.

Cultural models interviews—one-on-one, semi-structured interviews lasting approximately two hours—allow researchers to capture the broad sets of assumptions, or 'cultural models', which participants use to make sense of a concept or topic area. These interviews are designed to elicit ways of thinking and talking about issues—in this case, issues related to early development. Interviews covered thinking about children and early development in broad terms before narrowing in on a series of specific themes related to early development. The interviews touched on child mental health and emotional development; play; factors

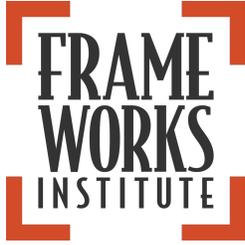
that shape early development; responsibility for good development; and solutions to improve early development in Australia. The goal of these interviews was to examine the cultural models that participants use to make sense of early development, so researchers gave them the freedom to follow topics in the directions they deemed relevant. Researchers approached each interview with a set of topics to cover but left the order in which these topics were addressed largely to participants. All interviews were recorded and transcribed with participants' written consent.

All participants were recruited by a market research firm, based on a series of criteria ensuring that the demographics of the sample were similar to those of the Australian population. While a sample of 26 participants is too small to ensure that the sample is perfectly *statistically* representative, the demographic variability of the sample is adequate to ensure that patterns in thinking identified are truly shared across different groups within the country²⁵. While larger sample sizes are needed to investigate variability *within* a population or to allow for statistically significant comparisons between groups, the goal of cultural models analysis is to describe common ways of understanding within a population. As a result, for cultural models research, the sample size is determined by the concept of saturation²⁶: it considers that a sample is of satisfying size when new data do not shed any further light on underlying patterns of thinking within a population. For this project, our analyses confirm that a sample size of 26 interviews was sufficient to reach a point of saturation as far as cultural models of early development in Australia were concerned.

The participant sample included 15 women and 11 men. Of the 26 participants, 22 self-identified as 'white or Caucasian', two as 'Aboriginal and/or Torres Strait Islander', and two as 'Other'. Twelve participants described their political views as 'Centre right (Liberal)', 11 as 'Centre left (Labour)' and three as 'Other (National, Green)'. Nine participants reported living in an urban area, five in a rural area, and 12 in a suburban area. Three participants said they belonged to the 20–29 age group; five participants to the 30–39 group; four participants to the 40–49 group; seven participants to the 50–59 group; and seven participants to the 60–69 group. Education was used as a proxy for socio-economic status; six participants held a secondary school certificate or below, nine had spent some time in college or vocational training (or equivalent), seven had completed university studies, and four had completed postgraduate studies. Sixteen were married and 15 were parents of at least one child.

Findings are based on an analysis of these interviews. To analyse the interviews, researchers used analytical techniques from cognitive and linguistic anthropology to examine how participants understood issues related to early development²⁷. First, researchers identified common ways of talking across the sample to reveal assumptions, relationships, logical steps, and connections that were commonly made, but taken for granted, throughout an individual's talk and across the set of interviews. In short, the analysis involved discerning patterns from both what was said (how things were related, explained, and understood) and what was not said (assumptions and implied relationships). In many cases, analysis revealed conflicting models that people brought to bear on the same issue. In such cases, one of the conflicting ways of understanding was typically found to be dominant over the other, in the sense that it more consistently and deeply shaped participants' thinking.

Analysis centred on ways of understanding that were shared across participants. Cultural models research is designed to identify common ways of thinking that can be identified across a sample. It is not designed to identify differences in the understandings of various demographic, ideological, or regional groups (which would be an inappropriate use of this method and its sampling frame).



About the FrameWorks Institute

The FrameWorks Institute is a think tank that advances the non-profit sector's communications capacity by framing the public discourse about social problems. Its work is based on Strategic Frame Analysis®, a multi-method, multidisciplinary approach to empirical research. FrameWorks designs, conducts, publishes, explains and applies communications research to prepare non-profit organisations planning to expand their constituency base, build public will and improve public understanding of specific social issues—the environment, government, race, children's issues, and health care, among others. Its work is unique in its breadth, ranging from qualitative, quantitative and experimental research to applied communications toolkits, eWorkshops, advertising campaigns, FrameChecks® and in-depth study engagements. In 2015, it was one of nine organisations worldwide to receive the MacArthur Foundation's Award for Creative & Effective Institutions. Learn more at www.frameworksinstitute.org.

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Endnotes

- ¹ Cunningham, H. (2006). *The Invention of Childhood* (p. 114). London: BBC Books.
- ² Cunningham, 113.
- ³ Experts stress that adolescence is also a period of high neuroplasticity when the brain's development is particularly sensitive to environmental influences. They explain that, during adolescence, the brain refines and stabilises its neural connections for later efficiency, and new connections form to integrate disparate brain regions. For a more detailed discussion of the science of adolescent development, see notably Busso, D., Volmert, A., & Kendall-Taylor, N. (2018). *Building opportunity into adolescence: Mapping the gaps between expert and public understandings of adolescent development*. Washington, DC: FrameWorks Institute.
- ⁴ For a full expert story of effective parenting in Australia, see Volmert, A., Kendall-Taylor, N., Cosh I., & Lindland, E. (2016). *Cuing Context: Mapping the gaps between expert and public understandings of effective parenting in Australia*. Washington, DC: FrameWorks Institute.
- ⁵ Experts identify common features of all types of play. They argue that play is voluntary, done for its own sake rather than to complete some end goal, and that it shouldn't be functional in immediate context.
- ⁶ For a literature review of existing studies on the impact of technological advances on early child development, see for instance Houghton, C., Aiken, M., & Cheevers, C. (2015). 'Cyber Babies: The Impact of Emerging Technology on the Developing Infant'. *Journal of Psychology Research*, 5(9), 504–518. doi: 10.17265/2159-5542/2015.09.002
- ⁷ Parents' prolonged use of mobile technology use can also threaten development by affecting how responsive they are—or aren't—to their children, and impact infants' attachment styles. For a study of the role of caregivers' mobile technology use in interactions with their children, see Radesky, J. S., Kistin, C. J., Zuckerman, B., Nitzberg, K., Gross, J., Kaplan-Sanoff, M., ... Silverstein, M. (2014). 'Patterns of Mobile Device Use by Caregivers and Children during Meals in Fast Food Restaurants'. *Pediatrics*, 133(4), 843–849. doi: 10.1542/peds.2013-3703. For a study drawing similar conclusions about the role of background television in the home, see Evans Schmidt, M., Pempek, T. A., Kirkorian, H. A., Frankenfield Lund, A., & Anderson, D. R. (2008). 'The Effects of Background Television on the Toy Play Behavior of Very Young Children'. *Child Development*, 79(4), 1137–51. doi:10.1111/j.1467-8624.2008.01180.x. On the influence of technology on attachment styles, see for instance Raval, V., Goldberg, S., Atkinson, L., Benoit, D., Myhal, N., ... Zwiers, M. (2001). 'Maternal Attachment, Maternal Responsiveness and Infant Attachment'. *Infant Behavior & Development*, 24(3), 281–304. doi: 10.1016/S0163-6383(01)00082-0.
- ⁸ For a more detailed discussion of the role of digital technologies in learning and development, see notably Levay, K., Volmert, A., & Kendall-Taylor, N. (2018). *Crossing the boundaries: Mapping the gaps between expert and public understandings of bridging STEM learning environments*. Washington, DC: FrameWorks Institute. See also Kendall-Taylor, N., & Lindland, E. (2010). 'Faster and Fancier Books': *Mapping the gaps between the expert and the public understandings of digital media and learning*. Washington, DC: FrameWorks Institute.
- ⁹ See for instance Gillen, J., Arnott, L., Marsh, J., Bus, A., Castro, T., Dardanou, M., ... Tafa, E. (2018). *Digital Literacy and young children: towards better understandings of the benefits and challenges of digital technologies in homes and early years settings*. COST Action IS1410 DigiLitEY
- ¹⁰ Hersh-Pasek, K., & Michnick Golinkoff, R. (2016). *Transforming cities into learning landscapes*. Retrieved August 8, 2018, from <https://www.brookings.edu/blog/education-plus-development/2016/11/02/transforming-cities-into-learning-landscapes/>
- ¹¹ For a historical perspective on this question, see notably Cunningham, H. (2006). *The Invention of Childhood*. London: BBC Books.
- ¹² All participant interview excerpts have been edited to remove any personally identifying information and improve readability. To conduct the analysis, researchers worked from verbatim transcripts of the interviews.

- ¹³ This point, as well as others in this report, draws from and builds upon the following FrameWorks reports on early childhood and parenting in Australia: Kendall-Taylor, N., & Lindland, E. (2013). *Modernity, Morals and More Information: Mapping the Gaps Between Expert and Public Understandings of Early Child Development in Australia*. Washington, DC: FrameWorks Institute; Volmert, A., Kendall-Taylor, N., Cosh I., & Lindland, E. (2016). *Cuing Context: Mapping the gaps between expert and public understandings of effective parenting in Australia*. Washington, DC: FrameWorks Institute.
- ¹⁴ The fact that members of the Australian public consistently hold both of these overarching views of development and toggle between them in their thinking marks a key difference with the US cultural context, in which different socio-economic groups have been found to rely on either one or the other exclusively. For more detail on this issue, see notably Lareau, A. (2011). *Unequal Childhoods: Class, Race, and Family Life* (2nd ed.). Berkeley: University of California Press.
- ¹⁵ See Kendall-Taylor, N., & Lindland, E. (2013) *Modernity, Morals and More Information: Mapping the Gaps Between Expert and Public Understandings of Early Child Development in Australia*. Washington, DC: FrameWorks Institute.
- ¹⁶ See L'Hôte, E., Fond, M., & Volmert, A. (2017). *Beyond awareness of stigma: Moving public understanding to the next level: Mapping the gaps between expert and public understandings of mental health in Colorado*. Washington, DC: FrameWorks Institute.
- ¹⁷ See for instance Kendall-Taylor, N., McCollum, C., & Manueal, T. (2009). *Caught between Osmosis and Environments: Mapping the Gaps between the Expert and the Public Understandings of the Role of Executive Function*, Washington, DC: FrameWorks Institute.
- ¹⁸ These findings about the Australian public's understanding of the roles and responsibilities of parents are very consistent with recent research conducted by FrameWorks on public perceptions of parenting in Australia. For more detail, see Appendix 1 in the present report. See also Volmert, A., Kendall-Taylor, N., Cosh I., & Lindland, E. (2016). *Cuing Context: Mapping the gaps between expert and public understandings of effective parenting in Australia*. Washington, DC: FrameWorks Institute.
- ¹⁹ See the Natural Parenting cultural model summarised in Appendix 1 in the present report, and detailed in Volmert, A., Kendall-Taylor, N., Cosh I., & Lindland, E. (2016). *Cuing Context: Mapping the gaps between expert and public understandings of effective parenting in Australia*. Washington, DC: FrameWorks Institute.
- ²⁰ See Kendall-Taylor, N., & Lindland, E. (2013) *Modernity, Morals and More Information: Mapping the Gaps Between Expert and Public Understandings of Early Child Development in Australia*. Washington, DC: FrameWorks Institute.
- ²¹ See Bales, S. N., & Kendall-Taylor, N. (2014). *Finding the Southern Cross: A FrameWorks MessageMemo for the Centre for Community Child Health*. Washington, DC: FrameWorks Institute. See also L'Hôte, E., Kendall-Taylor, N., O'Neil, M., Busso, D., Volmert, A., & Nichols, J. (2017). *Talking about the science of parenting*. Washington, DC: FrameWorks Institute.
- ²² On thematic vs episodic frames, see Iyengar, S. (1991). *Is anyone responsible? How television frames political issues*. Chicago, IL: University of Chicago Press.
- ²³ This list of cultural models is taken from Volmert, A., Kendall-Taylor, N., Cosh I., & Lindland, E. (2016). *Cuing Context: Mapping the gaps between expert and public understandings of effective parenting in Australia*. Washington, DC: FrameWorks Institute.
- ²⁴ Glaser, B. G., & Strauss, A. L. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago, IL: Aldine Publishing Company; Strauss, A. L., & Corbin, J. M. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. (Thousand Oaks, CA: Sage Publications).
- ²⁵ For a discussion of sample size for cultural models analysis, see notably Quinn, N. (2005). Introduction. In N. Quinn (Ed.), *Finding Culture in Talk: A Collection of Methods* (pp. 1–34). New York: Palgrave Macmillan. See also D'Andrade, R. (2005). Some Methods for Studying Cultural Cognitive Structures. In N. Quinn (Ed.), *Finding Culture in Talk: A Collection of Methods* (pp. 83–104). New York: Palgrave Macmillan.
- ²⁶ See notably Glaser, B. G., & Strauss, A. L. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Chicago, IL: Aldine Publishing Company. See also Mason, M. (2010). 'Sample Size and Saturation in PhD Studies Using Qualitative Interviews'. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* 11(3). doi: 10.17169/fqs-11.3.1428
- ²⁷ Quinn, N. (Ed.). (2005). *Finding Culture in Talk: A Collection of Methods*. New York: Palgrave Macmillan.