We're now immediately faced with a question that will continually arise throughout this course:

**How many of a newborn infant's abilities are innate or inborn and how many have to be learned?**

This question is continually raised in many areas of child development and is often referred to as the **nature/nurture debate.**

**Nativists versus Empiricists**

On one side there are the **nativists** who believe that various aspects of behaviour are **innate**.

On the other side there are the **empiricists** who believe that these behaviours must be **learned** and are influenced by the child's experiences in their environment.

*Surprise, surprise, there are rarely any clear cut answers to support just one or other of these theorists!*

Take for example apparently clear-cut innate behaviours such as sucking and swallowing. Even this has been shown to be open to the effects of learning. **Cohen (1967)** found that babies who were restless and crying for a feed became quicker with practice at recognising the nipple, stopping crying and commencing sucking.

*We've introduced another recurring point here. In psychology there are very few black or white answers. Most are ultimately varying shades of grey. In looking at various aspects of development and behaviour we will consider the balance of* ***research evidence*** *which* ***supports*** *or* ***refutes*** *different theories.*

*This might mean that although we can quote several particular theories, often there are serious* ***criticisms*** *of these. We will always aim to* ***evaluate*** *these theories by considering both the weight of evidence to support them and specific criticisms of such theories.*

**SELF ASSESSMENT TEST 1**: In your own words try to explain the nature/nurture debate.

Use the space below to write down your answer and then compare it with the answer given at the end of the unit.

**Infant Reflexes**

All infants are born with several innate **reflexes**.

**A reflex is an automatic, involuntary response to a specific stimulus.**

Let's look at some specific examples of reflexes.

| **Stimulus** | → | **Response** |
|---|---|---|
| Food in the mouth | → | Produces saliva |
| Food in the throat | → | Swallowing |
| Food in the windpipe | → | Coughing to prevent choking |
| Puff of air into the eye | → | Blinking |

**SELF ASSESSMENT TEST 2:** Can you think of a reason why our bodies incorporate such reflexes?

As with all SATs, write your answer below, then check with the suggested answer at the end of the unit.

In addition to these basic **physiological** reflexes (all of which continue to be present throughout our lives), newborn infants possess certain **primitive reflexes** which a paediatrician will usually check as a guide to the **neurological** health of the infant.

These reflexes include:

**The rooting reflex** – if you gently touch the corner of an infant's mouth and pull your finger slowly towards their cheek, the infant will turn his tongue, mouth and even his entire head towards the stimulated side and attempt to suck your finger.

**The moro reflex** – in response to any sudden movement or noise nearby the infant quickly extends his arms and brings them together. Sick or premature babies often fail to demonstrate this reflex, though even in normal, healthy babies it often disappears after about 5 days.

**The Babinski reflex** – if the bottom of an infant's foot is stroked, he will first of all splay out his toes and then curl them in.

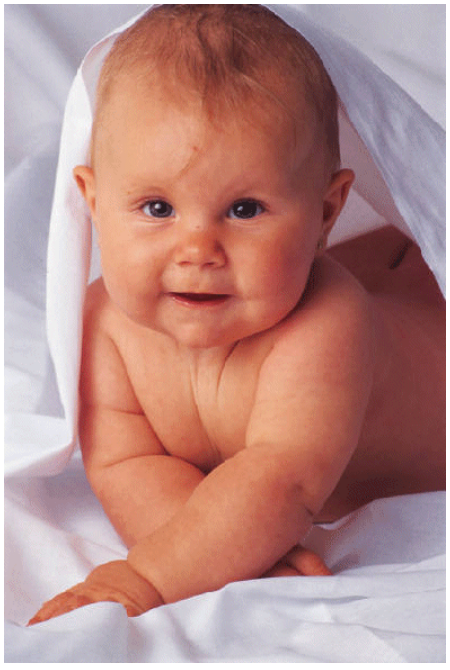
**The stepping reflex** – if the infant is held carefully with his head supported and gently lowered to a table top until his feet touch and his knees bend, his legs will straighten. Then, if he is leaned forward with his feet gently dragging on the table he will make a step-like movement.

*Do remember that all children are individuals and that even healthy infants will not display a reflex every time they are stimulated.*

*Even skilled paediatricians can't always persuade hungry/tired/unhappy/unco-operative infants to demonstrate a reflex.*

Also remember that right from the word 'go' infants clearly demonstrate **individual differences.**

*Many mums often say that they could identify specific individual characteristics in their children right from their first few days together on the maternity ward.*



**Binns (1965)** demonstrated this experimentally. He studied babies less than 5 days old and found clear differences in babies' reactions to being suddenly disturbed.

**ACTIVITY 1:** Talk to as many different mothers of two or more young children as possible. Ask them whether they noticed differences between their children during their first few days of life.

- What kind of differences did they notice?
- Have these differences remained?

*Those preliminary investigations will not only help you appreciate the way in which individual differences appear to operate right from the moment of birth but may also be of help to you in your individual investigation which you will conduct later in this course.*

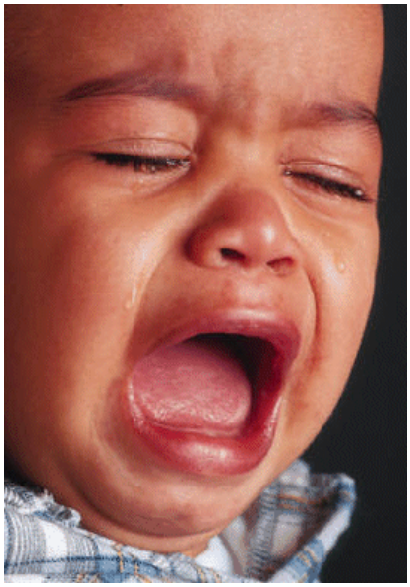
**Early Social Behaviour**

Probably **the** most important relationship an infant forms during the first year of life is with his/her mother.

*Just how soon does an infant begin to distinguish his/her mother?*

**Macfarlane** investigated whether infants could recognise their mothers by smell alone. She found that at two days old infants would turn their heads towards a stranger's breast pad as often as they did towards their mother's. However, by the time they were ten days old they showed a definite preference for that of their mother's.

**SELF ASSESSMENT TEST 3:** What conclusion would Macfarlane have drawn from this study?



**Social Interaction**

Human infants are really quite anti-social beings. They often seem to do little but cry, eat and demand changing!

One of the first ways in which they initiate **social interaction** is by **smiling**.

From about the second to the seventh month of life the infant will smile at whoever approaches and interacts with him. He will even smile at a very crude, oval-shaped piece of cardboard with two black dots painted as eyes **(Ahrens, 1954).**

In the second part of the first year of the infant's life a dramatic change takes place in how readily they smile at a stranger's face. Spitz clearly demonstrated this change.

| Age of children | Number of children | % smiling at strange face |
|---|---|---|
| 0 – 20 days | 54 | 0 |
| 21 days – 2 months | 144 | 2 |
| 2 months – 6 months | 145 | 98 |
| 6 months – 12 months | 147 | 3 |

This change in the infants' social behaviour is clearly related to their development of specific **attachments**, as we'll see in the next unit.

It's important to note that **cross-cultural studies** have noted similar types of behaviour in children throughout the world.

**SELF ASSESSMENT TEST 4:** Give a definition of what you understand by cross-cultural studies.