

ATTACHMENT: John Bowlby's theory and some subsequent research

John Bowlby is a classically trained psychoanalyst who sought to explain some observations that were not predicted by psychoanalysis. He did so knowing that theorists usually frame their theories within a particular intellectual context as Freud had done with 19th century Physiology and Evolution. Consequently, he decided that the two theoretical points of view he would use which were on the cutting edge of development in the intellectual world were Ethology and Information Processing (for which he used the phrase current in the 1950's "control systems"). Ethology is the naturalistic study of animal behavior within an evolutionary framework and is familiar to us through the work of people like Jane Goodall who studied chimpanzees and perhaps Conrad Lorenz who studied birds and particularly graylag geese.

When a woman in England gives birth to a child she is often encouraged to stay in the hospital for two to three weeks afterwards for what is called a lying in period. Many British medical personnel believe this is very beneficial for both mother and child as it gives the mother time to recover from childbirth without pressure to resume her normal work whether it is as a mother and housewife or outside the home work. Y Robertson was a woman who normally cared for children whose mother had gone into the hospital to have another child. She noticed that children from about one to three years of age became more upset at their mother's absence than did children both younger and older than this age. Mrs. Robertson and her husband, X Robertson, knew that there was nothing in psychoanalytic theory which predicted this difference in the level of upset shown by children of different ages on separation from their mother. In general psychoanalytic theory suggested that the younger the child, the more upset they should be. They consulted with John Bowlby who was a noted psychiatrist about the phenomenon. Bowlby then developed a theory which has come to generate widespread interest and a great deal of academic research.

In attempting to explain this difference in a child's level of upset depending on the child's age, Bowlby decided that there must be an instinct for maintaining proximity to their care-giver who was usually their mother. He called this instinct the Attachment instinct. According to Bowlby, for something to be called an instinct it must have four characteristics:

1. It must appear in all members of the species and be different from the behavior of other species thus he said the Attachment instinct was species wide and species specific. From the ethological point of view, other species might have similar instincts to one another and the degree of similarity will depend on the evolutionary closeness of the species.
2. Instincts are neither reflexes, nor simple stimulus-response activities but are predictable, complex, and integrated sequences of behavior with an obvious goal. So for something to be called an instinct it must have a goal and the infant must engage in a complex yet integrated series of actions obviously leading to the goal of the instinct.
3. The instinct should appear in some muted or altered form even when opportunities for its expression are absent. In other words it was an impulse born within the organism and seek expression rather than to be drawn forth as a reaction to particular stimuli.
4. The instinct should have obvious survival value for the individual organism in its environment of evolutionary adaptedness. That is the instinct should have helped the individual human child survive on the plains and in the forests of Africa where our ancestors most likely evolved from pre-human species into modern humans.

In addition, most instincts have what has been called a sensitive period. That is, they emerge at some particular stage in the development of the organism and often are not present at either earlier or later ages or stages of development.

From an information processing point of view an instinct is viewed as a built in control system for the behavior of the person. Control systems have these characteristics:

1. They are purposive. That is they have some easily identifiable function and control over the system is exercised in order to obtain that purpose.
2. Control systems obtain feedback as to the effects of their actions relative to the purpose of the

system. They have some mechanism to gather information and compare it to the goal which the instinct has evolved to obtain for the infant. Feedback is only information relevant to the goal and the effect of one's behavior in obtaining the goal.

3. Control Systems correct their actions with regard to the information they obtain in characteristic #2 so they keep moving toward their goal whatever the situation. In particular each control system must have a starting and stopping mechanism to turn on and off their goal-directed actions.

Bowlby wanted to show that all these criteria of both paradigms were met in saying that there is such a thing as an attachment instinct. What follows is his attempt to show that attachment behavior meets all these criteria.

First he defined attachment as a tendency in children from about one year of age to about 3 years of age to maintain proximity or control of proximity to an attachment figure. He said this period is initiated at about age one because that is when the child acquires object permanence which is an ability to appreciate that things have continued existence outside of the child's perceptual field. Bowlby said that the active period for the attachment instinct ends at about age three because that is when a child begins to have movement and communicative competence. That is, the child at about age three begins to be able to follow his or her parents when they move and so is less dependent on them to accomplish proximity. At age three the child is also able to communicate their needs verbally over a distance and so is less dependent on their parents to be able to see their situation and understand their needs.

The explicit behaviors Bowlby says result from this attachment instinct are to seek and maintain contact or control over contact with the attachment figure. He says that anxiety is the starting and stopping mechanism for the system. So that when a child feels anxious they seek proximity to a caregiver. Children often show anxiety when there is some disruption in this process of contact maintenance which leads to further anxiety and increased attempts to gain proximity or contact with the caregiver. He says that when the attachment figure leaves then the child usually protests and attempts to follow. When the attachment figure returns the child makes contact and is comforted by that contact. So from an information processing point of view the attachment mechanism is turned on and off by anxiety which can arise either from distance from the care-giver, loss of control over the distance from the care-giver or some other source. The system directs the child's behavior towards proximity or contact (the goal) in the presence of anxiety, notes (feedback) when anxiety is lessened and then turns the system off.

Bowlby notes that children typically exhibit a secure-base pattern of behavior. That is when children are anxious they seek contact with their care-giver. When they feel secure in their ability to maintain that contact and anxiety is low, the attachment system is turned off and another system is turned on. Usually the other instinctual system that gets turned on when the attachment system is turned off is the exploratory behavior system. So, in terms of observable behavior, what typically happens is that the child clings to the parent in an uncertain situation until the child feels a low level of anxiety. As the child feels secure the attachment system is turned off and the exploratory system is turned on. So the child begins to explore the environment which usually involves moving away from the attachment figure. When the child is frightened or gets far enough away it begins to feel anxious and the attachment system is turned back on and so the child returns to the attachment figure until the attachment system is again turned off. So children tend to exhibit an alternation of exploration and return to the attachment figure and to be comforted by this contact which is the predictable sequence of behaviors required for an instinct from an ethological perspective.

Another characteristic of an instinct from the ethological perspective is species width and specificity. Bowlby believes that this pattern of behavior is characteristic of all human infants in all cultures. Studies of infant behavior in a variety of societies have generally supported this claim.

The third necessity for an instinct is that it has obvious survival value. Bowlby claims that proximity to care-givers (usually parents) protected the child from predation, starvation, extreme temperature change, being attacked by other humans and various other disasters that could befall an infant. A number of studies have shown that children are less likely to die from a variety of causes when their parents are present than when they are absent in several contemporary societies including our own.

The last characteristic of an instinct is its muted development in the absence of opportunities for expression. Bowlby observes the continued approaches of abused children to their abusive parents as evidence of this. He also points to the work of Mary Ainsworth, Mary Main and Alan Sroufe (among many others) who show patterns in attachment behavior in response to parental behavior as evidence for this claim.

Mary Ainsworth created an experimental procedure called the "Strange Situation" in order to explore patterns of attachment. In the strange situation, a child is brought into a standard room with many toys on the floor in the center and three chairs along the walls (see Figure 1). Being in a new place usually makes young children feel mildly anxious. Then a standard series of events occurs.

1. The child's caregiver is told to sit in the corner and encourage the child to play with the toys and to minimize their interactions with the child besides encouraging them to play. They are left alone for 3 minutes.
2. A stranger enters & stays for 3 minutes - then caregiver leaves the child alone with the stranger for 3 minutes or until the infant gets too upset.
3. The caregiver returns & stranger leaves till the child resumes play.
4. The caregiver leaves the child alone for 3 minutes.
5. A stranger enters & attempts to comfort child for 3 minutes.
6. The stranger leaves as caregiver returns & comforts child.

Normal infants initially react with anxiety to any new environment including the Strange Situation, are comforted by caregiver's presence & begin to explore the room. They become anxious on stranger's entrance and either seek contact with or at least make visual contact with the caregiver. The caregiver's departure typically leads to obvious anxiety on the part of the child who may protest and attempt to follow the caregiver. Strangers typically cannot comfort the child. But the caregiver's return usually comforts child who becomes even more upset when left alone again. And usually the child is not comforted by stranger but is comforted by caregiver's return.

Children show several patterns of behavior in the Strange Situation that can be classified as A, B, C or D. In the type A reaction, babies do not appear comforted by the presence of the caregiver. They usually do not cling nor resist separation. They either do not greet returning caregiver or make abortive or partial attempts to do so. They often avoid contact with caregiver and ignore them. Babies exhibiting the A pattern have been found to have high levels of cortisol, which is a product of bodily tension, in their bloodstreams and tend to avoid tactile contact in general. In the strange situation they often engage in continuous exploration regardless of caregiver behavior. They often have flat affects. Main has called this "repression in service of attachment" as the avoidance prevents expression of anger and/or disgust toward the parent which might disrupt the child's remaining close to the parent.

Babies classified as showing type B behavior show the predicted pattern or close to it.

The type C behavior pattern is characterized by a baby showing nearly constant anxiety and a failure to exhibit the secure base pattern. They tend to show little exploration and to play with toys less than babies showing the A or B pattern. They often show either exaggerated or inhibited distress on separation. Some are very clingy and some seem apathetic and passive. Babies exhibiting the C pattern of behavior appear to have mixed feelings towards the caregiver. Many of these infants are hyper-vigilant toward their caregivers – continually watching or holding on to them. Some babies showing this pattern are passive and some seem continually angry.

Babies showing no clear pattern of attachment are classified as showing the D pattern of behavior. Instead of showing some particular pattern as do babies whose behavior is classified as A, B, or C, these infants seem to react in a disorganized manner that changes from time to time. They often seem fearful of their caregiver, sometimes ignore them, but also sometimes cling to them in an exaggerated manner.

It is important to remember that what is being classified is the child's behavior with regards to a particular caregiver and not their personality or character. There is no correlation between the behavior of infants with mother and with fathers so that their patterns of behavior are clearly relationship reactions and not personality characteristics.

The proportion of children whose behavior falls into the four categories differs from sample to sample. When three categories are used usually about 65% of the relationships are categorized as B; about 10% as A and about 25% as C. When four categories are used there is usually there is about 60% in group B, 10% in group A, 15% in group C and about 10% in group D and about 5% cannot be classified. In one sample of abused children about 70% were classified in group A with the abusing parent - but this sampling did not use the D category. Another researcher found about 80% of abused children belonged in category D.

In home visits with infants and their mothers, Ainsworth found four variables related to classification in the strange situation.

1. Mother's sensitivity to child: being attentive and responsive to child's signals. A kids mothers were more sensitive than A or D who did not differ from each other $B > AC$

2. Mother's Acceptance or rejection of infant: her feelings about baby. Accepting mothers cheerfully accepted responsibility of parenting while rejecting mothers were resentful, angry and disgusted by parental duties. $B > C > A$. B mothers higher than C, mothers who were higher than A mothers.

3. Mother's cooperation versus interference in child's activities: avoiding interrupting child versus imposing parental will and point of view on child. $B > AC$ B mother higher than A or C who did not differ.

4. Accessibility versus ignoring: tuning in and noticing what is happening with the child. Accessible mothers are more present in the moment. $B > AC$ who did not differ.

Mary Main found 70% stability of classification across 9 months of life. She suggests that children build mental schema of adult caregivers which become independent of situation over time and lead kids to react to others as they have reacted to caregivers. These patterns are changeable but tend to be self-perpetuating as they serve as the both the source for behavioral repertoire and the conceptual scheme to which new experiences are compared.

Mary Main also found she could predict the attachment pattern of children before they were born by interviewing their parents. Parents who were to have a child classified as A tended to be unrealistically positive about their own parents then contradict themselves. They also claimed their own parents had little or no effect on their own adjustment. Parents who later had babies classified as B tended to be realistic in discussing their parents strength and weaknesses as parents and to recognize definite patterns in their own lives as resulting from parental interactions. Parents who later had babies classified as C tended to be preoccupied with unresolved conflicts with their own parents and to lose track of their surroundings during their self absorption. Parents who later had children classified as D generally showed some marked disorganization or disorientation in their thinking or reasoning during discussion of traumatic events suggesting a degree of dissociation - many had suffered traumatic loss in the immediate past.

In conversation at age 6 children classified in infancy as:

B (secure) tend to tell stories with crises that are followed by happy endings. They describe what a child should do if separated from their parents, have a breadth of thought, have fluid conversations with their parents characterized by mutual listening and responsiveness.

A (avoidant) tell sad stories with no crises and without happy endings in which they are invulnerable. They tend to produce no realistic plans about what a child separated from their parents should do, have restricted affect, describe self as perfect, avoid looking at or telling stories about family pictures, and show no balance in conversation with parent.

C (ambivalent/resistive) tend to tell digressive stories with lots of activity but often without coherent plot. They tend to avoid thinking about separation from a parent, and to tell stories in which others experience

their emotions. They often describe themselves as vulnerable and helpless needing help from others.

D (disorganized) often act parental towards their parents in conversation and can be either punitive or nurturing toward the parent - often in exaggerated and inappropriate ways. They often ignore what their parents say and their conversations with their parents tend to have many false starts that fall flat from lack of response. They tend to have catastrophic fantasies and a negative self-concept. Their stories are often exaggeratedly loving and flowery or harsh and preoccupied with themes of death.

Researcher make the inferences from these observations that children organize their sense of self in reaction to their relationships with caregivers. They internalize interaction scripts from parental relationships and later use them as the bases for engaging in other social relationships. A babies minimize contact, C babies maximize it, and D babies alternate. Attachments are not necessarily positive but infants choose some form of attachment over no attachment. A, C, and D babies are also hypothesized to aid their parents coping through their attachment styles.

Please note that I have given you Bowlby's original theoretical formulation of Attachment here in order to show you how a modern theorist might develop a new theory. Bowlby has already revised the theory two or three times in response to the mountainous volume of research being done in the area of attachment. As more and more research is done the theory becomes fuzzier and fuzzier as all original statements need to be qualified.

Glossary of Terms

A Pattern of Attachment – an attachment pattern characterized by hostility toward and avoidance of the caregiver.

Anxiety – part of the starting mechanism for the attachment instinct.

Attachment – instinct for maintaining control over proximity to a caregiver active in humans from about age one to age three.

B Pattern of Attachment – a pattern of relationship between child and caregiver which follows the expected pattern including the secure base phenomenon.

C Pattern of Attachment – a pattern of relationship between child and caregiver characterized by the absence of the secure base phenomenon, high levels of anxiety and an ambivalent or resistive pattern of actions toward the caregiver.

Critical Period – age at which instinct or other aspect of development appears and operates influencing later development.

Control System – system designed to affect an aspect of the environment using feedback in a self-correcting process.

D Pattern of Attachment – a pattern of relationship between an infant and a caregiver characterized by instability and wide swings of emotional reactions.

Environment of Evolutionary Adaptedness – environment in which a species evolved and in which its

instinctual systems are likely to have survival value.

Ethology – the naturalistic study of animal behavior utilizing explanations drawn from an evolutionary framework.

Exploratory Instinct – theorized instinct to discover new information about the world through interaction.

Feedback – information relevant to the goal and operation of a control system.

Information Processing – computer science and the application of its principals to other fields.

Object Permanence – the ability to know that something exists outside of one's sensory experience.

Secure Base Phenomenon – the tendency of securely attached children to use their caregiver as a source of security so that they can lower their anxiety enough to engage in exploratory or other behavior – typically children contact the caregiver when anxiety is high then leave the caregiver when anxiety is low.

Starting and Stopping Mechanisms – the environmental information, data gathering system and set points for starting and stopping an instinctual system.

Strange Situation – an experimental technique developed by Mary Ainsworth to study infant attachment behavior.

Survival Value – the increase in fitness or ability to survive and procreate produced by an instinct or other characteristic of an organism.