12.2 Baby's early interaction: getting someone to feed it

An infant does not have a fully developed structure of elementary control units whose reference functions and perceptual input functions are simply sitting there waiting to be properly interconnected by reorganization. The baby may well have a genetic plan for the types of perceptual functions it will later develop and control, as it does for the development of its physical features, but as a newborn, and indeed for years thereafter, it does not have the perceptual functions it will have as a mature adult. At least for human infants, much of its developmental course depends on the environment into which it is born, an environment both physical and social, in which the actions of more mature people are crucial for the baby's survival.

As is the case for any organism, the infant stays alive by controlling various perceptions in such a way that its intrinsic variables stay within genetically determined limits. Like all living things, it can do this only by acting on its environment in ways that bring important controlled perceptions to, or maintain them near, their reference values.

Imagine a newborn infant left all alone for a long time. It might be able to cry, move its eyes and its various extremities, but, if it is alone, none of its actions upon its physical environment will provide it with food or water, and it will die. To control its perceptions effectively, it needs other people — or at least one other person. Almost the very first perceptual controlling it does must be social.

To control a perception such as the fullness of its stomach, the infant must act in ways that disturb some controlled perception(s) in another person so that the other person's control actions feed it. The newborn infant cries, not directing its output toward any particular end, and mother feeds it (Figure 12.6). Mother controls a perception of baby's happiness, and crying disturbs that controlled perception. If mother can do something to stop baby crying, the error in her controlled perception is reduced. Mother controls through baby, and baby controls through mother, though initially only through the side-effects of its actions.

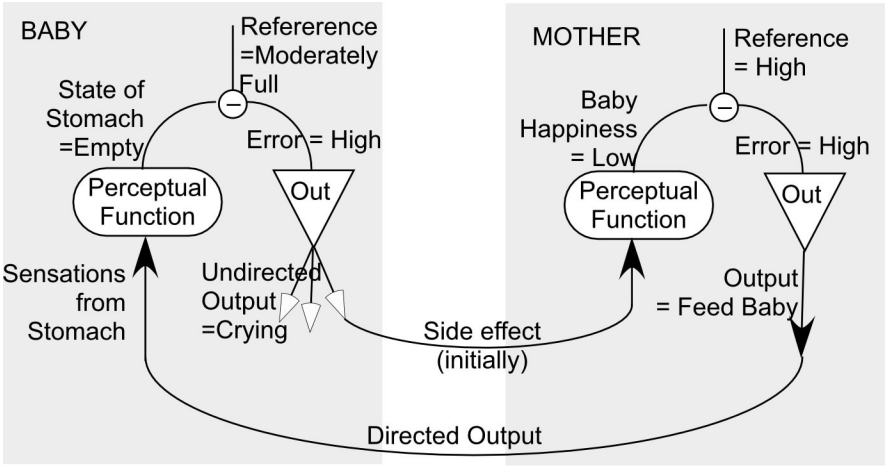

Figure 12.6. Schematic of what might be the first externally observable control loop of a baby. It is a social control loop, incorporating a controlled perception in the mother, the environmental feedback path of which passes through the social partner (baby).

Since baby has not yet reorganized, any connection between the sensation of an empty stomach and a reference for perceiving the stomach to be less empty must be genetic. The baby may not even perceive the state of malaise as "hunger" or "empty stomach", but what we, as Analysts, call "empty stomach" leads the baby to cry, and the crying stops when the malaise stops. Crying is by no means the baby's only output to the environment when it is hungry or otherwise discontent, though it is the only one shown in Figure 12.6. For example, the baby may output limb movements, facial expressions, and sounds of all kinds, and mother's "Baby Happiness Level" perceptual function might use any subset of these correlated features as possible contributors to her perception of baby's state of happiness.

Since according to almost any version of PCT "all [intentional] behaviour is the control of perception" the initiating partner's actions happen because some perception differs from its reference value. If the mother's actions do not reduce the disturbance caused by the baby's actions, in both partners a controlled perception remains in error.

In the Powers version of PCT, one consequence of failure to control a perception successfully is an increased rate of reorganization. The fact that the initiator's (baby's) environmental feedback pathway goes through another person (mother) is irrelevant to the reorganization process in either individual. On the other hand, if the two reorganizations fail to mesh properly, neither party will be able to counter the disturbances that influence their respective controlled perceptions. Accordingly, the two reorganizations will continue until both can control their relevant perceptions or until the baby dies. The reorganizations may eventually produce coordination, so looking from outside at both parties at once, we might consider this double process to be a single phenomenon we could label "co-reorganization".

If mother comes to perceive, say, that baby waving its left leg and right arm while voicing a rising tone means baby is hungry, and often feeds it after observing that pattern of behaviour, then baby will eventually reorganize so that its action outputs when it feels hungry are to wave its left leg and right arm while voicing a rising tone. Baby and mother together have learned a "word": Baby-hungry (according to mother's perception) = wave-left-leg-and-right-arm-and-make-rising-tone. But mother will not use that "word" to let baby know she is hungry. Even in natural languages, the words used for the same thing may, for cultural reasons, differ between protocol partners of, say, different gender or social standing.

More probably, if baby cries and waves its arms about because genetically it has been programmed to do so, and mother's midwife tells her that this means she should feed it, then those actions will continue to be used by baby and will become its "hungry-word". Moreover, mother will quite probably tell her friends who become new mothers that this is what babies do when they are hungry, so they will act in ways that induce their babies reorganize to use the same

“language” of gesture and sound when hungry. That kind of “hungry-word” becomes part of the public language of babies rather than being part of the private language of one mother-baby pair.

The action components of the “hungry-word” are not consciously chosen by the baby (who we will call “Ivan”), and could be any pattern of movements or sounds the baby is capable of producing deliberately. Rather, the structure of the “hungry-word” is the result of reorganizing the output components of the feedback loop involved in controlling the perception of general discomfort, which often includes empty stomach.

When the baby emits this initially arbitrary display, the mother (Cora) is likely to try feeding it. Feeding Ivan is her continuation protocol that complements Ivan’s initiating protocol and brings controlled perceptions in both mother and baby closer to their reference values. All language, whether in words or in gestures and facial expressions, can be seen as being, or at least as deriving from, the display element of a protocol. The concept of “language” is inseparable from that of a protocol.

It is crucially important to note the arbitrariness of the “hungry-word”. All words of every language (except for those that mimic non-language sounds) are equally arbitrary, whether they are purely voiced, use voice and facial or other bodily gestures, or are purely transmitted visually. Language is not limited to sound patterns, as the existence of various national sign languages communicated entirely through gesture attests. Collective control, as we shall see, stabilizes over time the words and larger constructions used for different purposes, but though this stabilization allows, indeed requires, adults to correct a child’s incorrect usage, maybe telling her that “farblig” doesn’t mean what you get when you cook slices from a dead animal, but what you get when you cook a whole dead animal. The word —any word — may have a correct usage within that community, and may had the same “correct” meaning for centuries, but its form is no less arbitrary for that. Indeed, if cooking whole animals goes out of fashion, “farblig” may come to mean simply “cooked meat”. An incorrect usage would have become correct.