17.1 A graphical depiction of the co-adaptational processes

As an analytic heuristic, to understand the dynamics of kama muta we can distinguish among three components. One component consists of the psychosocial processes that occur ‘within’ the mind and body—although these processes are tuned to be responsive to what goes on ‘outside’ the physical person, and function to act on the social milieu. One thing that partially distinguishes these psychosocial processes is that many of them occur very rapidly, in milliseconds or seconds, though learning and memory operate over much longer spans. The second component consist of sociocultural interaction processes in which people coordinate: the relationships among people. These processes tend to be slower, often taking minutes, hours, days, months, or years. This sphere includes much of the core processes of cultural evolution, which can stretch over many years. The third component consists of biological natural selection, based on inclusive fitness and, perhaps in exceptional circumstances, biological group selection. (We ignore isolating ecologies, genetic drift, founder effects, bottlenecks and other stochastic processes.) The processes of natural selection occur over many generations. These three components are outlined in Figure 17.2. We shall see that the three are not causally or systemically isolable, but each has a certain coherence.

Figure 17.2
Within the psychosocial component, the psype, responding to memory, imagination, fiction, or perception, generates a mote: the momentary kama muta event. This generative process is represented as the top arrow in Figure 17.2. In turn, the mote generates affective devotion and moral commitment to CS; this motivational process is shown as the lower arrow.

**Figure 17.3**

The psype is often activated by a culturally evolved driver; this effect is represented by the top arrow in Figure 17.3. Kama muta motes are intrinsically positive, rewarding experiences. Having experienced a mote when they participated in a cultural driver, people typically want to participate in the driver again (which may involve simply showing up, or taking steps to be eligible for admission, or organizing new events themselves). This re-enactment of the driver is a step in its cultural evolution: participants sustain or reproduce the driver. This is depicted in Figure 17.3, in the lowest of the curving arrows from mote to driver. An additional impetus for the cultural selection of the driver is that people usually like to tell others about their wonderful kama muta motes, attracting the listeners, readers, or viewers to engage in the driver. This is depicted in the arrow from mote to narrating, and arrow from narrating to driver. Finally, it is characteristic of kama muta that people want to share it, so they invite others to join them in the
driver. This is depicted by the arrows from mote to inviting and thence to driver. All of these curved arrows are cultural evolutionary paths that sustain and reproduce the driver.

In addition, narrating kama muta (in which we mean to include depicting motes in theater, art, texts, photographs, movies, or any other medium) typically activates the perceiver’s psype, which is shown in Figure 17.4 in the arrow from narrating to psype. Also, when a person displays kama muta, this also often triggers the psype. This is shown in the arrows from mote to kama muta display and thence to psype. In a broad sense, the driver encompasses these acts of display and narrating, so we have drawn a light ellipse around them.
The driver only functions in a psychosocial environment in which people have psypes that respond to it. The more people have psypes that respond to the driver, and the more sensitive those psypes are to such drivers, the more strongly the driver is culturally selected. This is shown in the top arrow, from psype to drivers. For the most part, the direct effect of the psype on the creation of drivers occurs mostly through unconscious neurocognitive mechanisms, i.e., intuitively or spontaneously. But sometimes, perhaps, when drawing on cultural folk psychology—or, henceforth, drawing on kama muta theory—people may reflectively intend to invent or refine drivers.

The more a person feels the need for CS, the more they will want to participate in a driver that intensifies CS. In Figure 17.5, this is shown at the arrow on the top right, from felt need for CS to driver. In the limiting case, the person seeking CS might be unaware of the kama muta motes that people experience when they participate in the driver; the person might simply want to do something together with others, to be included. Or they might (reasonably) expect that joining others in the driver gradually augments CS among participants. They don’t need to know the mechanism to know that those folks who do that driver thereby create CS bonds with each other. So the need for CS directly attracts people to engage in the driver.
Commitment and devotion to CS motivate people to do CS—to enact it by kindness, compassion, mutual support, and so on. This builds the CS bond among the participants, so that the person’s partners are motivated to commit and devote to the relationship, and consequently participate more actively and further build the relationship. This feedbacks to further strengthen the first person’s devotion and commitment. In Figure 17.5, near the bottom left, this is shown in the two-way arrow between CS commitment and CS performance, together with the two-way arrow between CS performance and other’s commitment and performance. Beyond the performance of CS in general, commitment to CS stimulates the persons to engage in consubstantial assimilation such as providing food, commensal eating and drinking, affectionate touch, and dancing in synchrony. This consubstantial assimilation greatly deepens the person’s partners’ CS commitment and performance—but often gradually, without activating the psype. This is shown at the bottom center by the arrow from consubstantial assimilation to others’ CS commitment and performance. Taken together, mutual commitment, performance, and consubstantial assimilation are what comprise a CS relationship, so they are surrounded by the large ellipse to indicate this. Simply put, the psype generates motives that strengthen a person’s CS relationships, or create new CS relationships.

The more that a person’s CS partners are committed, devoted, and engaged in performing a CS relationship with the person, the more they are disposed to participate in the driver that strengthens this relationship. Indeed may feel obliged and be socially pressured to do so. That is, to join in kama muta drivers with your fellows is an affirmation of the CS relationship, while failing to join in is a rejection of that CS. This is shown in Figure 17.6 by the arrow on the right that goes from others’ CS commitment and performance to driver.

The psype responds to others’ unexpected or extraordinary performance of CS: new, exceptionally generous, or selflessly loving acts intensify CS. Furthermore, the operation of psype is moderated by the prior existence of CS or disposition to form CS. That is, a prior CS bond may make a person more open and receptive to sudden CS intensification. In addition, sometimes sudden or wonderful acts of consubstantial assimilation directly activate the psype. These two processes are shown by the long looping parallel arrows that extend all the way around from consubstantial assimilation to psype, and from others’ CS commitment and performance to psype.
These sociocultural and psychosocial processes affect and are affected by processes of biological natural selection. That it, they are linked to inclusive fitness (and perhaps sometimes to biological group selection). A person’s CS partners’ commitment and performance enhance the person’s fitness, often crucially so. CS partners are often close kin, and to the extent that they share genes, a person’s own CS performance enhances the person’s inclusive fitness when the performance benefits those kin preferentially. These effects on survival and reproduction are depicted as the arrows (at the lower right) from the person’s CS performance to their inclusive fitness, and from others’ CS commitment and performance to inclusive fitness. Also, the biological survival and reproduction of a person affect the sociocultural survival and reproduction of the institutions and practices they participate in, including kama muta drivers. Also, to the extent that CS relationships augment fitness, natural selection directly favors the evolution of felt need for CS. And natural selection favors the evolution of the psype because the psype mediates the commitment to CS that enhances inclusive fitness.

That's the complete model, shown in its entirety in Figure 17.7. It's more complex than an ideal model, but its lack of parsimony is more than compensated by what the model shows about the
interdeterminacy of psychological, social relational, and evolutionary processes. Each of these three types of processes, operating at very different rates, enables, constrains, and shapes the others. The psychological mechanisms, including the psype, presupposes, depend on, and derive from the sociocultural processes. Those sociocultural processes reciprocally presuppose, depend on, and derive from the psychological mechanisms. Both psyche and social relations are enabled and constrained by processes of natural selection, while natural selection is conditional on, and operates with respect to the dynamic subsystem linking psyche and social relations. In humans, psychological dispositions that are appropriately responsive to cultural circumstances afford social relationships that are crucial to survival and reproductive success. Or, to put it another way, natural selection on Homo sapiens operates on culturally informed and oriented patterns of social relations. And those processes of natural selection in turn favor the evolution of psychological dispositions that enable culturally-tuned adaptive social relationships.

The figures make salient the fact that the processes diagramed are positive feedback loops, yet all of the entities certainly do not recursively intensify without limit. This implies that there are unknown damping effects or negative feedback loops kicking in to check the recursive explosion. The graphic depiction of the model makes this point salient in a way that no verbal explication would be likely to.
Even when we build them step by step, these are complex figures, impossible to fully apprehend at a glance. For certain purposes, we can depict the dynamics more parsimoniously, ignoring many of the complexities. Figure 17.8 simplifies in this manner. Though less complete and hence less valid, simpler models are more elegant and comprehensible.

As depicted in Figure 17.8, the essence of the dynamics of kama muta is that the activation of the psype generates a mote, along with commitment and devotion to CS. That motivation reinforces the CS relationship, which contributes to the participants’ inclusive fitness. The participants enhanced chances for survival and reproduction confer a selective advantage to whatever variant(s) of the psype generated the mote, and so forth. At the same time, the very positive experience of the mote induces the person to engage again with the driver that evoked it; they also tell others about the driver, recruiting them to participate, while still others simply observe the joyful mote and hence join in the driver to enjoy it themselves. Furthermore, incorporation in the newly created or reinforced CS relationship leads participants to re-engage with the driver that sustains it, which indeed may be construed as its defining activity.
The psype can be activated by a driver, or it can be activated by the opportunity for a new or enhanced CS relationship such as holding your baby, receiving an unexpected or extraordinary kindness, or being reunited with a loved one.

This graph diagrams the dynamics paths of every instance and type of kama muta we have considered in this book. The reader might find it illuminating to trace the paths that are active in cases of particular interest to her or him. We illustrate with just one. A person participates in a religious service focused on union with a loving deity, singing in the choir. The service, including the music, is the driver that activates the psype (shown as the arrow from driver to psype), evoking the religious kama muta mote of feeling the god’s love (arrow from psype to mote), out of which grow affective devotion and moral commitment to the deity and to the congregation (arrow from mote to CS commitment). The resulting enhancement of the CS with the deity and the congregation motivate further participation in future church services, while the desire to share motes of this kind motivates the person to recruit others to join (both diagrammed as the arrow pointing up from CS relationship to driver). More immediately, the positive mote is rewarding, conditioning further participation in church services, which occasion reactivation of the mote again (diagrammed as the arrow from mote to driver). The CS relationship with the congregation affords trusting cooperation in work, compassionate caretaking when ill or injured, kindness to kin, commitment to mutual support in warfare, and so forth (diagrammed as the arrow from CS relationship to inclusive fitness). As diagrammed by the arrow from CS relationship to inclusive fitness, all of this enhances the participant’s inclusive fitness, which—in the long run—favors the selection of variants of the psype that are responsive to the worship driver (diagramed as the dashed natural selection arrow from inclusive fitness back to the psype). Furthermore, engagement in mutualistic CS with members of the congregation who are similarly devoted and committed affords myriad opportunities to experience caring and kindness that again activates the psype (diagramed as the arrow that loops around from the CS relationship back to the psype).

In order to be graphically intelligible, the figures—and the verbal exegesis of them, have ignored a vital aspect of the kama muta dynamics: the cultural preos that specify how, when, with whom and with regard to what each of the processes operates. Figure 17.9 illustrates this point. The psype generates motes which are culturally performed by the relevant preos, along with CS commitment and devotion that is culturally appropriate, according to the preos that are operating to orient and shape the motives. This commitment and devotion supports a culturally informed CS relationship. Local preos determine how people implement the CS relationship, and hence its effects on inclusive fitness. Increasing the inclusive fitness of the actors selects for the variant of the psype that we began with. At the same time, in a manner determined by the operating preos, the person’s engagement in the newly formed or enhanced CS relationship makes the person more prone to re-enact the driver that evoked the psype in the first place. In turn, mediated by various preos, the re-enactment of the driver re-activates the psype.
In addition, the rewarding experience of the mote motivates a person to seek further participation in the driver, while their performance and narrative reports of the mote attract new recruits to participate in the driver.

The phylogenetic origin of the psype must be maternal bonding with their offspring, evolved into pair bonding along with paternal bonding with infants. In humans, even bonding with one’s newborn is mediated by preos: Is the father present, or when and how does he see his infant? Who are the birth attendants who may also bond with the newborn? Is the infant immediately taken by nurses or midwives to be cleaned, weighed and measured, swaddled, briefly shown to the mother, and then taken off to a nursery? Or is the newborn put immediately on the mother, before the cord is even cut? Who holds the infant—or is she in a crib? Likewise, every act of kindness is profoundly shaped by preos. It might seem that a reunion is simply a reunion, activating the psype in a manner unmediated by culture. But this is not so. For example, when a Moose man returns to his village in Burkina Faso after years of work abroad, he may have been entirely out of touch with his family, who may not even have been sure he was alive. Returning, he walks silently through the village without speaking to anyone or being spoken to, going straight into his family compound. There he exchanges very formal greetings (without touching anyone), sits down alone, is formally given water and then food, and is greeted very formally and at length by each member of his family, and later by neighbors and friends. Over the following days he pays formal visits to village leaders, and then his neighbors and friends. There are no hugs or kisses here, in this situation or any other that I ever observed. There are no exclamations; I don’t know whether there are private tears. In contrast, recall that in some traditional South American villages the returning person would stop at the edge of the village for women to gather and cry over him, lamenting about the misfortunes the village had suffered during his absence and weeping over the hardships of his journey. Every culture has its routines and rituals of birth, beneficence, and return. The preos for these are indicated in the upper right of Figure 17.9.

With a set of prototypes and precepts, a particular culture may constitute a loving deity, specifying what love from and to the deity consists of. Together with these, the culture will provide precedent practices that enable a person to express her love for the deity. Such a culture will also offer paradigms for sensing this love, along with preos for feeling it, for performing it, and for relating the experience. The culture will also provide prescriptions for acting on the devotion and demonstrating the commitment. Together, such a set of particular preos, specific to a particular culture and context, make it possible for a person to have kama muta motes with Krishna, the Buddha, Allah, Jesus or the Virgin Mary, as the case may be. Without all of these preos to trigger, enable, inform, and orient the psype, no such religious kama muta mote could occur. Likewise, without the culturally produced and interpreted geography, architecture and artifacts of some certain shrine, along with narratives of the paragon who was or there, as well as pilgrimage precedents, there is no holy site, and hence there could be no kama muta mote of arrival at it. Without a stupa there is no stupefaction.
Note again that these processes operate at very different time scales: the psychosocial processes typically in second or less, the sociocultural processes typically in hours, days, or weeks, and the biological fitness (survival and reproduction) processes over generations. As in the previous diagrams, the arrow from inclusive fitness to psype is dashed to indicate that this link operates orders of magnitude more slowly than any of the others.

Figure 17.9 shows the preos as in between the entities such as commitment and relationship, mediating the dynamic links among them. But it would be equally true to construe the preos as features of the entities themselves. For example, all commitments are culturally informed and oriented with reference to the apposite preos. All CS relationships are culturally implemented according to the precedents, prototypes, paradigms, and precepts that the participants apply to the particular context in the specific culture. Graphically depicting the preos in between the entities simply highlights their processual nature. Furthermore, while the entities (psype, driver, etcetera) are lexically represented in these figures, they are not static ‘things’. They are all dynamic processes. So in an important sense it is somewhat arbitrary what to depict as an entity and what to depict as an arrow linking the entities. Really, it’s all arrows—all process. Like any good model, to clarify some aspects of the phenomena, it obscures others.