

“Kama Muta” or ‘Being Moved by Love’:  
A Bootstrapping Approach to the Ontology and Epistemology of an Emotion

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In English, people speak of *being moved*, *touched*, or *overwhelmed with emotion*, having a *heart-warming*, *tear-jerking*, or *poignant experience*, feeling *nostalgia* or *sweet sorrow*, and the *rapture* of divine love. People also have feelings evoked by cute babies or adorable kittens, and feelings that occur when feeling one with nature or the cosmos – neither of which feelings has a clear and definite name in English. Three years ago we began exploring what seems to be the emotion common to these experiences. To avoid the ambiguity and unwanted connotations of vernacular terms varying across languages, we call this emotion *kama muta* (Sanskrit for ‘moved by love’). We also coin this scientific term because we think that people aren’t entirely consistent in their use of any vernacular term, so that sometimes, for example, a person says they are *moved* when they are feeling awe or sadness, not *kama muta*. And because we believe that people feel *kama muta* about kittens and the cosmos, without being able to give their feeling a name. Moreover, being *moved* denotes approximately the same set of experiences as *gǎn dòng* (Mandarin 感动), Malayan-Indonesian *terharu*, Estonia *olema puudutatud* and

*olema liigutatud* – but not exactly. These vernacular lexemes are the best translations for each other, but do not have precisely the same prototypes or fields of reference; so which term would we use? And while English speakers who say they are *moved*, *touched*, *overwhelmed with emotion*, having a *heart-warming*, *tear-jerking*, or *poignant experience*, feeling *nostalgia* or *sweet sorrow*, and *rapture* usually are referring to the same emotion, each of these lexemes encompasses some relationship-specific and context-specific aspects of experiences; which English term would we select to denote the intersection of these terms? So we call the emotion we are studying “kama muta.”

Our endeavour is based on the assumption, not undisputed in emotion research, that there exists a set of universal, evolutionarily prepared innate mechanisms for generating emotions. That mechanism, however, does not work in isolation, but expects and requires cultural completion (Fiske 2000). An emotional episode consists in a pattern of coordinated changes in physiology, affect, cognition, and behavior. We assume that such an episode can be categorized as an instance of an emotion when these coordinated changes have certain attributes, as we will detail below. It is important to mention here already, that while cognitions and motivations vary greatly between emotional episodes and cultures, we believe that it is possible to diagnose certain core themes common to all episodes of a particular emotion. To do so, however, requires good knowledge of the culture where one investigates this, in order to recognize the specific cultural forms and underlying structures. Our empirical approach presented here is designed to collect evidence regarding one emotion. We will come back to this at the end of the chapter.

We’ve found that kama muta is common and important in both everyday life and pivotal rituals across diverse cultures. Yet it has rarely been studied or theorized, and the few scattered articles about it had not been linked. This gave us both the freedom and the challenge to determine whether kama muta is a distinct emotion in the sense explained above, and if so to characterize its defining features, to discover what evokes it, to identify its motivational effects, and to illuminate its social relational functions. Moreover, we had to address head-on the question of whether linguistic labels and self-report are valid guides for identifying, delimiting, and classifying emotions. We had to decide how to deal with differences across languages in the meanings of lexemes denoting what may or

may not be ‘the same’ emotion – and in some languages, such as Hindi/Urdu, Bikol, and Ancient Greek, the apparent absence of any specific corresponding lexeme. Most crucially, we had to try to figure out valid methods for identifying instances of an emotion from self-reports of informants speaking different languages, from ethnographies and historical accounts, from classical texts, from observations and reports of others, and, of course, in the personal experiences of the three of us across a variety of occasions. In this chapter, we discuss our approach to these issues. Moreover, we tackle the issue of what aspects of *kama muta* are universal and what aspects vary across cultures.

### **Ontology and Epistemology of Emotions between Psychology and Culture, or Why We Need a Bootstrapping Approach**

How can we know that an emotion ‘exists,’ consisting of some set of attributes, delimited by boundaries that distinguish it from other emotions and states, and with distinctive causes and consequences? Also, how do we know that you and I are experiencing, or have experienced on particular occasions, ‘the same’ emotion? Indeed, how does a person know whether an emotion that she experienced today is the same as the emotion she experienced last week — and how do we know this about two emotional experiences of someone else? How can we identify the emotions represented in primary texts, ethnographies, and histories? How do we know whether people in different cultures or at different points in history have ‘the same’ emotion? Or rather, in what respects will an emotion be the same across culture and history, and in what respects may it differ, yet still be recognized as the same species? Mastiffs and Maltese are both dogs. Tamil and Tumbuka are both languages. Orgasm in ancient Egypt and orgasm in contemporary Papua New Guinea are both orgasm – though participants’ concepts and lexemes for sex differ, as do many aspects of their subjective experience of copulation and its social meanings. Are a 3<sup>rd</sup> century BCE Indian worshipper’s *bhakti* from being in love with Krishna and a contemporary Norwegian child’s *rørt* from watching a Pixar movie both *kama muta*?

After pondering similar questions, in the third generation of their classic chapter on the cultural psychology of emotions, Shweder, Haidt, Horton, and Joseph (2008) concluded on a hopeful note: “It is one of the great marvels of life that across languages, cultures,

and history, it is possible, with sufficient knowledge, effort, and insight, to truly understand the meanings of other people's emotions and mental states" (p. 424). But they add that it is "one of the great ironies of life ... that the process of understanding the consciousness of others can deceptively appear to be far easier than it really is" (p. 425). This may be especially so because, as they also point out in that chapter, the affective, cognitive, and behavioural processes making up what we know as an emotion are fast, efficient, and largely automatic, giving emotions almost perception-like qualities, where it becomes difficult to distinguish between the mere apprehension of an event and the emotional effects we feel from it.

How do we attain the sufficient knowledge and insight? The questions above are epistemological questions, but they can only be answered with respect to ontological assumptions about what 'an emotion' *is*.

The epistemology becomes especially complex when we posit that emotions are likely to be polythetic categories, which must be characterized by the total 'score' based on the total degree of presence of features from a weighted list.<sup>1</sup> For example, we might say that a person experiences emotion X if their total score is  $\geq 10$ , where the score is the sum of the intensity of features from a list of eight, where each feature may be weighted differently. Perhaps crying might be weighted more than being choked up. The weight of a feature might be multiplied by its intensity, such that, for example, if a person is crying intensely, that would count more than if a person merely had moist eyes. A valid ontology may require a more complex criterion: for example, we may want to say that a person is experiencing emotion X only if their total score is  $\geq 10$  *and* at least 2 of the first four features are present. Then no matter how intense features 5–8 are, this isn't an instance of the emotion unless two of the first four are present. Or the score could be computed as an interaction such that crying, goosebumps, and a warm feeling in the chest occurring *together* might be given a score greater than the sum of the scores of the three components when they occur alone. Such an ontology — which we think is valid for emotions and many other psychosocial entities — is an epistemological challenge because when we start to investigate some phenomena that might constitute 'an

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<sup>1</sup> DSM diagnoses are formulated somewhat like this.

emotion,' we don't know a priori how to identify the features, let alone how to weight or combine them, and whether some of the features are crucial. Of course, this would not be an issue if the emotion were characterized by a unique 'facial expression' or any other necessary and sufficient feature but we don't believe this is necessarily true of kama muta (or perhaps any emotion). Note that although polythetic categories do not have necessary and sufficient features, they are definite and discrete – they don't have the fuzzy boundaries of Wittgensteinian family resemblances.

The epistemology of emotions is especially challenging if we acknowledge that a person experiencing an emotion, or an observer, may not be aware of a feature, may be dimly aware of a feature but not attend to it sufficiently to encode it as a meaningful aspect of experience in long-term memory, may interpret a feature as something else, may not be able to recall the feature as an aspect or instance of X, or may wish or need to report it as something else. That is, features of emotion X may go unnoticed, be forgotten, go unreported, or be reported as something else.

Yet inevitably, language is a primary source of evidence about others' emotions, and a primary medium for remembering our own emotions. When studying people who are not present, and especially for people in the past, language is virtually the only means of knowing about others' emotions, though images, including art, may also be informative. Language is an inexact medium for representing emotions, their features, their eliciting circumstances, their significance and consequences (S. Fiske 1995). Individuals use language differently on different occasions, and no two people use a language quite the same way. Dialects vary, along with local practices of language use. Moreover, lexemes do not directly correspond to emotions or their features in any direct one-to-one mapping. Moreover, a word or phrase in a given language may denote only a subset of the experiences of a given emotion, or, conversely, may encompass more than one emotion. The same problems of messy and uncertain correspondence obtain for lexemes for emotions and for features of emotions. What counts as *to weep*? What counts as *pleurer*? Informants within and between cultures may have differing ideas of what constitutes *tears* or *pleurer*, and hence differ in what they are reporting. Language is the primary lens for studying emotion, but it is a distorting lens, typically focusing too broadly or too narrowly, representing selectively or misrepresenting the shapes and colors we

see through it. And of course to the extent that emotions, their features, their eliciting conditions, their moral implications, or their motivational affordances do not become encoded in declarative semantic or narrative memory, or are encoded in a distorted or inconsistent manner, explicit language will be an inadequate or even deceptive guide to emotions.

Furthermore, we can expect each language to filter or distort in distinct ways. Each language divides the space of emotions into more or less different categories – and it requires careful investigation to determine how different, and in what ways. A given language may lack any lexeme for emotion X, may subdivide X into a number of categories denoted by different lexemes, may have lexemes that denote specific combinations of emotion X with emotions Y or Z, or may have a lexeme that denotes ‘either X or Y or some types of Z.’ This makes it challenging to compare emotion reports from different languages, or even from ‘the same’ language spoken in different communities or at different times.

Moreover, each culture has its own folk psychology of emotions, its own emotional practices, and its own distinctive prescriptions for experiencing, communicating, and evoking emotions (Shweder et al., 2008).<sup>2</sup> This folk psychology – often explicit in articulate discourse and texts, always implicit in practices, motives, and evaluations – is associated with, but goes far beyond, the lexicon of the language. And it shapes self-report and others’ reports of psychological states: people tend to notice and interpret experience through the filter of their ethnopsychology, to make inferences and judgments with reference to their ethnopsychology, and to construct memories and communicate to others through cultural schemas from their ethnopsychology. Experiences and their perception, recall, and report are always at least to some degree formulated *through* the perceiver’s explicit or implicit ethnopsychology.

This is one of the reasons why we should not mistake people’s theories of psychology for veridical accounts of how their minds work. People have very incomplete, inaccurate, and misleading understandings of their own and others’ psychology. Only academic

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<sup>2</sup> See for instance the insightful account Cassaniti (this volume) gives of the Thai Buddhist folk theory of emotionality.

psychologists understand such mechanisms as Herrnstein's matching law, negativity bias, source memory errors, dissonance, etcetera. Conversely, many people think dreams predict the future. And of course people constantly engage in all sorts of habits, practices and activities without knowing how they do them, and sometimes without being fully aware *that* they do them at all. In short, informants' language, beliefs and explanations may be informative in various respects, but cannot be uncritically relied on as valid accounts of how their minds or social relations actually work.

Yet beliefs about psychology feed back to shape people's experience and, above all, their representations and understandings of their experience. Both experience and memory are active processes of construction; while much of the raw material is sometimes sensory, the builder is cultural, and the builder constructs experience and memory according to the plans provided by cultural ethnopsychology. So, among other biases, people notice, remember, report, and actively construct – invent, even – the aspects of experience they have words, concepts and metaphors for, that they believe that people like them have, or should have, or are admired for having. Generally they are unaware of this ethnopsychological shaping of their experiences.

Every action, motive, sentiment, evaluation, or emotion is the product of interactions between evolved psychological proclivities and cultural transmissions, including but not limited to ethnopsychology. Moreover, humans being born so neotenuous, with so much neural development still to occur after birth, most human capacities and habits emerge slowly, as the expression of genes interacts with the sociocultural environment. So we can never observe pure endogenous psychological proclivities that have not been shaped by culture. As a psychological proclivity develops, it is informed by the culture in which it emerges. Moreover, the aspects of emotion and action that have psychological roots and those that have cultural roots are not distinct: It's not that certain features are psychologically inherited, while others are culturally inherited — all the features of an emotion are generated by the interaction of psychological and cultural processes. An emotion is thus a category whose defining features take on a variety of cultural forms, and one needs cultural knowledge to recognize the common core among these diverse forms.

By 'psychology' we mean here the innate, biological, ontogenetically-emergent aspect of human minds. By 'culture' we mean whatever people become able to do, disposed to do or actually do; and whatever technologies, architectures, landscapes and environments they can use by virtue of participating in a particular social system. Though this is a productive metatheoretical heuristic contrast, practices or institutions result from complex combinations: there are no purely psychological actions, nor any purely cultural practices or institutions.

This means that deciphering the nature of psychology and the nature of culture go hand-in-hand. You simply cannot study one without studying the other (for a similar point, see Henrich, Heine, & Norenzayan, 2010). In particular, if we want to study an emotion, we must compare and contrast that emotion across cultures. We need to know what's more or less the same across most cultures, and what varies. We can't discern the central tendencies (some of them resulting from psychology, some from common emergent cultural processes) without studying the population variance. That is, we can't understand what an emotion *is* without collecting evidence about 'the emotion' across a wide range of cultures. But this ineluctably brings us back to the starting point: In order to make broad comparisons of the emotion across a broad range of cultures, we have to recognize instances of that emotion in each culture (or be able to determine that it's absent in a culture). How do we recognize instances of the emotion (if there is actually an emotion there at all) when the emotion is a polythetic category? How do we recognize instances of the emotion when each culture has its own speech practices, its own folk psychology of emotions, its own emotional practices, and its own distinctive prescriptions for experiencing, communicating, and evoking the emotion? How do we recognize instances of the emotion when it is not likely that any language has a lexeme that precisely, specifically, and distinctively identifies an entity that comprises the whole emotion and nothing but the emotion? How do we deal with varying cultural practices and norms about attribution, disclosure, gossip, or confabulation about mental states?

The study of emotions thus presents an inevitable conundrum. We believe one, and probably the only, solution to it is to use a bootstrapping approach. The basis of this bootstrapping approach is broad observation and comparison, from which one hopes to inductively construct an orienting theory. Obviously, previous psychological,

anthropological, and biological theorizing and evidence must be carefully examined. The theory must explain the features of the emotion that define the phenomenon. Moreover, the theory should explain the functions of the emotion, hence the conditions under which it is likely to be evoked, its implications and its sequelae. Ultimately, the theory must explain why and how the emotion is at the same time psychologically *and* culturally evoked, oriented, and informed. Equipped with such a theoretical starting point, researchers can compare self-report and observation, connect psychology to culture, seek to identify empirical patterns, generate and test hypothesis. Crucially, this bootstrapping process will entail many iterations of refinement and falsification in different cultures (Shweder, 2014).

### **A Bootstrapping Approach to Kama Muta**

So how are we studying the emotion which we call kama muta? We have interviewed native speakers and scholars of a number of languages, either asking for translations of the English lexemes, or by starting a description of the prototypical situations evoking Kama Muta, and describing the prototypical bodily sensations or manifestations. In most cases, our interviewees readily reported lexemes that seemed apt. In French, the principal terms for this emotion are *émouvoir* and *toucher*, with approximately the same literal meanings as their English cognates. Likewise, the Spanish is *estar conmovido*; similarly, the Portuguese is *comovido (comover)*, and the Italian *commuovere/commozione (commuoversi)*; all of these literally mean, ‘be moving with’). The corresponding German, Dutch and Norwegian terms, *bewegt sein, gerührt sein; bewogen zijn, ontroerd zijn, geraakt zijn; and bli beveget or bli rørt*, all mean ‘be stirred’ (as a liquid is swirled or mixed) or ‘being moved’. In Russian, the closest term is *быть растроганным (byt' rastrogannym)*, literally, ‘be touched’).

In the Uralic language family we find similar terms. In Estonian people say *olema puudutatud*, (literally ‘be touched’) and *olema liigutatud* (‘be moved’), as well as *olema hingepõhjani liigutatud* (‘to be moved to the bottom of one's soul’) and *olema pisarateni liigutatud* (‘to be moved to tears’). Similarly, in Finnish, ‘moving’ is *liikuttava* and ‘moved’ is *liikuttunut*; a term for this emotion when it is more intense is *koskettaa*, ‘to touch’ and *koskettava*, ‘touching’; again, these words have the literal physical meanings of their

English glosses. In Hungarian, there is *megérintett* (literally, to ‘move’), and *megérint* (literally, ‘to touch’).

In Mandarin, it’s *gǎn dòng* 感动; literally, ‘to feel movement’); Korean and Japanese use the same characters with the same general meaning. The Indonesian words are *terharu* and *keharuan* (a cousin of compassion and pity; Shaver, Murdaya, & Fraley 2001). *Terharu* seems to have no other non-emotional, physical meaning.

These terms in these respective languages and others definitely have substantially overlapping denotations, though their meanings are not identical. That congruence increases our confidence about the ontological status of kama muta. Our confidence is bolstered by the fact that in most of the languages we have explored, the words for kama muta have literal meanings of passive physical motion or passive physical touch.<sup>3</sup>

But, one might ask, how do we know that these lexemes actually *do* denote instances that are mostly kama muta? There are two bases for these translations. First, very similar, well delineated and particular situations evoke the emotion most commonly denoted by each of the terms. For example, when we show the same videos to US, Norwegian, Israeli, Portuguese, and Chinese, participants, they use the terms we have identified, and report corresponding physical sensations. We also find these sensations reported in ancient texts. Our approach thus decomposes the emotion into several components and compares these components across cultures, both to see whether they are the same or different, and to see whether they are linked together in the same or different manners. Various theorists have put forward different lists of components of emotion. Shweder et al. (2008) advocated investigating the following components: (1) Somatic experience, (2) affective phenomenology, (3) environmental determinants, and (4) whether they are seen as significant, (5) normative social appraisal of experiencing or expressing the emotion, (6) impact on self-management, (7) communication and symbolization of the experience including facial and postural expression, (8) social

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<sup>3</sup> The identification of these terms requires corroboration; we invite readers to comment on them, as well as suggesting corresponding lexemes in other languages. One way to share translations is to post them online at <https://www.facebook.com/beingmoved>

management by others. In the text above, we have covered components 1, 2, and 3 of this list. Below, we will add more evidence about this, and also about component 7.

One important aspect of our bootstrapping approach is that we strive to use theoretically grounded analyses of the relational determinants of kama muta. People experience kama muta when a communal sharing relationship is suddenly intensified. A communal sharing (CS) relationship is a relationship in which the participants feel one with each other: Their motives, actions, and thoughts are oriented toward something they have in common, some common essence. Thus they feel love, solidarity, identity, compassion, kindness, devotion to each other (Fiske, 1991, 2004). More formally, CS is an equivalence relation.

Our analysis of the situational determinants suggests that kama muta occurs when people who feel CS have been separated and reunite; when their relationship has been problematic and they connect again, restoring the CS; when the CS has been dormant and is revived; or when they ardently seek CS and the bond is suddenly fully realized. Intriguingly, a person experiences kama muta when she herself suddenly feels intensified CS; when she suddenly appreciates someone who displays intensified CS toward her (for example, by an extraordinary act of care, kindness, generosity, or self-sacrifice for her); or when she observes suddenly intensified CS between third parties — even strangers or fictional characters (for example, a soldier reunited with his family). The fact that kama muta can be generated by intensification of CS initiated in the first, second, or third person is a notable feature.

When a person is very strongly kama muta, they experience or exhibit some of the following sensations or signs:

1. Moist eyes, tears, or weeping.
2. Goosebumps, chills, shivers, piloerection (horripilation – hair standing up).
3. A feeling, often a warm sensation, sometimes one of expansion, at the surface of the center of the chest over the sternum.
4. Putting one or both hands over the center of the chest.
5. Choked up throat, often more or less inhibiting articulation so that one speaks in what linguists call a ‘creaky voice.’

6. An utterance indicative of tenderness or joyous pleasure and excitement vocables, such as English “Awww (how cute),” African and the Middle Eastern ululation, in some cultures melodic weeping, the adulatory screams when adored musicians appear or begin to play a ‘moving’ song.
7. Possibly, right afterwards, a feeling of buoyancy, exhilaration, or security.

Each of these sensations or signs may occur to any degree, depending on the intensity of kama muta, but in the most common, mild everyday experiences of kama muta, many or most people neither feel nor exhibit any of them.

Note that any one of these sensations and signs can occur in emotions very different from kama muta: tears when in pain, fear, or grief; goosebumps or chills when frightened or when something eerie occurs; warmth in the chest in embarrassment or orgasm; choking up in fear or disgust. Tears may result from eye irritation, and goosebumps from low ambient temperature. What identifies kama muta is the combination of these features, and their occurrence due to the sudden intensification of CS.

Kama muta is short-lived, usually lasting no more than a minute or two, and often less. There are some texts that suggest that perhaps there are cultural practices or contexts that facilitate more enduring kama muta, but we don’t have good evidence for this. However, participating in a wedding or dance performance, watching a movie, or in certain rituals, people may experience kama muta repeatedly within a span of minutes or hours.

We are of course not the first ones to point out the significance, symptoms, and causes of this emotion. Eminent scholars have over the years repeatedly said that this emotion is under researched and deserves more work. One of the first to point it out was Claparède (1930), who described it very much along our lines, but curiously thought it had no motivational consequences for self-management or social behavior (we disagree). Later Frijda (1988), Panksepp (1995), Scherer and Zentner (2001), Konečni (2005), and Tan (2009) theorized on it. More recently, and perhaps sparked by the trend that people share “moving”, “touching”, “tear-jerking”, and “heart-warming” clips that will “restore your faith in humanity” on social media sites, this emotion has attracted renewed interest (Benedek & Kaernbach, 2011; Cova & Deonna, 2014; Hanich, Wagner, Shah, Jacobsen &

Menninghaus, 2014). Before we started our ethnological, historical, and experimental research, little was published in English-, French-, or German-language journals on non-Western variants of the emotion, with the exception of Tokaji (2003), who reported on it in Japanese culture.

While there is a fair consensus on the affective and somatic components of what is typically labeled *being moved*, *être ému*, or *gam dong* (Japanese 感動) theories diverge regarding the situational determinants. While we emphasize (and indeed postulate) that *kama muta* is caused by sudden intensification of communal sharing, Cova and Deonna (2014) identify affirmation of “core values” as the main determinant. In his description of the emotion “elevation”, Haidt (2003) noted that “the popular press and Oprah Winfrey talk about [elevation] ... as being touched, moved, or inspired” (p. 281), thus equating elevation and being moved. Indeed, in a study testing whether elevation leads to altruistic behavior, Schnall, Roper and Fessler (2010) used self-reports of “being moved” as an index of elevation. Haidt (2003) proposed that elevation is caused by observing virtuous acts, and constitutes the affirmation of a purity virtue. It remains an open question whether these diverging views mirror varying emphases on different aspects of the same environmental condition (in the sense of Shweder et al. 2008’s point 4), or whether one has more explanatory power, as they have not been empirically tested against each other or studied across a range of cultures.

Although we have only limited data relevant to the matter, we are inclined to believe that *kama muta* has specific motivational consequences reflected in certain attitudes. When individuals experience *kama muta* due to the intensification of a relationship in which they are engaged, they seem to become more committed to the relationship: they feel more loving, more closely connected, more ready to make sacrifices for the other and more devoted to maintaining the relationship. And whether they experience *kama muta* due to intensification of a relationship that they themselves are engaged in or one that they observe, the emotion seems to dispose people to be open to new CS relationships, to renew dormant CS relationships, and to deepen or repair existing CS relationships. People sometimes report that after a *kama muta* experience, they want to find someone to hug. *Kama muta* makes people more loving, kinder, and more charitable (Schnall et

al., 2010; Strick et al., 2015). People often respond with kama muta when they observe or hear of others kama muta, which may partially explain why crying makes observers want to care for, help, and share with the crying and weeping individual (Balsters et al., 2012; Hendriks et al., 2008; Hendriks & Vingerhoets, 2006), especially their own infants (e.g., Wiesenfeld & Klorman, 1978).

The motivational effect and function of kama muta is likely to be specific to CS: feeling kama muta probably does not make people diffusely ‘prosocial.’ We predict that it specifically affords enhancement of CS relationships, with less effect — perhaps no effect — on Authority Ranking, Equality Matching, or Market Pricing relationships. However, that is a prediction that needs to be tested, again comparing various cultures.

We think that the precise function of kama muta is to evoke commitment and devotion to CS. Humans are extraordinarily dependent on CS relationships for their fitness (and psychological wellbeing). But people have CS relationships of varying importance with different people, and not all CS relationships are worth great investment. People must be discriminating but wholehearted in committing and showing commitment to the CS relationships that matter to them. The adaptive function of kama muta is to enhance CS motivation when there is new information about the prospects for the relationship indicating that the expected value of the relationship has suddenly increased. Likewise, observing others’ CS intensification is informative about the potential of CS in one’s own networks.

In short, kama muta typically has the following features, which we can use to identify instances:

1. It occurs when people are engaged in or observe the sudden intensification of CS.
2. When kama muta is strongly felt, people feel or display a combination of some or all of the sensations and signs listed above. Kama muta is especially indicated when the sensations or signs include those high on that list (e.g., weeping is more indicative than hand moved to the chest). We can be most confident in recognizing kama muta when a *combination* of these sensations or signs occur simultaneously — the more signs or sensations, the more confident we can be.

3. People refer to their experience using lexemes whose primary meaning is 'passively being moved, touched, or stirred.'
4. The feeling is primarily 'positive': people tend to seek to experience or re-experience it.
5. When initiated by the first or second person, people feel a stronger, more enduring commitment to the intensified CS relationship.
6. The person is diffusely more open to and more motivated to engage in CS with others, e.g., by being more caring and compassionate.
7. People experiencing kama muta want to 'share' it with others: they want to give it to others, and like to experience it together with others.
8. People who witness kama muta are typically disposed to suddenly intensify their CS relationships with the persons exhibiting kama muta, or sometimes with others, and hence themselves tend to experience kama muta.

We believe the sudden intensification is a necessary feature. But because kama muta may be a polythetic category, we don't assume a priori that any of these features are necessary or that any set of them are sufficient. We can't yet specify the weighting function that defines kama muta, but heuristically, we weight them in the order listed above. As a general research strategy, when we observe any of these, we start looking for the others, because we think they are features of the same emotional entity, kama muta. At the same time, we are attentively eager to discover and illuminate cultural variations in the particulars of each of these features. And having identified a great many cultural practices, institutions, roles, narratives, and artifacts, whose psychosocial function is to evoke kama muta and exploit its motivational and behavioral outcomes, we are constantly looking for more.

### Initial Quantitative Studies

To study kama muta, we are collecting convergent evidence from ethnological and historical materials, ancient and more recent texts, participant-observation mini-ethnographies focused on key practices, interviews, diary self-report, Internet blogs and videos, and experiments using self-report responses to controlled stimuli.

Our first laboratory research question was whether indeed people experience kama muta when communal relationships intensify. We therefore searched for and selected videos from the Internet that were described as ‘moving,’ ‘touching,’ ‘heart-warming,’ or ‘tear-evoking.’ We pretested each of them with a small group of researchers and students, and retained for the study those that evoked the emotion strongly in a majority of us. We then presented these videos to large samples of U.S. residents recruited through the online platform Amazon Mechanical Turk, and Norwegian, Portuguese, Israeli, and Chinese participants recruited through word of mouth and subject pools. Participants were asked to watch at least two such videos (they could watch up to ten), reporting on the extent to which they were *touched or moved* (or *rørt* in Norwegian, and corresponding terms in Portuguese, Hebrew, and Mandarin) by the videos, indicating which bodily symptoms they observed in themselves and rating the videos on five appraisal dimensions. We conducted a number of such studies with partially overlapping videos and with the same appraisal questions. The main hypothesis to test was that the more participants indicated that “characters in the video got closer to each other” — our operationalization of observing intensified communal sharing — the more kama muta they were by the video. Our results showed consistent, significant, and sizable relations, a) between the communal sharing appraisal and being moved, b) between self-reported bodily symptoms of weeping and goose bumps and being moved, and c) between these bodily symptoms and the communal sharing appraisal. In sum, we found covariation among the three pillars of our analysis: intensified communal sharing, lexemes referencing being moved or touched, bodily symptoms of weeping and chills, along with a positive tone (people like the experience).

These data provide support for our bootstrapped hypotheses, but they also demonstrate how skillful the producers of many of our videos are: By combining real footage or performances by actors, often music, and sometimes voice over, within two minutes these clips cause many of our participants to weep and have other kama muta sensations. While the emotional impact of these clips is impressive, this also poses a problem for our analysis, as these stimuli are quite complex, and we are asking participants to provide a summary appraisal of an entire two-minute clip *after* watching it. To overcome this problem, a second research strategy consisted in asking US

participants to report on only one judgment but do so continuously over time *while* watching a clip. Some participants were asked to continuously report real-time changes in their experiences of being moved as they watched each clip. Other participants were asked to report changes in closeness among the protagonists of the movie, while still other samples reported sadness, or goosebumps, or happiness. Averaging each different set of participants' reports on a given judgment, we generated time curves for each variable, which we then cross-correlated with each other at each point in time, and compared to the events in the movie. We observed extraordinarily strong moment-to-moment relations between reported feelings of being moved and observed closeness: the magnitude of each predicted the other across moments. Happiness also tends to temporally co-vary with being moved, but not always; sadness only sometimes co-varies with kama muta. This demonstrates the distinctness of kama muta. Goosebumps occur with strong intensifications of kama muta, but also at other points, which corroborates our earlier observation that this physiological symptom is not unique to kama muta. One set of participants' reports of tears at a given moment strongly predicted the other sets of participants feeling *moved or touched* and judgments that the protagonists were close.

Our second research question addresses the assumption that kama muta can be experienced as a first, second or third person experience. To study this question, we asked research participants in Norway to report daily on whether they had felt *rørt*, and to categorize and describe the eliciting event. Our data suggest that our participants remember experiencing kama muta fairly frequently, on average two times per week, that during these everyday personal experiences, the same main bodily symptoms occur as when watching the videos, and that about half of the experiences reported are first- or second-person, the other half third-person experiences where they observed a sudden intensification of CS. In this study we found that it was not easy to clearly distinguish between first- and second-person kama muta because often it is not clear whether the first or second person initiated the sudden increase in the feeling of communal sharing between them.

We also asked online participants in the U.S. to recall an episode where they cried or shed a tear because of something positive. As we had expected, the episodes participants reported were predominantly kama muta experiences, and they indicated

greatly feeling moved and touched during the episode. We content-analyzed the episodes and found that about two thirds were first- or second-person events. Again, increased closeness predicted how moved or touched participants indicated feeling.

At the same time, we have been exploring ethnographies, histories, and texts for accounts of kama muta in diverse cultures and historical epochs. These sources generally tell us relatively little about the experiences of individuals, but often illuminate sociocultural institutions, practices, schemas, ideals, and linguistic genres in which kama muta is quite salient. Kama muta appears in cultures in all regions of the world, at all levels of social and technical complexity, and in all of the major periods in history. Of course we don't know whether kama muta is present in individual experience or in socioculturally structured institutions, practices, schemas, ideals or linguistic genres in *all* cultures. One methodological issue is at the same time an intriguing discovery: kama muta does not seem to have clear, definite, distinct or salient lexical representation in some languages, such as Turkish, Hebrew, Bikol, Classical Greek, and Hindi-Urdu. Yet people definitely seem to experience kama muta in these cultures, and indeed accounts of kama muta events are prominent in the *Odyssey* and in classical Sanskrit and Pali texts that have been translated and widely read by Hindus and Buddhists.

In many cultures there are major rituals that seem to consistently evoke strong kama muta and/or structure its performance according to the situation. One intriguing aspect of this ritualization is that cultural models for the performance of kama muta apparently afford its experience: people evidently frequently tend to *feel* kama muta when they participate in or observe rituals that are supposed to evoke it, or when they are expected to perform it. For example, in quite a number of widespread cultures men or especially women are prescriptively expected to weep with kama muta at reunions, peace ceremonies, or funerals. For example, Andaman Islanders and people in several Amazonian cultures weep at reunions; Tupinamba women of north coastal Brazil wept when welcoming guests — even complete strangers (Urban 1988). When people weep in accord with their culturally valued practices, the evidence suggests that they commonly feel kama muta: the weeping, highly structured in a culture- and situation-specific manner, quickly elicits kama muta in the weepers, and in their audience, who often start weeping. Among many examples is the weeping of Shia Muslims in Muharram

commemorations of the martyrdom of Hussain ibn Ali at Karbala in 680 CE. Shia informants say that they often get goosebumps as they weep and pound their chests. Western informants evidently often feel kama muta when they are expected to at weddings.

In many cultures kama muta weeping is culturally elaborated into melodic forms, sometimes containing isolated words, and sometimes poetic lyrics. Such laments are extraordinarily effective in evoking kama muta in performers and listeners. There is only a short space between such laments and modern blues, country and western, and many other genres of pop songs. Perhaps singing in general is in to some extent an outgrowth of these genres of melodic and lyrical weeping. Informants tell us that performing and listening to music can sometimes evoke intense kama muta.

In many cultures of Africa both south and north of the Sahara, as well as in the Levant, women ululate in a wide range of situations that correspond to the situations in which Western informants commonly report strong kama muta experiences, and which apparently involve sudden intensification of CS. This suggests the intriguing hypothesis that ululating is a culturally evolved and diffused performance of kama muta. Naturally, there are cultural models for who should feel or perform kama muta in what situations. One of the most striking is that of Western Desert Bedouins analyzed by Abu-Lughod (1986), where people are proudly stoic, imperturbable, and fiercely autonomous in public, even in the face of great disappointment or loss. Yet in private, with immediate family and close friends, both men and women recite poignant verses declaring their neediness, longing, despair, and unrequited love – which often evokes kama muta in listeners, who may be moved to help. In Papua New Guinea, Kaluli men dress up in beautiful feather and leaf costumes and come to the men's longhouse in another community to perform a *gisaro* (Schieffelin 1976). In the torch-lit night, they slowly dance while singing songs they have composed that allude to places that remind their hosts of loved ones who have died. When a host man is moved to tears by these memories, he then becomes enraged, grabs a torch, and severely burns the singer – who continues dancing and singing unperturbed. The burner then fervently hugs the singer and soon departs, weeping. Then the cycle continues with more burning of the same and subsequent dancers. The next morning, the dancers give their hosts ample gifts to compensate them for the sorrows

they experienced. Kaluli are deeply moved by these *gisaro* songs, regularly seek and create the experience, admire the burned dancers for the poignancy of their songs, and recite the new songs and comment on them extensively. For the Kaluli, the only performance more moving than *gisaro* is one of their five forms of weeping in which women cry in a manner that evokes the songs of the birds who embody the mournful spirits of dead children pleading for nurturance (Feld, 1990).

Kama muta is pivotal to major strains of Hinduism, Buddhism, Christianity, and Islam. When devotees abruptly encounter or recall the extraordinary kindness, compassion, and love of the deity, a prophet, saint, or guru, and especially when devotees experience a sudden sense of deep loving union with the deity, they experience kama muta – sometimes overwhelmingly. These experiences are represented in holy texts and reported by contemporary worshippers. One might speculate that the profound experience of kama muta was and remains a major appeal crucial to the endurance and diffusion of the world religions. In contrast to devotees of these mystical personal experience-based religious practices, followers of the strands of these religions that are more oriented to theological doctrine – to the declarative semantics of their religion – may be much less prone to experience kama muta in their religious practices.

Our initial ethnological, historical, and textual research has already made it clear that many cultures have evolved institutions, practices, and symbolic genres whose effect and function is to evoke kama muta. Conversely, it seems likely that these cultural forms have been propagated *because* they resonate with the psychological proclivity for kama muta: People respond to, remember, and re-enact stories and practices that evoke kama muta, leading to their ritualization and institutionalization. Indeed, we suspect that beyond its centrality in religion and ritual, kama muta is crucial to the creation, resonance, and diffusion of many forms of poetry, song, music, oral narratives, theater, short stories and novels, television and movie drama, news, and social media. People also evoke kama muta strategically in oratory and marketing, and it seems to be a key attraction of addiction-recovery meetings and other kinds of support groups.

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Emotions are shaped by ‘psychology’ — the innate, biological, ontogenetically-emergent aspect of human minds and bodies — and by ‘culture’ — acquired through participating in a particular social system, with its languages, relationships, institutions, technologies, norms, religions, and practices. With such a model, we position ourselves between theorists who assume that basic emotions are natural kinds and theorists who see them as constructs that are completely constructed by cultures and devoid of any evolved adaptive structure beyond core affect, arousal, and an approach—avoidance dimension (for a discussion, see, e.g., Gross & Barrett, 2011; Lindquist, 2013). Kama muta is fundamentally generated and oriented by the social relationships in which it emerges — like all other social and moral emotions (Fiske, 2002, 2010). Because the fundamental forms of social relationships are necessarily implemented in culture-specific and context-particular implementations (Fiske 2000), we can only identify a social emotion by observing and comparing it across diverse cultures and contexts. This is what we are doing in our bootstrapping approach to kama muta. Kama muta theory explains the functions of kama muta, hence the conditions under which it is likely to be evoked, its manifestations and its sequelae. Using this bootstrapping approach enables researchers to address the epistemological question strategically: we can identify the emotion syndrome only by comparing across many cultures and contexts, searching for the co-occurrence of a certain social relational experience, characteristic sensations, specific motives, distinctive actions, a particular valence, and named (if it is named at all) by certain metaphors. In any particular social relational context in any particular culture at any point in history, we may not find all of these features. But when several of them co-occur, including most of the important features, we are looking at a cultural realization of a universal emotion.

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