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Response to Commentaries on Gervais and Fessler: *On the deep structure of social affect:  
Attitudes, emotions, sentiments, and the case of “contempt”*

**Seeing the elephant: Parsimony, functionalism, and the emergent design of  
contempt and other sentiments**

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**Abstract:** The target article argues that contempt is a sentiment and that sentiments are the deep structure of social affect. The 26 commentaries meet these claims with a range of exciting extensions and applications, as well as critiques. Most significantly, we reply that construction and emergence are necessary for, not incompatible with, evolved design, while parsimony requires explanatory adequacy and predictive accuracy, not mere simplicity.

## **R1. Introduction**

We thank the authors of the 26 commentaries for their thoughtful and wide-ranging discussions of our target article. Many affirm the aptness of our analysis of contempt, the conceptual and methodological value of the Attitude–Scenario–Emotion (ASE) model, and the applicability of this model to other affective and interpersonal phenomena. Many authors also present constructive criticism, advancing the discussion and revealing avenues for future research and theory building. Some may misunderstand our argument, so below we clarify our position. We maintain that sentiments are like the proverbial elephant: unseen by disparate investigators narrowly focused on parts of the whole. Also like the elephant, sentiments are constructed from general materials organized over evolutionary and developmental time to serve specialized functions. We hope that in stimulating debate about the shape and substance of sentiments, we contribute to eventually understanding the evolved structure of the social mind.

Our response is organized as follows: In section R.2, we address criticisms. These include skepticism that sentiments are natural kinds (R.2.1), skepticism of the functional distinction between attitudes and emotions (R.2.2), skepticism of the utility of the ASE sentiment construct, especially as applied to contempt (R.2.3, R.2.4), and skepticism of the operationalizability of the ASE model (R.2.5). In section R.3, we engage the many productive extensions and applications of the general ASE model (R.3.1, R.3.3) and of the specific ASE model of contempt (R.3.2, R.3.4).

## **R2. Critical concerns**

### ***R.2.1. The designed emergence of functional kinds***

The ASE model is grounded in an evolutionary approach that assumes the mind consists of adaptations shaped by natural selection. Adaptations can be described at multiple complementary levels: evolved function, phylogenetic history, ontogenetic origins, and proximate implementation. Functional descriptions, addressing why a trait evolved, entail descriptions of input–output computations, but they are agnostic as to how adaptations proximately work and how they arise during development. Nonetheless, natural selection operates by shaping proximate and developmental systems to produce functional phenotypes; rather than being contradictory to evolved design, “designed emergence” (Barrett 2015) is necessary for building locally adapted organisms.

Several commentaries (**Bzdok & Schilbach; Christie & Chen; Galesic; Spring, Cameron, Gray, & Lindquist**) conflate levels of description in construing the emergence of sentiments from lower-level processes as an alternative to our adaptationist account of sentiments. The ASE describes the design – the computational form and functions – of emotions, attitudes, and sentiments. These functional kinds are built out of domain-general ingredients over both evolutionary and developmental time. If design is evident in the patterning of constituent parts across situations, individuals, and populations, this indicates that evolution has crafted functional kinds, regardless of how they get built. Showing that emotions are constructed from domain-general processes, as Spring et al. suggest, does not refute adaptationist accounts.

Likewise, **Galesic**'s "alternative" account to the ASE supposedly renders sentiments illusory, mere distributions of emotions and judgments. Her account assumes basic emotions, simple evaluative judgments, and information from memory and context, which jointly construct an appraisal of a social situation. However, sampling evaluative judgments of others (what we call "attitudes") in constructing an appraisal of a social situation, to produce emotions, is precisely a process account of the ASE. If (1) evaluative judgments are influenced by previous relational experience (the bookkeeping functions of attitudes); (2) there are ancestrally adaptive patterns in the construction of these judgments; (3) sampled social contexts are parsed according to evolutionarily relevant content ("scenarios"); (4) jointly sampling evaluations and contexts has consistent effects on emotion components ("appraisal"); and (5) the same evaluations sampled in different contexts produce different yet adaptive emotions (emotional pluripotency), then evolution has built functional systems – sentiments – for social relationship regulation. It is not the involvement of lower-level processes that will weigh against the ASE model, but an absence of patterning in their joint operation. We nonetheless agree with Galesic that formally modeling these interactions will help generate quantitative predictions about the patterning of emotions within relationships (see below).

**Spring et al.** do dispute functional patterning in emotions and sentiments, arguing that "emotion categories have neither consistent nor specific outcomes." But existing emotion categories are not natural kinds; they are folk affect concepts. In contrast, ASE attitudes, emotions, and sentiments are functional constructs and putative basic affect systems. Folk affect concepts may dissociate from these systems for many reasons. One is that the adaptive regulation of behavior does not require phenomenological consistency every time an adaptation is engaged.

This is especially true of sentiments, which can manifest as attitudes or as different emotions, producing diverse and variably salient experiences. Accordingly, contempt's manifestations can vary “across persons within the same situation, and within the same person across situations” (Spring et al., next-to-last paragraph), which Spring et al. erroneously claim is a novel prediction of constructionist accounts; yet we predict such variation in detail in section 6.1 of the target article. We grant that no linguistic prompt is necessary to experience together the features united by an existing “contempt” concept. But unlike the ASE, constructionist accounts produce only post hoc explanations for the particular patterning of “contempt” concepts across scenarios, individuals, and populations.

Considering the proximate instantiation of the ASE, sentiments should inhere in functional networks among neural and embodied subsystems for memory, attention, appraisal processes, affect regulation, and decision making. This belies any suggestion that we naively assume discrete neural “centers,” even for discrete emotions. **Bzdok & Schilbach** appreciate this, yet they label sentiments “non-natural kinds” – a puzzling description if evolution has designed coordination among their subsystems. We are also surprised that **Schaller** views the ASE model as insufficiently computational; we defined the components of sentiments with reference to the same evolutionary computational approaches that Schaller cites (e.g., Tooby et al. 2008).

### ***R.2.2. Attitudes and emotions***

A number of the commentaries wrestle with the distinction between attitudes and emotions. **Haslam** highlights the need to establish clear conceptual boundaries between them, even while everyday vernacular conflates them. We agree (see Table 2 of the target article). A functionalist model of the deep structure of affect can decompose folk affect concepts into constituent functional systems.

**Lench, Bench, & Perez (Lench et al.)** argue that many of the features we ascribe to contempt are features of emotions and, therefore, that contempt is an emotion. However, they ignore attitudes, ascribing to emotions features often used to distinguish attitudes from them (e.g., Clore & Schnall 2005). For example, Lench et al. argue that intentionality is a hallmark of emotions, while conflating intentionality about objects and about events. Their examples of the intentionality of emotions – sadness at failure, and anger at insult – are events. Yet we explicitly ascribe object intentionality to contempt and use intentionality about objects as compared with events as *the hallmark functional distinction* between attitudes and emotions. Lench et al. also argue that duration does not distinguish emotions from attitudes, given evidence for the potential long time course, and re-occurrence, of emotions. We acknowledge that emotions can last a long time; unconventionally, we explicitly classify moods as emotions that deal with protracted problems. However, this is not the same as a permanent change in attitude toward a target, and reliving an emotion through simulation or mental time travel is not equivalent to coldly contemplating an attitude. Lench et al. further argue that appraisals, such as those in contempt, are well known to cause emotions. However, the fact that emotions are preceded by appraisals does not mean that anything that follows an appraisal is an emotion. Some appraisals cause emotions, but some recalibrate attitudes, and some may do both. Lench et al. also argue that

because emotions include changes in cognition, the cognitive changes in contempt are evidence of an emotion. Although we include cognitive shifts as part of our account of the form of emotions, not all cognitive changes are contingent on emotion activation, and they may be permanent, as in attitude change.

**Giner-Sorolla & Fischer** likewise inadequately theorize attitudes. They emphasize that contempt involves an appraisal of character, being about a person, making it different from putatively comparable emotions involving appraisals of actions. Fischer and Giner-Sorolla (2016) even describe contempt as an emotion attached to an “attitude” or to a “general representation” of a person or group. Yet they deny that contempt is an attitude. By undertheorizing attitudes, emotion researchers perpetuate the mutual isolation of the attitude and emotion literatures.

**Grecucci, Frederickson, & Job (Grecucci et al.)** argue that comparative neurobiological evidence contradicts the ASE. After perception, affective information is processed first via direct links between perceptual systems and subcortical structures; cognitive processing occurs more slowly and is influenced by prior affective evaluation. However, Grecucci et al. equate attitudes with cognition, and emotions with affect. In the ASE, affect plays a role in both attitudes and emotions, being the representational currency linking them. The priority of affect in processing stimuli is consistent with the role that attitudes play in the ASE in moderating appraisals. If someone approaches, the reaction of fear, anger, or happiness will be contingent on the affective attitude one holds; affectively tinged representations of other people potentiate emotional reactions in scenarios. Rather than undermining the ASE, research such as



that cited by Greccucci et al. offers a consilient neurobiological account of how attitudes moderate emotions and how emotions update attitudes.

**Greccucci et al.** also critique us for overlooking the distinction between emotions and “defensive affects,” purportedly a class of mechanisms functioning to “ward off unwanted emotions.” This biologically implausible view treats “self-harming” emotions such as shame as dysfunctional, despite strong support for theories of their adaptive functions (e.g., Sznycer et al., 2016). Contempt generally follows from appraisals of inefficacy *in others*, not, as Greccucci et al. contend, cues of inefficacy and low value in *one's self*.

Both **Hurlemann, Marsh, Schultz, & Scheele (Hurlemann et al.)** and **Christie & Chen** argue that oxytocin challenges the ASE model because it has effects that are both emotional and attitudinal. This critique rests on a definition of “emotion” delimited to valence and arousal. Although these facets are primary in some definitions of emotion, the ASE theorizes emotions as coordinating modulation across systems, including cognition. Rather than being a counterexample, oxytocin may exemplify a neurohormonally implemented emotion that coordinates organism-wide systems. These authors also underappreciate the implications of the contingent release of oxytocin within particular dyads. Oxytocin administration studies, such as those cited by Hurlemann et al., bypass the endogenous processes that moderate oxytocin release in naturalistic social interaction. If not an attitude, what is the “bond” that moderates oxytocin release toward one individual and not toward others? To the extent that oxytocin release is contingent on the presence of particular partners, and on antecedent attitudinal representations of them as valuable, then oxytocin regulation nicely illustrates attitudinal moderation of emotions.

Evidence that the attitudinal bond moderates emotion systems not linked to oxytocin would support the broader emotional pluripotency of sentiments.

### ***R.2.3. Sentiments and the emotional pluripotency hypothesis***

**Adair & Carruthers** argue that sentiments are not psychological causes; either sentiments are epiphenomena, or they should be equated with attitudes, which are causal. Strictly speaking, they are correct: as we stated, “each sentiment is an attitude state and the various emotions disposed by that representation” (sect. 4.2, para. 6). However, there are two reasons for distinguishing between attitudes narrowly defined as representations, and sentiments as attitudes linked to diverse emotion dispositions. First, Adair & Carruthers argue that attitudes alone can explain the emotional texture of contempt, “provided one bears in mind that any evaluative attitude will issue in a range of distinct emotions” (next-to-last paragraph). This will be news to social psychologists, who have long theorized and studied attitudes without reference to their emotional pluripotency, contrasting “attitude” with “sentiment” on precisely this basis. Moreover, beyond interpersonal relationships, in attitude research on products, opinions, and political positions, attitudes are simple evaluative representations, qualitatively different from the causally linked emotion networks of sentiments. **Mason**, implicating deficiencies of current attitude theory, appreciates this. Although not endorsing the need for a distinct psychological kind in sentiments, Mason emphasizes that the sentiment construct helps keep track of the emotion dispositions of attitudes. With “sentiment” highlighting attitude–emotion contingencies, it becomes an empirical question whether all attitudes qualify as sentiments.

A second reason to maintain the sentiment construct is that rather than being psychological causes, networks of attitudes and emotions are social, evolutionary, and cultural causes. In a sentiment, each contingent emotion serves a particular function in regulating a social relationship tracked by an attitude. These functions are complementary – in a relationship represented by *love* for an other, different emotions implement attending to their needs, tolerating costs from them, refraining from exploiting them, and signaling commitment after failing their expectations. The gestalt of these contingent behaviors determines the partner's perception of relationship quality, their reciprocal sentiments, and the success of the relationship. It is the sentiment – the whole attitude–emotion network – that is causing relationship quality. **Christie & Chen** contend that only lower-level processes will be under selection, but evolution through social selection, in which particular relationship partners are differentially chosen as mates, cooperative partners, or leaders, should target sentiments and configure networks of attitudes and emotions as contributors to social strategies that determine fitness. Finally, as **Adair & Carruthers** appreciate, the network patterning of attitudes and emotions is causal in structuring folk affect concepts. It is in this sense that sentiments are a “deep structure.” A concept such as “contempt” can include contradictory facets such as “cold” indifference and “boiling inward” because these are linked within sentiment networks. Differential activation of parts of this network can explain seemingly irreconcilable affect concepts across individuals and populations.

**Haslam** suggests that rather than being a distinct natural kind, sentiments may be an “intermediate zone between the most prototypical emotion and the most prototypical attitude.” Attitudes and emotions may well overlap at the margins, because emotions can be enduring

moods and can be chronically evoked by re-imagining their eliciting appraisals. However, the emotional pluripotency of sentiments presents a qualitatively different form from single emotions (Royzman et al. 2005). If an evaluation of an object can be shown to cause distinct emotions across different scenarios, then, operationally, that evaluation is a sentiment.

**Giner-Sorolla & Fischer** advance several critiques that hinge on the emotional pluripotency hypothesis. They claim that the ASE model blurs established usage of the term *sentiment*, developed by Frijda (1994; Frijda et al. 1991), wherein a sentiment is the enduring one-to-one association of an emotion with an object. Like **Haslam's** "intermediate" form, this usage is qualitatively different from the ASE's emotionally pluripotent sentiments. However, "sentiment" is rarely invoked as a construct in the social psychological literature, and Frijda's use is not seminal; an earlier "sentiment" construct (e.g., Shand 1920; McDougall 1937) included diverse emotional outcomes.

**Giner-Sorolla & Fischer** also contend that the ASE model of contempt is unnecessarily complicated. They advance an alternative model (Fischer and Giner-Sorolla 2016, hereafter F&G-S), which was published while our target article was under review. F&G-S depict contempt as a discrete (albeit not prototypical) emotion, involving distinct appraisals and action tendencies, but lacking distinct eliciting conditions and a universal non-verbal expression, while appearing uniquely "cool" relative to frequently co-occurring anger and disgust. To explain contempt's non-prototypical features, F&G-S argue that contempt is *also* a sentiment *sensu* Frijda – the emotion becomes "attached" to a representation of the target, which functions to elicit contempt at the target's real, or imagined, presence.

The F&G-S model is only superficially simple. It includes three pathways to contempt elicitation: (1) repeated transgressions implying low-value character; (2) culturally transmitted beliefs about an other's contemptible characteristics; and (3) transgression-evoked anger that, if ineffectual, "turns into" contempt. The ASE model parsimoniously subsumes these. In each case, information is obtained that warrants devaluation of the object (i.e., the "relational cues" in Fig. 1 of the target article). **Giner-Sorolla & Fischer** mischaracterize us as claiming that contempt only manifests from a pre-set attitude. Contempt will manifest during its establishment by any cues to inefficacy and low relationship value, including single events that recalibrate attitudes and establish contempt.

The F&G-S model also fails to account for data that the ASE model illuminates. In portraying contempt as both a distinct emotion and a sentiment, **Giner-Sorolla & Fischer** note that "any emotion can become a sentiment." Why, then, is contempt a "special case" (Rosenberg & Ekman 1995) among putative basic emotions for its inconsistent lexicalization and unreliable expression? F&G-S attribute contempt's lack of a distinct facial expression to "methodological problems" and to the rarity of the term. This both fails to explain that rarity and overstates it; in the research they review, "contempt" is the most common term in the "disgust" cluster, and contempt is studied with the same methods as other putative emotion-sentiments. F&G-S also observe that contempt has divergent emotional consequences in scenarios beyond "merely seeing someone." Their examples – verbal attack and reduced compassion – entail distinct emotional concomitants in complex scenarios; F&G-S obscure this complexity and fail to give a process account for it. Likewise, arguing, as F&G-S do, that contempt downregulates anger and hate –

being less “effortful and risky,” less “socially and personally costly” – fails to account for the “boiling inward” phenomenology sometimes associated with contempt (Frijda et al. 1989). It also conflates “coolness” from reduced anger with “coolness” from reduced “warm” engagement.

In contrast, contempt as an emotionally pluripotent sentiment parsimoniously explains – and furnishes predictions about – the range of emotions, expressions, and meanings associated with contempt. There are several critical tests between our model and that of **Giner-Sorolla & Fischer/F&G-S**. First, if enduring contempt, identified by a representation of a target as inferior, can be shown to create diverse downstream emotion biases in particular contexts, for example, downregulating compassion and guilt, while disposing anger and disgust, then congruent with the ASE but not with the F&G-S model, this will be evidence of a “master sentiment.” Second, F&G-S explain contempt’s “coolness” by suggesting that contempt downregulates anger, whereas the ASE predicts that contempt potentiates anger in the service of social distancing; data on anger reactivity toward objects of contempt will support one model over the other.

**Lench et al.** also deny the emotional pluripotency hypothesis, underappreciating the functional gestalt among contempt’s features. They reject that contempt creates indifference and argue that “coldness” is also a feature of sadness. However, this again conflates two meanings of “coldness” – vis-à-vis “hot” anger and “warm” compassion – and ignores that we emphasize the latter in articulating the reduction in “warm” prosocial emotions caused by contempt. Lench et al. implicate lack of differentiation among negative emotions in explaining the associations of contempt with disgust and anger. However, the evidence we reviewed goes far beyond vague

associations, to specific functional and temporal relationships. Our model explains these while making many predictions about contempt vis-à-vis anger, disgust, and hate. In explaining away contempt's diverse expressions, Lench et al. argue that the expressions of all emotions are moderated by contextual affordances. We concur, but this does not explain why contempt is inferred from a range of expressions, including those for other basic emotions, and from an absence of any expression. Finally, in explaining the diverse behavioral outcomes of contempt, Lench et al. argue that all emotions are associated with behaviors. We do not dispute this, but it does not follow that only emotions predict behavior. If attitudes moderate emotions, then they too will have behavioral consequences, albeit a more diverse set than a single emotion.

Both **Mason and Cova, Deonna, Sander, Teroni, & Teroni** argue that the ASE model of contempt conflates “recognition respect” and “appraisal respect.” Recognition respect entails giving appropriate consideration to its object during deliberation. In Darwall's (1977) normative account, recognition respect is owed all persons by virtue of them being ends in themselves in possession of dignity. Appraisal respect, in contrast, must be earned through positive appraisals of character and involves feelings of respect such as admiration.

Acknowledging the utility of distinguishing recognition and appraisal respect, we think the ASE model of respect parsimoniously unites them. Appraisal respect is the more accurate descriptive account of how the *respect* sentiment operates: appraisals of another's value incrementally increase “feelings of respect,” the emotion constellation of the *respect* sentiment. Unlike Darwall (1977), we do not limit appraised features to character, but hold that all contributors to efficacy influence respect. Moreover, appraisals are relative to an appraiser's own

interests and standards in valued domains, not “categorical” in Darwall’s sense. The ASE can then subsume recognition respect as part of the emotion constellation of appraisal respect. We have highlighted interest in targets and deference to them as outcomes of respect; this is effectively the weighting of a target’s concerns that scholars have ascribed to recognition respect. Interest and consideration may not intuitively belong among the “feelings of respect,” but they involve the kinds of systems (e.g., attention, and evaluative trade-offs) that attitudes moderate on the ASE. On this account, prescribing recognition respect for persons is equivalent to stipulating that personhood is a sufficient criterion for some minimum appraisal respect. However, personhood will compete with other appraisals—including incompetence, laziness, and badness—that undercut appraisal respect, engendering contempt, muting recognition respect, and potentiating intolerance and exploitation. This descriptive account does not deny the virtue of stipulating recognition respect for all humans, or for all life. But it does unpack why the normative project of fostering recognition respect runs aground on the rocks of human nature, while suggesting workarounds (see below). It also minimizes **Mason**’s critique of our analysis of contempt’s place in a dignity culture. We identify contempt with an absence of respect. We argue that because a dignity culture prescribes respect for all persons, it proscribes expressions of contempt. Mason points out that prescribing *recognition* respect, and dignity for all, does not proscribe *appraisal* contempt, or differential devaluing of others on the basis of character. Even those viewed as morally depraved should be granted dignity. However, the normative stipulation of respect for persons does not countervail the descriptive fact that humans are prone to deny personhood to others on the basis of real or imagined negative appraisals. Lapses in recognition respect remain a problem in a dignity culture, even while its prescription undercuts the expression of contempt. If such lapses are most likely toward targets that are also objects of hate,



then our suggestion of a conceptual conflation of contempt and hate within dignity cultures remains plausible.

**Cova et al.** argue that we conflate two forms of contempt, disregard (an absence of appraisal respect) and scorn (an absence of recognition respect). We see these as two outcomes of the sentiment contempt. Disregard can be an absence of recognition respect, the “cold indifference” facet of the contempt sentiment. An absence of appraisal respect, and of emotions such as admiration, can also manifest as “scorn.” However, rather than proposing a distinct emotion, *scorn*, our account decomposes the folk affect concept “scorn” as disgust in the service of contempt. This captures both the enduring and the occurrent manifestations of scorn, as well as its connotations of superiority, derision, and rejection. Similarly, whereas **Giner-Sorolla & Fischer** adduce the unilateral lip curl (ULC) as evidence of a unique contempt emotion, we counter that the ULC, often labeled “anger” or “disgust” (Haidt & Keltner 1999; Matsumoto 2005; Russell 1991b; 1991c), signals the reactive intolerance cluster of the ASE sentiment contempt, implemented by anger (if a second-person threat) or disgust (if a third-party signal) vis-à-vis a devalued target. Either of these emotions, or the attitudinal core of contempt, can be inferred from the ULC.

Challenging our claim that contempt actually disposes both anger and disgust, **Cikara** asks what determines whether contempt runs hot or cold and, when it runs hot, what determines whether contempt prompts approach or avoidance. **Mason** (sect. 1) similarly asks how contempt maps onto two putatively distinct phenomena, “reactive contempt” (such as protesting) and “nonreactive (or objective) contempt,” such as disregard and disengagement. The answer to both

is: the scenarios in which the attitude object is encountered or imagined, and the threats or opportunities posed by that scenario vis-à-vis the fitness affordances tracked by the attitude. Anger, as a bargaining strategy (Sell et al. 2009), changes the behavior of contemned targets to reduce the costs they impose; disgust, as a mechanism co-opted for signaling rejection (Fessler & Haley 2003), prevents guilt by association in the eyes of third parties (see also Kupfer & Giner-Sorolla 2016). Imposition or even approach by a contemned target evokes anger, whereas proximity to, or similarity with, a contemned target in the presence of potential allies elicits disgust; if a contemned target claims leadership, this elicits disgusted opposition; if they are inactive or harmless, disregard suffices. In all cases, action is suffused with disrespect, including protest (Tausch et al. 2011).

#### ***R.2.4. The dimensionality of sentiments***

Comparing the ASE unfavorably to the Stereotype Content Model (SCM), **Cikara** contends that we collapse orthogonal dimensions of social-relational value, namely, “relational value” (warmth) and “agentic value” (competence). In fact, we break “warmth” into two positive (*love, liking*) and two negative (*hate, fear*) dimensions, while generalizing “competence” to efficacy across domains. These dimensions are potentially orthogonal, allowing for cooperation and competition to occur within a relationship, unlike the unitary “warmth” dimension of the SCM. The ASE also provides a crucial missing piece to the SCM: how interactive scenarios moderate the relationship of attitudes and emotions. In the SCM, each representational quadrant has “corresponding” emotions. However, Cikara’s own example of *schadenfreude* at the misfortune of a competitive, high-status target illustrates that such “correspondence” does not hold. The ASE acknowledges “default” emotion dispositions at approach, but theorizes

emotional pluripotency, in which single emotions can address similar adaptive problems vis-à-vis different kinds of targets. This includes happiness at the success of a loved one *and* at the failure of a hated enemy, and anger at any “transgression,” with a threshold moderated by attitudes

**Hruschka** suggests that the SCM provides a “simpler” theory of contempt than the ASE. In the SCM, contempt joins disgust and hatred as emotional reactions to targets low in both warmth and competence. Yet as we point out in the target article, and as **Lench et al.** echo, studies of the SCM often collapse measures of contempt with disgust and hatred, producing composite ratings. This obscures unique variance accounted for by contempt and limits contempt to targets that are also disgusting and hated. Studies that partial out contempt find it is not directed only at low warmth–low competence targets: in some, contempt tracks competence alone (Hutcherson & Gross 2011; Ufkes et al. 2011); in others, there are main effects of both warmth and competence (Schriber et al. 2016); and in some, only high–high targets are safe from contempt (Caprariello et al. 2009; Schriber et al. 2016). The SCM also denies a role for contempt in pity. But as Miller (1997) argues, “Contempt ... often informs benevolent and polite treatment of the inferior.... Pity and contempt go hand in hand” (p. 32). Yoking contempt to the efficacy dimension explains this. **Cova et al.** argue that “caring about” someone does not have a single sentimental etiology, and sentiments including love can produce it despite contempt; parental sensitivity is thus not necessarily the “inverse” of contempt, as **Swain & Ho** and Hruschka suggest. Although Hruschka and **Cikara** contend that we extend the swath of the contemned too far, contempt is not simply a response to the lowest of the low.

**Schaller** doubts that there is a unitary *love* sentiment tracking fitness dependence on an other. Although we agree that the domains of fitness dependence addressed by romantic love, filial love, and parental love entail unique adaptive problems, the similarities are striking, for example, the behavioral needs for tolerance and conditional aid provisioning. Evidence for conserved neural bases across these systems (Preston 2013) suggests that an ancestral *love* system was evolutionarily co-opted repeatedly, from regulating parental behavior to shaping pair bonds and friendships, producing a *love* sentiment with manifestations tailored to different forms of fitness dependence.

### ***R.2.5. Operationalizing the ASE***

**Galesic, Giner-Sorolla & Fischer, Hruschka, and Schaller** express concerns about the operationalizability of the ASE. We outlined how to operationalize and empirically distinguish attitudes, emotions, and sentiments (see Table 2, column 2, of the target article). The parameters for distinguishing attitudes and emotions include their intentionality (object- vs. event-specific), phenomenology (“cold” vs. “hot”), time course (enduring vs. occurrent), and structure (evaluative representation vs. organismic mode of operation). Sentiments will include all of these features, but not randomly: attitudinal representations will moderate different emotional outcomes across scenarios. The interrelatedness of the core concepts of the ASE is a feature of the model, not a limitation, affording decomposition of folk affect concepts into underlying attitude–emotion networks. Various descriptions of a sentiment as a “syndrome,” a “network,” or a “deep structure,” which **Schaller** laments, is productively seeing sentiments from different perspectives: respectively as the coordinated regulation of different emotions, as causal links

among attitudes and emotions, and as the functional architecture underlying variation in folk affect concepts.

**Galesic** suggests that sentiments might be quantitatively described as frequency distributions of appraisals and emotions within relationships. Refining this, sentiments may be described as a set of conditional probabilities of scenario–emotion contingencies given a particular attitudinal representation in a relationship. *Perceived* scenarios are crucial; the consequences of objective situations will be psychologically mediated, via attention, appraisals of threat, harm, and so on, and ascriptions of causation. Efforts to measure emotions have recently converged on multicomponential triangulation (e.g., Kragel & LaBar 2013), focusing on the coordination of functional features across diverse measures. Multimeasure scales are likewise useful for measuring interpersonal attitudes. Although **Hruschka** worries about how readily people can rate their contempt for others, he also highlights the role that metaphors such as “warmth” and “closeness” can play in assessing interpersonal evaluations. In the case of contempt, scaling separate Likert-type measures of “look down on,” “look up to,” “contempt,” and “respect” could produce a reliable measure of the attitudinal core of contempt. Schriber et al. (2016) demonstrated the utility of this approach in their Dispositional Contempt Scale; this could be readily converted into a target-specific scale. The key to a clean measure of respect–contempt will be partialing out love and hatred.

**Bilewicz, Kamińska, Winiewski, & Soral** challenge our identification of *contempt* with an absence of *respect*, citing research on attitudes toward out-groups that reports widely varying intra-target correlations between respect and contempt. However, Bilewicz et al. treat both

affects as “emotions,” and they do not give sufficient detail of the studies they cite to evaluate their bearing on our claims. Of course, if reliable measures of respect and contempt, as enduring, target-specific attitudes, fail to negatively correlate, then this will undermine our model.

### **R.3. Extensions and applications**

#### ***R.3.1. Extensions of the ASE model of sentiments***

Both **Cova et al.** and **Giner-Sorolla & Fischer** argue that contempt can be an emotion and a sentiment. We are unconvinced by their arguments for a unique emotional outcome of the contempt sentiment, because a representational core that downregulates pro-social emotions, and upregulates anger and disgust, can account for the data. Nonetheless, some sentiments may have proprietary emotional outcomes. They may also be updated by emotions. The possibility remains that there is a proprietary contempt emotion involved in the establishment of the sentiment contempt, that is, in downregulating respect. At the perception of cues to inefficacy in some valued domain, this emotion would recalibrate the affective component of respect and establish a contempt representation. This emotion might sometimes be categorized as “disappointment,” which has been linked with the unilateral lip curl (Russell 1991c). However, we know of no strong evidence for this proposal. Similarly, Cova et al. suggest that an emotion, *admiration*, plays a role in establishing respect. As an emotional reaction to appraised efficacy, admiration plausibly upregulates respect. Alternatively or in addition, admiration may be a proprietary outcome of an established *respect* representation – part of the ASE sentiment *respect* – implementing approach and emulation of highly respected targets (Onu et al. 2016). These

considerations highlight the need for a more detailed theory of the processes whereby the attitudinal cores of sentiments are recalibrated, including by emotions (Tooby et al. 2008).

**Dellantonio, Pastore, & Esposito (Dellantonio et al.)** discuss the role of moral values in sentiments. They claim that, in our approach, “[one’s] view of another person’s moral in/efficacy depends on whether [one is] motivated e.g. by contempt or respect.” This actually reverses our argument: contempt and respect depend on appraisals of another person’s moral in/efficacy. Nonetheless, this appraisal is influenced by moral values. We distinguish two meanings of “value” that Dellantonio et al. conflate. One, *valuation*, is a form of regard; an outcome of evaluation, it involves ascribing a quality and quantity of worth to an object. This is the primary sense in which we use *value*—relational valuations of the fitness costs and benefits of social partners, evaluated using ancestrally reliable cues, and tracked through time by attitudinal representations. By *values* Dellantonio et al. mean abstract principles used in the process of evaluation; values are standards against which evaluation occurs. Some values are moral, but others are practical, such as valuing particular domains of expertise. Dellantonio et al. are correct that we said little about values as standards. We did discuss two points. First, values play a role in determining respect. Respect is conditioned on attributions of efficacy in valued domains; failure in those domains warrants contempt; values thus condition valuations. Second, we discussed the role of relational valuations in anchoring the internalization of values. If internalization is a psychological commitment device for enacting normative behavior, a capacity selected by differential inclusion in cooperative ventures (Fessler 2007), then what gets internalized as values should be yoked to valuations of social partners. In this vein, Dellantonio et al. review early life transmission of values, highlighting the role of bonding with parents. We likewise implicated deficits in valuations underlying insensitivity to socialization in clinical

psychopathy. We agree that the function of morality is relationship regulation, and that moral values are, to some extent, relative to the expectations of moral communities (Fessler et al. 2015).

### ***R.3.2. Extensions of the ASE model of contempt***

**Bzdok & Schilbach** foreground an absence of neuropsychological, ontogenetic, and heritability data in our account of contempt. We endorse triangulating the form and functions of biological systems using consilient data from across disciplines. Although direct data are lacking, there may be relevance in research on the genetics and development of callous-unemotional traits, as well as in frontotemporal dementia. Important empirical questions remain.

**Varnum & Grossmann** present original analyses extending both our observation that “contempt” use has proportionally decreased in English-language books and our suggestion that folk affect concept salience should vary with socioecological parameters. Varnum & Grossmann suggest that contempt may be less engaged in excluding outgroup targets as infection risk decreases. However, they show that declines in pathogen prevalence lag behind declines in contempt-related words, which undermines a simple causal story, hinting at a third variable, plausibly socioeconomic development. On the negative relationship of socioeconomic development and contempt, Varnum & Grossman implicate reduced stratification in post-industrial workplaces and increased material security through stable employment. We are skeptical of these causal mechanisms. It is not clear that hierarchically structured white-collar organizations involve less perceived stratification than do industrial or pre-industrial workplaces.



Moreover, increased material security and individual risk retention may effectively decrease the value of social partners, especially for risk pooling, which may increase contempt. Perhaps socioeconomic development both fosters, and relies on, respect (in action, if not in sentiment), as a medium for mutualistic economic interactions among strangers. However, capitalism can also produce inequality and exploitation. A confound in the American data set used by Varnum & Grossmann is the rise of a dignity culture through civil rights movements. This shift toward norms of equality, inclusivity, and tolerance likely undermined the expression of contempt in America, perhaps until recent shifts in American political discourse during the 2016 election (e.g., Stohr 2017). Prior to this, if the rise of a dignity culture actually did increase tolerance and mutual respect, without common violations, then discussions of contempt would have declined. Whether this change in norms can itself be related to changes in social or economic organization is unclear.

**Chapais** summarizes our argument (based partly on his work) that *protorespect* evolved in primate dominance hierarchies to track efficacy – both of dominants, in downwardly conferring benefits such as resource access and protection, and of subordinates, in upwardly conferring benefits such as grooming and coalitional support. The evolution of a capacity for *protorespect* made possible *protocontempt*: withholding *protorespect* from those not efficacious in these ways, directing intolerance and exploitation toward them. Chapais derives two predictions from this. First, he suggests that “looking down on” followers should be intrinsic to leadership, potentiating exploitation down hierarchies. Some folk models (e.g., that “power is corrupting”) are consistent with this. Second, Chapais suggests that downward contempt should vary with the extent to which status is dependent on subordinates. This echoes our own

conjecture: “To the extent that high rank is contingent on the support of subordinates, mutual respect may change the quality of dominance interactions and hierarchies” (sect. 5.3, para. 2). Again, there is folk precedent: “absolute power corrupts absolutely.” Regarding both predictions, note that respect and contempt may interact with other attitude dimensions and sentiments. For example, while downward contempt may unleash exploitation, the expression of upward contempt may be mitigated by fear of physical reprisal. Likewise, in addition to respect for efficacious subordinates, downward contempt may be mitigated by interdependence from relatedness or shared group defense.

**Sullivan** notes that pride was implicated in contempt in eighteenth-century moral philosophy, and draws parallels between the functional features of one facet of pride – “hubristic pride” (Tracy & Robins 2007) – and contempt, including expressions of superiority and diminished concern for others. Sullivan proposes that hubristic pride is among the emotion dispositions of the contempt sentiment, following from a superior and devaluing attitude. This is plausible. Fessler (1999) has argued that pride has phylogenetic roots in *protopride*, an emotion evoked in dominance hierarchies when a dominant is in the presence of a subordinate; it motivates status-striving and signals dominance to others. In this model, an antecedent representation (of being dominant or higher status) interacts with a scenario (proximity) to produce an emotion (*protopride*). If the attitudinal core of contempt is part of the representation of relative superiority, this model of *protopride* implies that a dominance-based positive emotion should be evoked by proximity to a contemned target. Research does link contempt to a tilted-back head and downward gaze (Izard & Haynes 1988), components of pride expressions, especially of the hubristic or dominance-based variety. Self-reported dispositional contempt also

correlates positively with trait hubristic pride (Schriber et al. 2016). Dominance-based pride may well be among the emotion dispositions of the sentiment contempt.

Even if one assumes a unitary pride emotion – an authentic positive feeling evoked during accomplishments – we expect attitudes toward others to moderate pride expressions. Respect for others, and concern for their standing and self-esteem, might lead authentic pride to be expressed humbly, with self-deprecation and other-enhancement; pride in the context of contempt may lead to unmitigated self-aggrandizing and bragging, inviting accusations of arrogance and conceit, the core of the hubristic pride scale (Tracy & Robins 2007; see also Holbrook et al. 2014; Tracy & Robins 2014). On this account, pride would not be an emotion disposition of contempt, but contempt would moderate pride expression. Different social-attitudinal contexts of pride and pride expression, in turn, could contribute to different cultural models of pride – as a healthy expression of success, as evidence of humility, or as an index of inflated self-worth. Degrees of pride expression could be taken as indexical of one's views of others; consonant with Sullivan's suggestion, the proud person may be the contemptuous person. This would illuminate why pride is viewed as dangerous in communal societies: its unmitigated expression indexes devaluation of others, predicting selfish behavior that undercuts community.

### ***R.3.3. Applications of the ASE model of sentiments***

**Bzdok & Schilbach** suggest that the ASE is relevant to interpreting the functions of the amygdala, the insular cortex, and the brain's "salience network." We add that somatic markers

(*sensu* **Greccucci et al.**) may be the affective component of attitudes, providing the mechanism whereby emotions update, or recalibrate, attitudinal representations.

**Weidman & Tracy** apply the ASE to “humility,” raising the possibility that there may be a self-directed sentiment, a representation of self-value moderating self-conscious emotional reactions to events. This finds precedent in functionalist views of self-esteem as an internal index regulating emotions and behavior (e.g., Leary et al. 1995). Given that self-esteem has been modeled as tracking liking by others (e.g., Srivastava & Beer 2005), the ASE suggests distinct self-monitoring systems may track distinct dimensions of valuation by others (e.g., liking, respect, love). Paralleling our remarks on pride, above, “humility” could be fruitfully approached by considering how the expression of self-valuations is moderated by other-directed sentiments such as respect, for example, whether pride manifests as hubris or humility. This raises questions about the interaction of other- and self-sentiments, for example, in producing attachment styles, or varieties of the “Dark Triad” personality complex. We suggest that some personality complexes emerge from the interaction of different sentiment dispositions. For example, psychopathy and narcissism may both involve dispositional contempt (Schriber et al. 2016), yet be distinguished in their default self-sentiments: high self-esteem (psychopathy) and low self-esteem (narcissism). Other facets of personality, such as attachment styles and agreeableness, may likewise emerge from the interaction of self- and other-sentiment dispositions.

**Bzdok & Schilbach** concur that the ASE is generally relevant to personality structure, extending our analysis of psychopathy. **Haslam** suggests that the ASE can help personality psychology go beyond inductively identifying latent traits by theorizing the cognitive-affective

networks that constitute relational strategies, including the simultaneous regulation of multiple emotion dispositions. He points to future research studying dependency in terms of dispositions toward the sentiment love. **Christie & Chen** suggest that, in a health psychology literature focused on individual differences in “hot” reactive hostility, considering the “cold” aspects of our model of contempt might inspire alternative interventions.

**Schaller** assesses the generality of the ASE model beyond contempt. For each sentiment feature – functional specialization, the interaction of an enduring attitude and diverse emotions, emotional pluripotency, and sensitivity to relevant relational cues – Schaller affirms an equivalent in a system regulating parental care provisioning. He also notes that this system responds to other infants as well as one's own; is active in non-parents; and responds to many organisms displaying cues of neotony and dependence. This highlights process distinctions between (1) the cue-driven elicitation of emotions, (2) the establishment of an attitude (and a sentiment) through emotion elicitation, and (3) the attitude-moderated elicitation of emotions within established sentiments. The ASE focuses on the latter, but allows for attitude updating by emotions, and also allows for emotion elicitation outside of sentiments. Neotony cues may elicit caretaking generally, but may also begin the process of parental sentiment formation; a unique function of a parental sentiment is to maintain caretaking after the child no longer evinces such cues. More discriminating cues may cement a strong parental sentiment; **Swain & Ho** foreground vaginal delivery and breastfeeding in the neural reorganization of motherhood that later predicts sensitivity, empathy, and the unique neural responses to one's own child. We add that differences in maternal life history trajectories – coloring the fitness value of a given child

for its mother – plausibly influence maternal sentiments, such that these cues do not have a uniform impact across mothers.

**Bahns** proposes that prejudice also evinces many of the functional features of sentiments, finding the emotional pluripotency hypothesis useful in accounting for both the evaluative form of prejudice and the many emotional outcomes associated with attitudes toward out-groups. Viewed in ASE terms, stereotypes may function like chronic scenario appraisals concerning the intentions, actions, and fates of out-group members, interacting with evaluative attitudes to produce chronic emotion dispositions toward them. More broadly, although we have focused on affect within personal relationships, sentiments should operate toward classes of others, of which out-groups are one type. We expect not only that both negative and positive stereotypes toward out-groups decompose into sentiments, but also that the same processes underlie representations of, and the regulation of responses toward, generic others on the basis of gender, age, class, and so forth.

**Cocca** raises the question of how sentiments operate within multiparty contexts. She suggests that *N*-person dynamics warrant modification of the ASE. We agree that *N*-person contexts add complexity, but suggest that they “simply” involve the relative weighting of sentiments across targets; attitudes toward all salient parties in a scenario should jointly moderate emotional reactions. More valuable relationships should be prioritized when trade-offs are unavoidable, and allegiances strategically revealed when a side must be taken (Shaw et al. 2017). Biasing emotional reactions according to the relative strengths of attitudes toward different parties addresses adaptive trade-offs, as attitudes track the relative costs and benefits to

supporting various parties. These computations are not simple, but the ASE provides a framework with which to partition sources of variation, especially the relative valuation of different social partners and weighting of their interests.

#### ***R.3.4. Applications of the ASE model of contempt***

**Cocea** highlights situations wherein a devalued target is instrumentally harassed to enhance social standing with an audience. This resonates with our suggestion that many “hate crimes” are more properly “contempt crimes” wherein perpetrators instrumentally exploit targets for gain, rather than spitefully attacking them for harm’s sake. **Bilewicz et al.** discuss “hate speech” driven by dominance and the expression of disgust, rather than by perceived threat. Although not materially exploitative, which would follow from the “cold” indifference facet of the contempt sentiment, such speech plausibly arises as part of the “hot” reactive intolerance facet of contempt. We suggested that disgust, in particular, operates in the service of contempt to signal alliance membership and mitigate “image infection” from the contemned.

**Neagota, Benga, & Benga** apply our model of contempt to *charivari*, a pan-Europe collective mockery institution, noting that, per the model, features of contempt should cohere across time and space. This suggests a recurring motivational and expressive scaffold from which ritualized institutions might be built, providing part of a universal semiotics for decomposing historical phenomena into constituent psychological and social processes. Their analysis also raises the possibility that the semiotics of contempt can be deployed in informal social bargaining, to influence the behavior of norm violators through mockery and threat of

exclusion. Public ritualized mockery appears in many cultures (e.g., Indonesia [Fessler 1995]), as punishment in the service of motivating norm conformity, rather than simply excluding non-conformists beyond redemption.

**Sullivan** suggests that group-level contempt illuminates intractable conflicts, noting that contempt within a “background group moral ethos” of relative power, abetted by group-based pride, can justify violence, undermine reconciliation, and prolong conflict. We agree that the social context of contempt will influence its expression and enactment. Although contempt can be proscribed, it can also be encouraged. The recent re-emergence of contempt in U.S. political discourse suggests that political polarization crossed a threshold at which the perceived between-group benefits of showing respect for the opposing party were outweighed by the within-group benefits of derogating and obstructing them. This transition could rest on increasing self-segregation afforded by new media, fanning a conviction that one’s own principles and constituents are superior to those of the other party. Expressions of contempt can be the final act in a crumbling relationship (Gottman & Levenson 2000), likely also between groups, biasing subsequent attributions of intentions and shifting construals of interdependence to zero-sum competition.

Asking why contempt is such a problem for contemporary society, **Sternberg** proposes that leaders use contempt to foment hate. We provided an error management mechanism for this phenomenon: contempt should bias one toward believing untrue vilifying information about its object, because targets of contempt are expendable, and failing to heed true vilifying information is dangerous. Although this supports Sternberg’s claim that leaders open the door for hate when



they show contempt for opponents, it leaves unexplained the latent contempt that leaders leverage. We might implicate the larger cultural and historical context: a globalized capitalist economy that requires impersonal participation while obscuring latent networks of interdependence (Durkheim 1893/1997). Such a system may be unfulfilling for a social mind striving for warmth, belonging, and reciprocity. Communities that do fulfill these needs, forced together despite divergent norms and interests, may fail to see latent efficacy in each other, and set themselves in competition.

**Sternberg** also proposes that leaders strategically display false contempt that followers mistake for genuine contempt. We are skeptical. Disrespecting and diminishing another's worth are corrosive in relationships. If a potential ally is actually valued, the costs of feigning contempt will be too high, unless both parties have reliable information about each other's private commitment to an alliance, whereupon displays of contempt could be used to mask the alliance without undermining it.

Lastly, **Sternberg** suggests that seeking a common good for all is the cure for contempt. This is partially accurate, but too underspecified. When will people seek a common good? Why do groups delimit the moral circle, with people tending to view "others" as worthy of contempt? Morality evolved for regulating social relationships (Fessler et al. 2015; Rai & Fiske 2011). Group members have a shared fate, manifest interdependencies, and accountability, as well as shared norms that facilitate coordination. Group boundaries are therefore ancestrally adaptive borders for sentiments such as love (tracking fitness dependence) and respect (tracking efficacy) that build and preserve valuable relationships; beyond them we should generally expect

indifference (Brewer 1999) or competitive hate (Choi & Bowles 2007), except in cases of specific affordances for out-group cooperation (Pisor & Gurven 2016).

We suggest three potential cures for contempt. First, sanctions on contemptuous behavior can extrinsically motivate tolerance and respectful consideration. However, contempt for the institutions backing such sanctions predicts extreme non-conformity (Tausch et al. 2011). Suppressing the expression of contempt is thus an unstable stopgap at best.

Second, it may be possible to upregulate the sentiment *love*, to override contempt. Given the likely phylogenetic origins of fitness dependence in biological relatedness, and later in shared fate within a coalition or group, cues of “unity” (Rai & Fiske 2011) – common origins, shared essence, shared fate, group membership, physical similarity – may upregulate love and the commitment emotions supporting those on whom one is dependent. Unfortunately, similar strategies can also be used to constrict boundaries. Immigration debates hinge on origin stories and purported allegiances; global threats are downplayed while anxieties over national or religious threats are fanned; economic isolationism denies gains-in-trade from intergroup alliances; and so on. The salience of spatially- and temporally-near interdependencies may outweigh abstract considerations. Using love to treat contempt may not be feasible or stable.

The “wisest” cure for contempt is to stoke respect through appraisals of efficacy, including competence, effort, and integrity. Dignity cultures simply stipulate that everyone deserves respect. However, the basic criterion for respect in this logic is personhood; contempt contributes to dehumanization (Haslam 2006), so premising respect on personhood cannot cure

contempt. Simply contesting pejorative narratives will often fail, as antecedent contempt biases evaluations of information, discrediting counter-narratives. Instead, curing contempt likely requires concrete interactions with target populations, in which practical and moral efficacy is evident and irrefutable. Intergroup Contact Theory has long recognized this (e.g., Allport 1954). Such research would benefit from moving beyond general conceptions of attitudes as positive versus negative, to measuring specific attitudes of love and closeness, respect and worth, hate and zero-sumness, and fear and bad intentions, including intervening appraisals of interdependence, varieties of efficacy, competition, and threat. Designing interventions that highlight concrete efficacy, as well as interdependence, while downplaying zero-sumness and unpredictability (e.g., collective action tasks [Schroeder & Risen 2016]), are most likely to positively alter attitudes. Although neither simple nor cheap, cuing respect has the best chance of curing contempt.

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