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MOTIVATIONAL THEORIES OF EMOTIONS IN PHILOSOPHY AND AFFECTIVE SCIENCE

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Introduction

The idea that emotions motivate behavior is a core assumption of commonsense psychology – we often explain what people do by referring to their emotions. John fired Sam *because* he was angry at his insubordination; Laura refused to walk home alone *because* she was afraid of being robbed. James (1884) famously called common sense into question, arguing that it reverses the actual direction of causation. On James's (1884) view, emotions do not cause the physiological changes (e.g. trembling) and motor actions (e.g. fleeing) ordinarily thought to be their manifestations, but are rather caused by them. This is because emotions are feelings of physiological changes and motor actions as they occur, and what brings these bodily changes about are *instincts* rather than *emotions*.

James's (1884) skepticism about the motivational role of emotions cast a long shadow in the 20th century (but see James 1894; Reisenzein, Chapter 8, this volume). It helped bring a second core assumption of commonsense psychology center stage – the idea that emotions are feelings. In the wake of James's analysis, a significant portion of the research community conceptualized emotions as particular types of conscious experiences, leaving the explanation of behavior to other motivational structures.

James's rejection of the view that emotions can explain behavior did not go unopposed. Dewey (1894, 1895) argued that James's theory of emotions as consequences of bodily changes fails to make sense of the importance emotions have in our lives. Why would we care about fear and anger as much as we do if they did not contribute at all to explaining, respectively, why we flee and why we attack, why we tremble and why we grimace?

Dewey (1895) stated that an emotion is actually "a mode of behavior which is purposive" (15). This mode of behavior "reflects itself into feeling", which is to say there is an experiential side to the behavior, but the mode of behavior is primary. When we say that a person is in a certain emotional state, Dewey (1895, 16–17) emphasized, "we do not simply, or even chiefly, mean that he has a certain 'feel' occupying his consciousness [but rather that he has assumed a] readiness to act in certain ways".

Dewey's line of inquiry has led the emergence of a rich corpus of *motivational theories of emotions* in the 20th century. Motivational theories of emotions claim, roughly, that emotions

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are, or at least essentially comprise, motivations to act. Motivational theories of emotion have recently had a revival in emotion theory, but their history goes back much longer.

They got their start with Aristotle's focus on the behavioral impulses associated with emotions, which he referred to as *orexis*, "the sort of faculty in the soul which initiates movement" (*De Anima* iii 10, 433a31-b1; Campeggiani and Konstan, Chapter 1, this volume). They became especially influential in the Middle Ages, when several authors, most notably Thomas Aquinas, proposed that emotions were *willings* or *wantings* or *movements* of the appetitive part of the soul (Knuuttila, Chapter 4, this volume). Many 17th- and 18th-century theorists of emotions also articulated theories of emotions which understood them as kinds of *endeavours* (Shapiro, Chapter 6, and Wilson, Chapter 7, this volume). In the late 19th century at the rise of scientific psychology, *desires* were singled out by several theorists as essential components or causes of emotions (Reisenzein, Chapter 8, this volume).

For reasons of space, I will focus exclusively on motivational theories of emotions developed in the second half of the 20th century, trying to clarify their basic tenets, benefits, and challenges. The primary payoff of this analysis will be a general taxonomy of the ways in which the relation between emotion and motivation can be understood. A secondary payoff will be the realization that the motivational family includes theories of emotions often considered to be in competition with one another, like basic emotion theory and appraisal theory. This will clear new paths for possible theoretical integration and synthesis.

Here is how I will proceed. First, I explain why a motivationalist approach to emotions is worth pursuing. Second, I describe a handful of pioneering motivational proposals developed by Leeper (1948), Simon (1967), and Bindra (1969), placing them in the context of the 20th-century psychology of motivation. Third, I focus on the motivational side of basic emotion theory, distinguishing between the Tomkins (1962)–Ekman (1992, 1999) wing and the Plutchik (1962) wing of the research program. Fourth, I consider Frijda's (1986, 2007) seminal theory of emotions as action tendencies. Fifth, I tackle modern-day appraisal theories, comparing and contrasting Roseman's (2008, 2013) and Scherer's (2005, 2009) accounts. Sixth, I compare and contrast two motivational theories offered in contemporary philosophy by Deonna and Teroni (2012, 2015) and by Scarantino (2014, 2015). I conclude by discussing the main dividing lines within the family of motivational theories, and point to some challenges the research tradition faces moving forward.

To get a sense of the 20th-century history of the psychology of motivation, whose overarching question is "What causes behavior?", readers are advised to consult Heckhausen and Heckhausen (2018) and Reeve (2014). Motivational theories of emotions have been discussed in passing in Scarantino (2016), Scarantino and De Sousa (2021), Moors (2022), Tappolet (2022), Kurth (2022), and Campeggiani (2023), among others. This is the first chapter-length treatment focused exclusively on the role motivation plays in theories of emotions in both affective science and philosophy. Important motivational proposals which cannot be covered for reasons of space include Moors's (2017, 2022) goal-directed theory, enactivist accounts in the style of Colombetti (2014), and Del Giudice's (2023) recent motivational systems theory (see also Al-Shawaf and Shackelford 2023).

Why Be a Motivationalist About Emotions?

Before we get into the details of the motivational approach to emotions, it might be useful to explain some of the reasons why the approach is attractive. One advantage of Motivationalism is that it offers a straightforward explanation of the correlations we observe between emotion types and action types, which any successful theory of emotions needs to explain. Even a

Jamesian would be hard-pressed to deny that when angry at an employee, we are more likely to fire him that to buy him expensive concert tickets, or that when afraid of being robbed in a certain area of town, we are more likely to stay away from it than to explore it alone at night. Motivational theories propose that these reliable associations come about because emotions *cause* behaviors distinctive of each emotion – non-Motivationalist accounts need to offer an equally compelling alternative explanation.

Another advantage of Motivationalism is that it allows for the study of emotions in animals. Non-motivational theorists who identify emotions with feelings face skepticism demonstrating that animals have feelings, let alone showing how animal feelings can be measured scientifically (see Anderson and Adolphs 2014; Paul, Neville, and Mendl, Chapter 57, Volume II). On the other hand, animals are undoubtedly motivated to behave in ways that promote their survival and reproduction. A motivational theory of emotions can rely on existing experimental paradigms used in animal psychology and comparative neuroscience to measure emotional states, as long as the latter are understood in behavioral terms.

Thirdly, Motivationalism is easy to reconcile with selectionist accounts of the emotions' origins and with the distinction between adaptive and maladaptive instances of emotions, which many emotion theorists wish to use in their work. Natural and cultural selection care about what organisms *do*, so if we understand emotions as *tools for doing*, we set the stage for their selection (specific selectionist proposals must of course be empirically validated). Non-motivational theories identifying emotions as feelings require an additional layer of explanation to bridge the gap between feelings and behavioral consequences, especially because several skeptics deny that feelings as such have any causal powers (Jackson 1982; Chalmers 1996).

Nevertheless, there are several reasons why one may want to oppose Motivationalism on principled grounds. A number of emotion theorists are convinced that emotions are by definition feelings (e.g. Barrett 2017; Le Doux 2017), and so they would consider motivational theories which focus on behavior at the expense of phenomenology not to be, strictly speaking, theories of emotions. Motivationalists can counter that emotions prototypically involve both feelings and motivations, but that identifying emotions with motivations is theoretically more fruitful (e.g. Adolphs and Andler 2018), for example because it allows for comparative animal research, or because it can ground functionalist accounts of emotions. This being said, several of the motivational theories I discuss in this chapter explain how feelings have an important role to play in the motivational story.

Another reason for skepticism is that we may not need to posit emotions understood as special-purpose adaptations to explain emotional phenomena. Psychological constructionists have been especially vocal in rejecting the view that there are specialized emotion mechanisms (Barrett and Lida, Chapter 17, this volume), proposing instead that emotional phenomena emerge from the regular workings of general-purpose capacities like the capacity to categorize, the capacity to experience core affect, and so on. This is a complicated threat to assess for Motivationalism, because it requires getting into the details of the alternative explanations proposed. Comparing and contrasting special-purpose and general-purpose accounts of the same emotional phenomena strikes me as a worthwhile endeavor for the future.

Psychological constructionists have also suggested that a motivational approach to emotions is incompatible with the empirical data about discrete emotions collected over the past four decades (Russell 2003; Barrett 2006). In brief, their critique is that the amount of variability revealed about the physiology, expressions, behaviors, and neural changes of discrete emotions cannot be reconciled with their alleged role as causes. This criticism has largely focused on the Tomkins-Ekman version of basic emotion theory (although it encompasses

some varieties of appraisal theory as well), but I will make the case that the Tomkins-Ekman account is an outlier within the motivational tradition, because it assumes that emotion programs work in a reflex-like fashion. This is anathema for most motivational theories (including Plutchik's own 1962 version of basic emotion theory), which are designed precisely to account for variability, and explain it as a means to the end of flexible emotional responding.

Another concern may be that Motivationalism blurs the line between motivation, exemplified by things like hunger and the sex drive, and emotion, exemplified by things like anger and fear. I consider several suggestions on how to draw the emotion-motivation distinction in this chapter, but I note right away that the mechanisms of operation of so-called biological drives and emotions are very similar in several respects (Bindra 1969). This being said, it is possible to consider both emotions and biological drives as motivations, and to draw distinctions between them as separate motivational systems, for instance in light of their different elicitation mechanisms, which appear more internally driven for biological drives and externally driven for emotions. Whether we consider emotions and biological drives as instances of the same theoretical category cannot be established a priori – it is a matter of the theoretical payoffs of lumping them versus splitting them, together with the theoretician's taste for letting common sense patrol the boundaries of theoretical investigation.

These brief remarks are unlikely to convince non-motivational theorists. My objective in this chapter is not to make the case that motivational theories of emotions are better than non-motivational ones. Rather, I want to showcase some influential contemporary motivational proposals, in the hope of offering a palette of live theoretical options to those who think that motivation is at the heart of emotion. If this gives other theorists a reason to take a second look at the motivational research tradition, this will be an added bonus.

The Motivational Tradition in Affective Science: Historical Preliminaries

Reflections on how behavior, and more specifically goal-directed action, is produced have been pervasive in all cultural traditions since Ancient Greece, but the psychological concept of "motivation" is a product of the 20th century – earlier theorists spoke of "will", "conation", "volition", "intention", and "impulse" instead. The establishment of motivation as an independent field of psychology, as evidenced by chapters in textbooks specifically devoted to the topic, is often associated with Young's *Motivation and Behavior: The Fundamental Determinants of Human and Animal Activity* (1936).[1]

The emergence of the concept of motivation resulted from the weakening of what I call the *reflex model* of behavior, according to which behavioral responses are inescapably evoked by the presentation of suitable stimuli. This mechanistic approach harks back to Descartes's 17th-century proposal that the principle of reflex action can account for all animal behavior without positing mental states (Descartes 1972). It became central to the explanation of human behavior in the early 20th century with the emergence of the behaviorist movement (Graham 2019), which identified learning with the classical or operant conditioning of reflex-like responses to originally neutral stimuli.

Innumerable behaviors, however, are not reflexive, and yet appear to be goal-directed, such as the behavior of a hunting dog (Woodworth 1918, 41). The concepts of *instinct*, *drive*, *need*, and *motive* were introduced in the span of a few years to account for these purposive behaviors. These alternative motivational concepts, popular at different times during the 20th century, broadly refer to a dispositional inner structure or mechanism which, when activated by internal or external stimuli, flexibly guides the organism toward a particular goal like catching a prey.

The crucial difference with a reflex model of explanation is that the steering of action provided by this dispositional inner structure consists of an *action tendency* rather than a specific response generated with "infallible certainty and promptness" (Woodworth 1921, 71). As Woodworth (1921) emphasized, when an action tendency is activated by an inner instinct/drive/need/motive, "quite a series of responses, R1, R2, etc., follows upon a single stimulus, all tending towards the same end-result" (71).

McDougall (1908) and Shand (1920) offered influential theories of how emotions are related to these broader motivational structures, which they both called *instincts*. For McDougall, emotions are parts of instincts, whereas for Shand, instincts are parts of emotions.[2] McDougall (1908) proposed that an instinct has three components: a *cognitive* component, an *affective* component, and a *conative* component. The emotion is defined phenomenologically, because it is an experience of excitement which comes about when a certain behavioral impulse is activated. On this early view, emotion is the felt part of an activated instinct (see McDougall 1923 for an account of emotion which gives a more central role to the conative component).

The motivational door was sprung fully open by Shand (1920), who argued that the conative impulse to action is not merely an accompaniment of emotion – it is an essential part of it. In addition, Shand urged the research community to relinquish its Jamesian concern with the phenomenological side of emotions in favor of the motivational side, emphasizing that emotions, although they do involve feelings, should be studied as "forces organised to achieve certain ends" (Shand 1920, 4). Shand understood instincts as tools available to emoters to pursue such ends, along with acquired tendencies which are instead learned. For example, when afraid, we can rely on the relatively rigid instincts of "flight and concealment", but we can also rely on the learned tendency to dial 911.

Neo-behaviorists like Tolman (1923) followed suit, emphasizing that "it is not the actually exhibited behavior, as such, which constitutes … the emotion, but rather the *readiness* or *drive* for such a behavior" (219; emphasis in original). Tolman proposed that neither stimuli as such (e.g. predators) nor behavioral responses as such (e.g. fleeing) can identify emotions, but only responses intended to achieve a certain purpose relative to certain stimuli (e.g. the purpose of protection). On this view, fear and anger should be understood as intervening variables between stimuli and responses rather than conscious states – fear is a *readiness to protect* from stimuli, anger is a *readiness to destroy* stimuli, and so on.

Leeper (1948) came to the same conclusion (see also Bull 1951). Opposing the view of emotions as disorganizing forces then prevalent in psychoanalysis, advertising, politics, and religion, all domains in which emotions were assumed to disrupt behavior, he argued that "emotional processes operate primarily as motives … which arouse, sustain, and direct activity" (17). Leeper (1948) added that "[t]he stronger the emotional process aroused … the more certainly will his behavior be governed in a way consistent with his emotional reaction" (17). In cases of extreme intensity, the emotions can indeed become disruptive, but this is for Leeper the exception rather than the norm.

The conceptualization of emotions as intervening motivational variables by Tolman, Leeper, and several neo-behaviorist psychologists became popular post World War II (e.g. Mowrer 1947; Miller 1951; Spence 1956; see Lazarus 1968 for a review). At the same time, critics remarked that assimilating emotions with motives rendered all behavior emotional, depriving emotion of any distinctive explanatory power. As Duffy (1948) noted in her critique of Leeper (1948), "I search in vain for a definition of *emotional* processes which would distinguish them from *other types* of motives" (326; emphasis in original).

Simon (1967) proposed a way to carve out the domain of emotion from the domain of motivation writ large. Simon (1967) defined *motivation* as "that which controls attention at any given time" (34) in a system which is pursuing a variety of goals, with attention being directed to a single goal or a multiplicity of goals. Simon stated that motivation, so understood, does not encompass the ability to quickly switch between goals. To achieve this objective, which is essential for survival, organisms must also be endowed with an *interrupt system*, i.e. a system continuously monitoring the environment in search for "needs of high priority". Once such needs are detected, ongoing processes must be interrupted and the existing goal pursuit replaced with a new goal pursuit.

Simon pointed out that high priority needs can arise in various ways – they could be associated with a loud sound warning of danger, or with a physiological state like intense hunger, or with a cognitive association like the memory of a vicious insult. In all such cases, the existing hierarchy of goals must be changed to favor the high-priority needs of, respectively, escaping danger, eating, or getting back at the one who slighted us. These sudden goal readjustments are accompanied by an increase in autonomic arousal that is also subjectively experienced as a feeling of arousal. Simon (1967) concluded that there is a "close connection between the operation of the interrupt system and much of what is usually called emotional behavior" (36). Because any information-processing system, including artificial computing systems, can in principle incorporate an interrupt system, Simon (1967) stated that all information-processing systems can incorporate not just motivational but also emotional controls over cognition.

Although Simon (1967) contrasted motivation and emotion, his proposal can be reinterpreted as a promising way to distinguish emotional motivation from non-emotional motivation. On this Simon-inspired view, emotional motivation is motivation driven by the urgency of the goals pursued, whereas other forms of motivation allow for a sequential style of goal pursuit. Not everyone, however, believed it was fruitful to distinguish between emotion and motivation.

Bindra (1969) debunked many common attempts to draw the distinction between emotion and motivation in terms of externality of stimuli, levels of disorganization, or degree of arousal. He proposed instead that emotions like anger, fear, and love, and biological motives like hunger, sex, and maternal concern, are all *central motive states* (CMS).[3]

A CMS is "a set of neural processes arising from an interaction of a certain type of physiological state and a certain class of incentive stimuli" (1081). Whenever emotions and biological motives interact with the right "incentive stimuli", such as the sight of a predator (in fear) or the smell of food (in hunger), a CMS is created. A CMS facilitates action through "*selective attention* to a certain class of incentive stimuli" and through "*response bias* in favor of a certain class of species-typical actions". Response bias consists of "general readiness for motor output", with the "exact responses made … depend[ing] … on the total stimulus characteristics of the situation" (1072–1073; see also Morgan 1943). On this view, when hungry/afraid, you will be selectively attentive to opportunities for food/escape, and manifest response bias toward eating/fleeing – another way to say that you will manifest an action tendency to eat/flee.

To sum up, by the 1960s there was a well-established motivational tradition which understood emotions in terms of dispositional structures or intervening variables which, when activated by the right incentives, led to a state of readiness to act toward an emotion-specific end (with maximal urgency on Simon's account), rather than to any particular set of motor responses.

When basic emotion theory emerged in the 1960s, its most influential proponents like Tomkins (1962) and Ekman (1992) parted ways with this motivational approach, proposing that emotions are a set of invariant physiological and facial responses generated by affect programs. At the same time, Tomkins argued that emotions are the primary motivational systems, more central to motivation than biological drives themselves. The Ekman-Tomkins

strand of basic emotion theory soon became dominant, partially hiding from view other versions of the research program such as Plutchik's (1962) version, which represent instead a direct continuation of the Dewey-McDougall-Shand-Leeper-Simon-Bindra research tradition. It is to these developments that I now turn.

Two Ways to Think of Basic Emotions as Motivating: Tomkins-Ekman versus Plutchik

If we take the core insight of basic emotion theory to be the idea that emotions are solutions to recurrent evolutionary problems (Shiota, Chapter 15, this volume), we find early predecessors of basic emotion theory in Shand (1920), McDougall (1908), and possibly even James (1890) (see Reisenzein, Chapter 8, this volume, for discussion). In its modern incarnation, however, basic emotion theory is a 1960s and 1970s affair.

The most influential version of basic emotion theory is associated with Tomkins's (1962) visionary writings, turned into an empirical research program by Ekman (1972) and Izard (1971). I will describe its main tenets, and then turn to a second strand of basic emotion theory associated with Plutchik (1962). As it turns out, although Tomkins, Ekman, and Plutchik all shared the view that basic emotions are evolutionary adaptations consisting of evolved programs causally responsible for behavior, they understood the nature of such programs very differently. Plutchik's version shows the way forward for properly integrating basic emotion theory within the motivational tradition.

Tomkins and Ekman differ from other members of the motivational tradition in an essential respect: they assume that emotions, which they refer to as *primary affects* (Tomkins) or *basic emotions* (Ekman), consist of specific bodily responses automatically caused by affect programs. The terms *primary affect* and *basic emotion* are used ambiguously by Tomkins and Ekman to refer both to the *suite of automated bodily responses* (an occurrent event) and to the *affect program* causally responsible for eliciting them (a dispositional structure; but see Naar, Chapter 21, this volume).

Neither Tomkins nor Ekman endorsed a reflex model of behavior in general, contrary to what the behaviorists had proposed. Also, they were well aware of the lack of a fixed, reflex-like relation between emotions like fear and anger and specific behaviors like running or hitting. At the same time, they did not think that states of action readiness were components of primary affects/basic emotions, leaving the emotion-action impulse connection in the background.

Given these differences, are Tomkins and Ekman genuine members of the motivational tradition? The answer is complicated. Tomkins stated that "the primary motivational system is the affective system [which comprises different individual affects], and [that] biological drives have motivational impact only when amplified by the affective system" (1962/2008, 4). Contrary to what Bindra (1969) and others had argued, Tomkins's view was that there is a fundamental difference between biological drives like hunger, distress, and the sex drive and primary affects like fear, excitement, and interest. The difference is that biological drives without the help of affects cannot motivate, whereas affects can motivate without drives – this is why Tomkins believed the affect system to be the primary motivational system.

For Tomkins (1962/2008), the main job of biological drives like sex or hunger is to provide organisms with information "of *time*, of *place* and of *response—where* and *when* to do *what*" (18; emphasis in original). For example, the hunger drive may inform you that food levels are at present not optimal – a need for putting food in your mouth is signaled. But Tomkins believed that you would not do much of anything about this signal unless the *affect* of *distress* stepped in, amplifying the food deprivation signal (affects can also *inhibit* drives under certain

conditions, as when fear inhibits the hunger drive). Distress and other affects are in charge of motivating, and the way they motivate is by providing the agent with *valenced feedback*. As Tomkins (1962/2008) put it, "[i]f the feedback of the affective response is motivating, then whatever instigates, maintains and reduces the affect also becomes equally motivating" (13).

Distress provides negative feedback – it is unpleasant – and whatever reduces distress – e.g. eating – is motivated by distress. On Tomkins's model, it is not hunger that directly motivates eating: hunger informs that eating is in order, distress steps in, and distress motivates eating because eating reduces distress. This seems to presuppose that hunger itself does not feel unpleasant in a way that would demand its own reduction, whereas distress does. This is a different understanding of how emotions motivate than the one we have considered so far. I describe it as a "light switch" model of emotional motivation, in the sense that emotions motivate actions aimed at turning emotions *off* (or *reducing* them) when unpleasant or turning emotions *on* (or *maintaining* them) when pleasant.

What produces the *motivating feedback* associated with affects? This passage explains Tomkins's position:

> Affects are sets of muscle and glandular responses located in the face and also widely distributed through the body, which generate sensory feed-back which is either inherently "acceptable" or "unacceptable." These organized sets of responses are triggered at subcortical centers where specific "programs" for each distinct affect are stored …. They are capable when activated of simultaneously capturing such widely distributed organs as the face, the heart, and the endocrines and imposing on them a specific pattern of correlated responses.
>
> *(Tomkins 1962/2008, 135)*

On this model, (a) each affect program elicits responses primarily in "facial behavior" and secondarily in "outer skeletal and inner visceral behavior" (114), (b) such response are elicited in a reflex-like fashion through "simultaneous capturing" by a subcortical program inducing a "specific pattern of correlated responses", and (c) the responses produced feel negative (unacceptable) or positive (acceptable). This implies that the affect program automatically elicits affective responses (it does not "motivate" those, it just causes them), and the automated responses themselves motivate behavior in light of their valence. Tomkins (1962/2008, 619) eventually suggested that it is the *skin* of the face rather than the facial *muscles* which has rewarding and punishing features, and so is the ultimate source of motivating facial feedback.

Tomkins (1962/2008) concluded that affects are *evolutionary adaptations*, and that there are eight primary affects out of which all other affects are built: interest, enjoyment, surprise, fear, anger, distress, shame, contempt, and disgust. Each affect corresponds to "discriminable distinct *sets* of facial, vocal, respiratory, skin, and muscle responses" (647; emphasis in original).

Ekman (1972), who was a student of Tomkins, further developed these ideas and gave basic emotion theory empirical respectability with his work on facial expressions (see also Izard 1971). Ekman proposed that we have strong empirical evidence for six basic affect programs, namely happiness, sadness, anger, fear, disgust, and surprise. Several other emotions have potential "basic emotion" status, including amusement, contempt, embarrassment, excitement, guilt, pride in achievement, relief, satisfaction, wonder, ecstasy, sensory pleasure, and shame (Ekman and Cordaro 2011).

Despite differences in the proposed set of basic emotions, Ekman followed Tomkins in three key respects: the assumption that affect programs are evolutionary adaptations with a reflex-like mode of operation, the assumption that facial movements are especially important effects of the activation of basic affect programs, and the assumption that no emotion-specific action tendencies are caused by basic affect programs.

Ekman (1992, 171) emphasizes that basic emotions "evolved for their adaptive value in dealing with *fundamental life-tasks*", which include challenges and opportunities like "facing an immediate danger, experiencing an irrevocable loss, progressing towards the realization of a goal" (cf. Lazarus 1991). The adaptive value of basic emotions is tied to their ability to "mobilise the organism to deal quickly with important interpersonal encounters" (171).

Ekman (1999) listed 11 features typical of the evolved solutions to these recurrent life-tasks: distinctive universal signals, distinctive physiology, automatic appraisals tuned to distinctive universals in antecedent events, distinctive developmental appearance, presence in other primates, quick onset, brief duration, unbidden occurrence, being accompanied by distinctive thoughts, memories, and images, and being characterized by distinctive subjective experiences.

Ekman (1999, 47) also thought that basic emotions are adaptive because "they inform conspecifics, without choice or consideration, about what is occurring". He concluded that distinctive universal signals are especially important effects of the action of affect programs, because they inform conspecifics. This explains the overarching focus of modern basic emotion theory on the evidence for the universal production and recognition of facial signals.

Like Tomkins, Ekman believed that when an affect program is activated, a "cascade of changes (without our choice or immediate awareness) occurs in split seconds" (Ekman and Cordaro 2011, 366) in various organs of the body. As he put it, the bodily changes brought about by the affect program are "inescapable". On the other hand, Ekman did not buy into Tomkins's light switch model of motivation, in part because he believed valenced feelings are hard to study scientifically (note that feelings were not even included in the nine-item list of distinctive characteristics of basic emotions originally presented in Ekman 1992).

Crucially, Ekman agreed with Tomkins that there are no emotion-specific action impulses associated with emotions. Ekman (1977, 1992) gave several reasons to explain the absence of action impulses from the set of distinctive characteristics of basic emotions. First, Ekman (1977) stated that motor patterns are not produced as quickly as facial and physiological changes, are not universal, are not innate, and are not hard to interfere with. The last point shows that for Ekman, the fact that a component is automatically produced, and therefore hard to interfere with, is a prerequisite for concluding that an affect program caused it. One may counter that emotional impulses to behavior are in fact hard to interfere with, but Ekman's (1977) view was that behavioral predispositions are *fragile*: "experience can overcome such predispositions and institute diametrically opposed coping … biology at best gives a tap … culturally and individually variable learning is the overwhelming contributor to coping" (64).

Ekman (1992) had a second reason to think that there are no emotion-specific action tendencies generated by affect programs, namely that "it is not self-evident that there is any uniform, universal tendency for one or another action" for emotions like "sadness, amusement, relief, contentment, or enjoyment" (182). For example, what is the action tendency associated with joy directed at a gorgeous sunset? And is it the same tendency applicable to all other instances of joy, as well as a tendency that no emotion other than joy can manifest?

Ekman was skeptical that we could provide satisfactory answers to these questions. He concluded that the actions that follow emotions are determined by *coping*, a term which "refers to attempts to deal with the emotion felt and its source; to increase, diminish or sustain what is occurring" (63). Coping has an emotion-focused and a stimulus-focused side: it determines if and how to interfere with the automated responses produced by the affect program (e.g. by trying to inhibit expressions of fear during a confrontation) and it determines what actions to take in response to the stimulus, which may be "organized behaviours as attacking or fleeing" (Ekman 1977, 64; see Wiegman 2021 for further discussion).

Ekman and Cordaro (2011) seem more receptive to the idea that basic emotions cause actions as well, but they have not quite made the leap to a straightforward motivational account of basic emotions as involving emotion-specific action tendencies (see Moors 2022 and Moors, Chapter 12, this volume, for a different take on this matter). This is because Ekman and Cordaro (2011) now list among the effects of the activation of action programs "preset actions" and "learned actions" (366). I take them to mean that an affect program may not only produce *preset actions* like ducking out of fear when exposed to the threat of a suddenly looming object, but also *learned actions* like "steering [the] wheel and braking" (368) when the threat comes from another car.

I would not describe preset and learned actions the expression of an "impulse" or "tendency" to avoid danger. Ekman and Cordaro (2011) have simply expanded the set of bodily changes produced in a reflex-like fashion by basic emotions to include, besides facial movements and autonomic changes, also *some* behavioral changes. Crucially, the "newly acquired emotional responses [like steering the wheel to avoid a car crash] become involuntary, just as involuntary as the unlearned responses" (268). What this picture still misses is the idea that fear itself can motivate a flexible range of *voluntary* behaviors aimed at avoiding danger, which is what a true impulse to avoid danger needs to involve. Figure 20.1 summarizes Ekman's model.

An alternative understanding of the connection between basic emotions and action was proposed by Plutchik (1962). The main difference with Tomkins and Ekman is that Plutchik

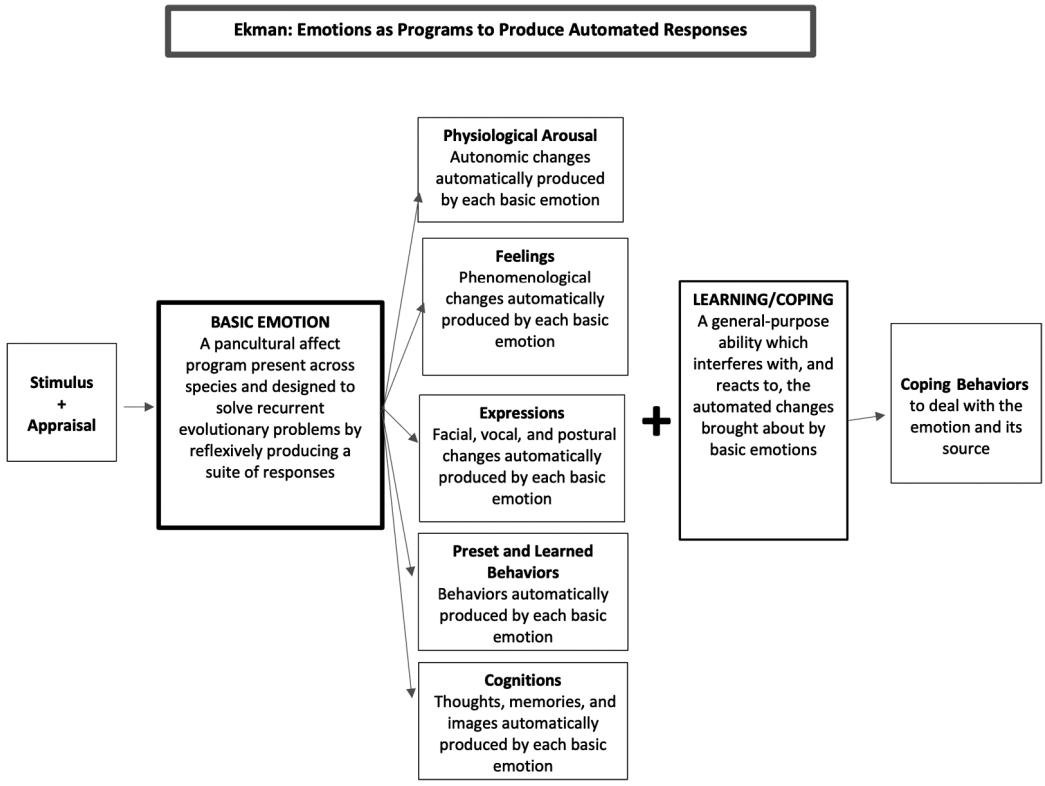

Figure 20.1 Ekman's theory of basic emotions. Learning and coping determine how the emoter responds to the basic emotion and its source.

endorsed a "goal pursuit" model of emotional motivation, according to which affect programs produce action tendencies aimed at achieving emotion-specific goals, rather than actions motivated by valenced feedback (as in Tomkins) or involuntary responses (as in Ekman).

Plutchik (1962) thought of (some) emotions as being basic in two senses: they are biologically basic, and they are psychologically basic (Ortony and Turner 1990). What makes emotions *biologically basic* is the fact that they bring about *impulses* to *basic behavior patterns* – the handful of action tendencies which organisms of all species need to survive and reproduce. What makes emotions *psychologically basic* is that they provide the ingredients for other non-basic emotions, but are not themselves made of other emotions, just as primary colors provide the ingredients for other non-primary colors without having other colors as parts.

On Plutchik's view, there are "survival problems for all organisms that must be successfully dealt with if they are to survive … [including determining] … appropriate responses to prey and predators, to caregivers and care solicitors, and to potential mates" (Plutchik 2000, 74). Emotions are the "adaptive behaviors that can be identified in lower animals as well as in humans" (79) as solutions to such survival problems.

Plutchik singled out eight "behavior patterns" as basic, describing them in terms of bipolar tendencies toward action (in parentheses are the emotions generating the tendencies): "moving toward" (destruction: anger) *versus* "moving away from" (protection: fear); "taking in" (incorporation: acceptance) *versus* "expelling" (rejection: disgust); "possessing" (reproduction: joy) *versus* "losing" (deprivation: sorrow); and "moving" (exploration: curiosity) *versus* "stopping" (orientation: startle) (see Plutchik 1980 for an updated analysis).

Plutchik (1962, 50) emphasized that "emotions are hypothetical constructs or idealized states whose properties must be inferred from various kinds of evidence" (emphasis removed from original), comparing them to other *unobservables* commonly studied in psychology (e.g. personality trait), physics (e.g. atom), or biology (e.g. gene). Plutchik (1962) occasionally described emotions as "patterned bodily reaction[s]" (151), but it is clear that he was not identifying emotions with any specific sets of bodily responses. What he had in mind were rather prototype patterns of adaptation that organisms rely on in their struggle for survival and reproduction. Figure 20.2 summarizes Plutchik's theory.

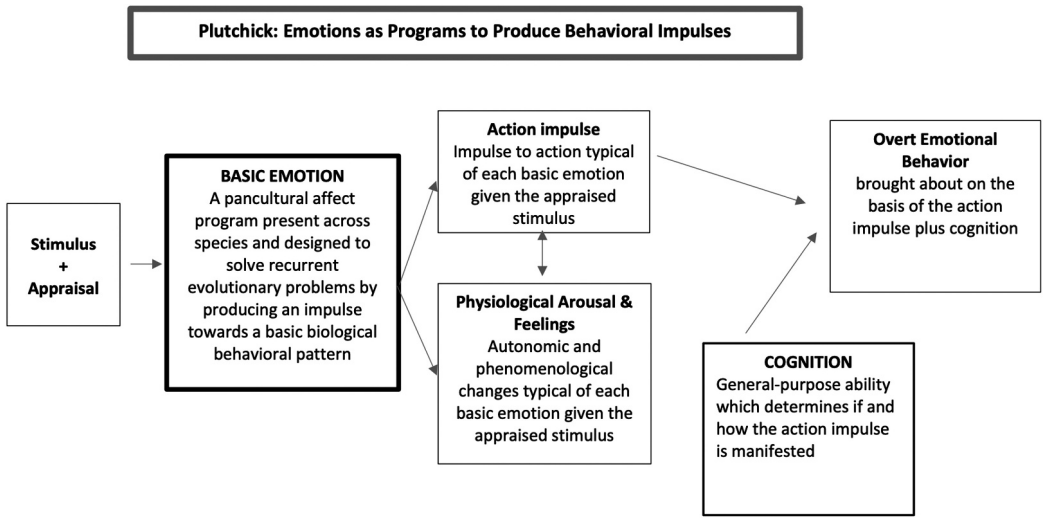

Figure 20.2 Plutchik's theory of basic emotions. Cognition and action impulses jointly determine overt emotional behavior.

In recent times, the Tomkins-Ekman version of basic emotion theory has been met with significant resistance in affective science (e.g. Barrett 2006). Plutchik's (1962) version, on the other hand, has been largely ignored. The main criticism of Tomkins-Ekman's approach has been the paucity of empirical evidence for the cascade of effects that affect programs are alleged to bring about reflexively and with a high degree of internal correlation between components (Shiota, Chapter 15, and Barrett and Lisa, Chapter 17, this volume).

Facial expressions continue to attract a significant portion of critical attention. Critics have denied that facial expressions are universally produced and universally recognized across cultures, impugning the data on methodological and empirical grounds (Russell 1994; but see Ekman 1994; Barrett et al. 2019; Cowen et al. 2021; Duran et al. 2023; Witkower et al. 2023). Others have rejected the evolutionary plausibility of an automated mechanism of operation for facial expressions, suggesting that emotional expressions work in an audience-dependent fashion as negotiating tools (Fridlund 1994).

The *problem of variability* also extends to neural, physiological, cognitive, or behavioral components of basic emotions. There is growing consensus that no emotion component has a one-to-one correspondence with fear, anger, happiness, sadness, disgust, surprise, or any other candidate basic emotion – variability is the norm when it comes to how emotions are instantiated (see Friedman and Thayer, Chapter 22, and Kragel, Sander, and LaBar, Chapter 23, this volume). The evidence for the existence of high correlation among emotion components in all instances of any given basic emotion is also scant (e.g. Mauss et al. 2005).

At least two rebuttals are available to basic emotion theorists (see Moors 2022; Moors, Chapter 12, and Shiota, Chapter 15, this volume). One is to argue that the Tomkins-Ekman version of basic emotion theory has the resources to counter the critics. This requires *inter alia* resolving apparent contradictions between claims made by Tomkins and Ekman at different times and in different venues. For instance, Tomkins (1962/2008) stated that affect programs automatically cause *messages* to be delivered to the organs, so that "a message which would ordinarily result in an acceleration of the heart rate might in fact produce a slowing of the heart rate" (136) given different background conditions. Ekman has also suggested that the responses produced by affect programs depend on intensity, display rules, and many other potential confounders. This may allow Tomkins and Ekman to account for at least a portion of the variability affecting emotion components.

The other option is to embrace Plutchik's (1962) approach (anticipated by McDougall 1908 and Shand 1920), and propose that affect programs cause tendencies to behave rather than a specific suite of automated physiological and behavioral responses. On this view, the fear program causes an impulse to protect, the disgust program generates an impulse to reject, the anger program generates an impulse to attack, etc. The intensity of the emotion, as well as its context of elicitation, determines the expressive, behavioral, autonomic, and phenomenological changes actually produced by the program. Intensity also determines the degree of expected correlation among components, with more intense emotions involving more highly correlated componential changes.

Versions of this idea have been proposed by several sympathizers of basic emotion theory like Levenson (1999), Scarantino (2015), Tracy and Randles (2011), and others. A challenge faced by this version of basic emotion theory is to make empirical predictions about what counts as a manifestation of a given action tendency, rather than a manifestation incompatible with it (see Moors et al. 2019 for a possible methodology). This is necessary if basic emotion theory is to remain falsifiable despite not predicting for each basic emotion an invariant suite of bodily responses. Predictions will need to take a more nuanced form than previously

proposed, since it is no longer assumed that there is a discriminable distinct set of facial, vocal, respiratory, skin, and muscle responses always associated with the same basic emotion. The context of elicitation is going to play a fundamental role, because the responses manifesting the same action tendency will change depending on the context. With the exception of limiting cases (e.g. fear of a suddenly looming object), all emotional responses become an expression of the complex interplay between the action impulses associated with basic emotions and general cognition (for examples of contextual predictions about fear, see Fanselow and Lester 1988; Mobbs et al. 2015).

We will now turn to what is arguably the best worked-out and most influential motivational account of emotions in contemporary affective science: Frijda's theory of emotions as modes of action readiness.

Frijda on Emotions as Action Tendencies with Control Precedence

Frijda's (1986, 2007) view is that basic emotion theory, identified with the Tomkins-Ekman version I discussed in the previous section, lacks empirical support with respect to distinctness of invariant responses and strength of correlation between them (2007, 52). Frijda (1986) also thought that the basic emotion approach had neglected cultural differences. It is worth noting that Ekman (1972) had used the term *neurocultural theory* to describe his own version of basic emotion theory. Ekman (1972) gave cultural processes a key role to play in shaping how stimuli are appraised and how the automatic responses brought about by affect programs are dealt with. However, Frijda thought that Ekman did not go far enough, because cultural differences shape the very response patterns brought about by the same emotions across cultures. Mesquita and Frijda (1992) have documented several differences of this sort, showing, for instance, that anger in Japan is constituted by a partially different set of responses from anger in the USA. It was also essential to Frijda that emotion theories capture the full richness of our emotional life, which includes not only the ever-shifting cast of basic emotions, but also love, lust, pride, guilt, embarrassment, shame, jealousy, nostalgia, and regret – Frijda did not consider these emotions, which are central to the human experience, to be either basic emotions or blends of basic emotions (2007, 54).

Frijda's (1986) core proposal is that "[e]motions … can be defined as modes of relational action readiness, either in the form of tendencies to establish, maintain, or disrupt a relationship with the environment or in the form of mode[s] of relational readiness as such" (71). Action tendencies are "states of readiness to execute a given kind of action" which is "defined by [the] end result aimed at" (70).

For this reason, emotions require *regulation* to lead to behavior. As he put it,

> because action tendencies are programs set for execution, it is in their nature also to be subject to control, to prior feasibility tests [can and should I pursue the end?] and to monitoring of progress [am I suitably progressing toward the end?].
>
> *(79)*

Frijda contrasted action tendencies with reflexes, which are also action programs, but are "reflexively linked to stimulus conditions" in such a way that, when these conditions are met, the program is immediately executed. Frijda pointed out that "action readiness only exists to the extent that inhibition can block action execution" (83).

Readers will immediately notice similarities between Frijda's (1986) theory and Plutchik's (1962) theory. They both assumed that emotions are designed to produce impulses to

behavior, and that their manifestations are variable and context-dependent, which leaves a major role to play for cultural differences. But there are differences too. First, for Plutchik (1962), the emotion is the hypothetical construct that brings about the impulse, whereas for Frijda (1986), the emotion is the action impulse itself. Second, Frijda disagreed with Plutchik on how the states of action readiness associated with specific emotions should be described.

Consider anger, which for Plutchik caused a tendency for destruction. Frijda (1986, 86) noted that many cases of anger are not associated with destructive behaviors. A better description for Frijda would be that anger is the tendency to attack, which includes destructive behaviors on occasion, but more commonly behaviors falling short of destruction such as yelling, insulting, spitting, slandering, reporting to the police, and so on.

Or consider joy and sadness, associated for Plutchik (1962) with a tendency for, respectively, reproduction and deprivation. Frijda (1986) considered these descriptions inappropriate for a deeper reason, namely that joy and sadness do not have ends the way fear and anger do. Joy is a mode of *action readiness as such*, more specifically the "manifestation of *free activation*" (38, emphasis added). Sadness is the counterpart of joy, in the sense that it manifests a "null state", namely a state of "explicit absence of relational activity" (22). Frijda (1986) concluded that "null states, activation modes, and action tendencies proper, all are modifications of action tendency in a general sense" (71).

Frijda clarified that modes of action readiness include modes of *mental action readiness*. Consider aesthetic emotions, which, since Kant's (1790) work on aesthetic pleasure, have been disconnected from behavioral readiness (e.g. De Sousa 2011; Scherer 2005). Frijda's (1986) view is that aesthetic emotions do involve behavioral readiness, but in the mental realm, as they involve being engrossed in the artwork, indulging in mental contemplation of it, desiring to possess the artwork, reminiscing about it, and so on (see also Menninghaus et al. 2019; Scarantino 2022).

Several other emotions involve modes of action readiness predominantly in the mental realm, as they are manifested by attending, imagining, remembering, calculating, deciding, inferring, craving, thinking, ruminating, and so on. Regret and grief are two examples among many. Regretful people display readiness to think about what they regret, they wish they had chosen differently, they imagine what would have happened had they taken a different course of action, and so on (Zeelenberg, Chapter 45, Volume II). Similarly, although the grieving person cannot bring back the person they have lost, grieving involves thinking intensely about the departed, remembering shared experiences, wishing to have spent more time together, etc.

Another pivotal contribution by Frijda (1986) is the idea that a mode of physical or mental action readiness becomes *emotional* only when it "clamors for attention and execution" (78). We have lots of action tendencies – e.g. I have the tendency to order spicy food in Thai restaurants – but these do not rise to the level of emotions unless they acquire what Frijda calls "control precedence", which is what clamoring for attention and execution is all about.

I distinguish four features of control precedence. The first is that states of action readiness with control precedence "tend to interrupt other ongoing programs and actions" (Frijda 1986, 78), an idea that harks back to Simon's (1967) suggestion that emotions are *interrupt systems*. The second is that states of readiness with control precedence "lie in waiting for signs that they can or may be executed" (78). I interpret this passage as suggesting that the emoter is not simply *open* to fulfilling a certain relational end, but actively *searching for means* to fulfill it.

The third feature is that this active search comes along with attention-grabbing bodily and mental preparations for action execution. As Frijda put it, an emotional mode of action readiness "invigorates action for which it reserves control" and "block[s] access to action control for other stimuli and other goals" (460). The fourth feature is that, once the action execution

process is underway, the "execution … tend[s] to persist in the face of interruptions" (78). This is to say that, once a mode of action readiness with control precedence turns into actual action, it acquires inertial movement, just as a vehicle does when gathering speed.

The picture of control precedence that emerges from these remarks is that emotions are modes of action readiness which prioritize the pursuit of certain relational ends,[4] prepare and invigorate toward their fulfillment both mentally and physically, and protect the execution of actions aimed at fulfilling such ends from possible interferences, all the while allowing regulation to shape overt behavior.

What causes changes in mode of relational action readiness? Frijda's (2007) answer is that the underlying causal structures are "behavioral systems" which "are shaped by evolution to serve the purposes" distinctive of each emotion and which provide "a direction that binds the behaviors together" (2007, 28). These behavioral systems have the job of pairing situational meaning structures and modes of action readiness, establishing for instance that "danger" will be matched with "avoidance". Frijda (1986, 457) calls this a "system of stimulus-to-response connections" or a "table of correspondences". Notably, for Frijda (1986, 2007) the emotion is the mode of action readiness activated by the behavioral system, rather than the behavioral system itself.

Frijda (2007) points out that there is no agreement on what the main behavioral systems are, nor on how exactly they connect to action tendencies, although he suggests that neuroscientists may have the final say on the matter. One possibility is that there is one behavioral system for each emotion. For example, the mode of avoidance readiness (fear) may always and only be the effect of the activation of a behavioral system for defense, and the mode of attack readiness (anger) may always and only be the effect of a behavioral system for attack.

Another possibility is that different modes of action readiness may be brought about by the same behavioral system. For example, the "various negative emotions like fear, anger, and disgust might be manifestations of one common defensive motivational system, and feeding, sex, and care-giving of one common appetitive system" (Frijda 2007, 155). Figure 20.3 summarizes Frijda's (1986, 2007) theory.

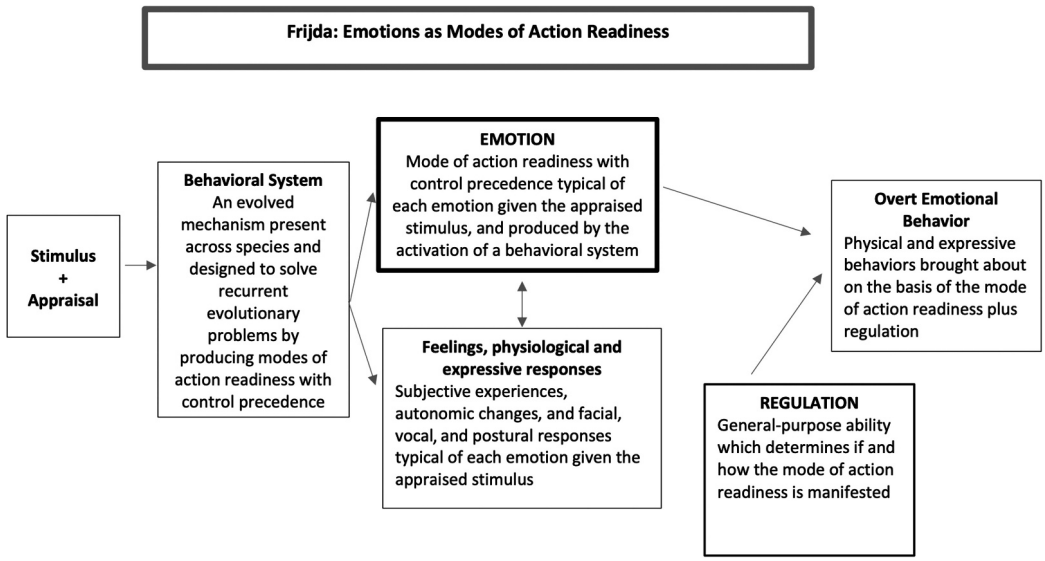

Figure 20.3 Frijda's theory of emotions as modes of action readiness. Regulation steps in jointly with action tendencies to transform potential action into overt behavior.

In a later publication, Frijda and Parrott (2011) have argued that emotions are not just modes of action readiness, but rather "multicomponential response patterns within which states of action readiness figure" (406). This opened up two new possibilities: the same emotion can involve different modes of action readiness, and the same mode of action readiness can figure in different emotions. In addition, Frijda and Parrott (2011) relabeled modes of action readiness as "ur-emotions", to emphasize their evolutionary origin and universality. Ur-emotions were characterized by Frijda and Parrott (2011) as the only truly "basic" parts of emotions – the multicomponential response patterns in which ur-emotions figure will differ in various respects across cultures.

Figure 20.4 shows Frijda and Parrott's (2011) proposed list of ur-emotions, which reflect the "limited number of modes of relating to other people, objects and circumstances" (406). Consider the modes of action readiness of submission (#13) and helplessness (#14). Frijda and Parrott propose that "the ur-emotion of submission can be part of [the] emotion[s] of shame … of amae … of awe, of admiration, humility, and respect" (411). The ur-emotion of helplessness can instead be part of the emotions of panic, anxiety, great misery, and burnout. In each of these emotions, readiness for submission will be elicited by different appraisals, reflecting the specific concerns that generated it. For example, in shame the appraisal is of a failure to live up to an ego ideal, so the mode of submission serves to deflect rejection from a group. In awe, the appraisal is of something powerful and partially overwhelming, so the mode of submission serves to signal unwillingness to challenge this power.

This makes the central role played by appraisals in identifying emotions apparent, as each emotion is now associated with a subset of modes of action readiness (each of which can also figure in other emotions) caused by appraisals and involving other componential changes driven by the specific mode of action readiness activated.[5]

I consider some weaknesses of Frijda's (1986) theory when I discuss the shortcomings of attitudinal and motivational theories of emotions in philosophy, because these theories borrow heavily from Frijda's framework and share the same limitations. I now turn to appraisal theory, the research program which has most carefully developed the idea that emotions are multicomponential response patterns driven by appraisals.

1. Acceptance	Accepting presence or interaction
2. Nonacceptance	Not accepting presence or interaction
3. Attending	Acquiring information
4. Disinterest	Not acquiring information
5. Affiliate	Achieving or accepting close interpersonal interaction
6. Avoid	Decreasing interaction
7. Reject	Refusing interaction
8. Antagonism	Modifying unwanted target action
9. Desire	Achieving positive hedonic outcome
10. Caring for	Improving target's well-being
11. Exuberance	Promoting gratuitous interactions
12. Domination	Controlling others' actions
13. Submission	Following someone else's wishes
14. Helplessness	Desiring to act but not knowing how
15. Hyperactivation	Increase of relational activity
16. Hypoactivation	Decrease of relational activity
17. Tenseness	Simultaneous opposing action tendencies
18. Inhibition	Inhibition of activated action readiness

Figure 20.4 Frijda and Parrott's list of possible modes of action readiness (ur-emotions)

The Motivational Side of Appraisal Theory: Roseman versus Scherer

Appraisal theories of emotions were developed by Arnold and Lazarus in the 1960s to address "the problem of how cold perception can cause either the felt emotion or the bodily upset" (Arnold 1960, 93). The core tenet of appraisal theory is that the appraisal of the significance of events for well-being is the standard elicitor of emotions (Moors and Scherer 2013; Ellsworth, Chapter 16, this volume).[6]

It was known long before the emergence of appraisal theory that emotions are associated with distinctive interpretations of the stimulus circumstances. However, prior to Arnold, the structure of the mental process of interpretation of stimuli had not been studied in terms of its psychological structure, which requires understanding the types of information extracted from the stimulus, the order in which the information is extracted, the format in which the information is encoded, the granularity of the information obtained, and so on (Moors, 2022).

Strictly speaking, appraisal theory focuses on how emotions come about, and it is compatible with many different accounts of what emotions are. But appraisal theorists have often added to their elucidation of the appraisal process substantive accounts of what emotions are. Such accounts have generally been motivational in nature – they have understood emotions as involving motivations to act (along with other components).

There are two main ways to think of how appraisals and emotional motivations are related. According to the first, exemplified by Roseman's (2008, 2013) work, appraisals feed into a program or mechanism which evolved to select the typically most adaptive states of action readiness. According to the second way, exemplified by Scherer's (1987, 2005, 2009) work, individual appraisals lead to changes in motivation to act directly, without any special-purpose behavioral program being involved. Moors (2022) refers to them, respectively, as the biological and non-biological versions of appraisal theory, although it should be clear that both accounts allow for modifiability via learning.

For Roseman, an emotion is:

> [a] syndrome … composed of several response components … *phenomenological* (thoughts and feelings characteristic of the emotion); *physiological* (patterns of neural, chemical, and muscular responses); *expressive* (facial, vocal, and/or postural changes); *behavioral* (tendencies or readinesses to take particular actions); and *emotivational* (goals that people want to pursue when experiencing the emotion).
>
> *(Roseman 2013, 141; emphasis in original)*

The term *emotion syndrome* is meant to characterize this set of probabilistically interrelated responses. What causes the activation of the emotion syndrome is a set of appraisals along the dimensions of *Motive-Consistency* (motive-consistent/motive-inconsistent), *Motivational State* (appetitive/aversive), *Probability* (uncertain/certain), *Control Potential* (low/high), *Problem Type* (instrumental/intrinsic), *Agency* (circumstances/other person/self), and *Unexpectedness* (not unexpected/unexpected) (Roseman 2013). These are often called *molecular appraisals* (e.g. Moors 2014).

A divide exists within appraisal theory with respect to the identity of the molecular appraisals, and the way the molecular appraisals are supposed to cause emotions. For some appraisal theorists like Lazarus and Smith (Lazarus 1991; Smith & Lazarus 1990), molecular appraisals need to coalesce into a higher-level *molar appraisal* before causally affecting emotion components (see Moors 2014). This higher-level appraisal is also referred to as an appraisal of *core relational themes* (Lazarus 1991). Examples of core relational themes are danger for fear, a

demeaning offense for anger, a transgression of a moral imperative for guilt, a failure to live up to an ego ideal for shame, and a loss for sadness (Lazarus, 1991).

Roseman's (2013) view is different, because although individual molecular appraisals do not have a direct influence on the emotion generation process (as in Scherer's 2005 model, described next), they do not need to coalesce into core relational themes to bring emotions about. Rather, they elicit emotions through what we may call *molecular appraisal combinations*.

For example, appraising an event as motive-inconsistent and uncertain (a combination of Motive-Consistency and Probability appraisals) elicits fear, even if a higher-level ("molar") appraisal of "danger" is not present. Appraising an event as motive-inconsistent, caused by another person, and such that the emoter has high control potential (a combination of *Motive-Consistency*, *Agency*, and *Control Potential* appraisals) elicits anger, even if there is no higher-level appraisal of a "slight". More broadly, for Roseman, the appraisal system has been shaped by evolution to evoke the emotion whose response strategy tends to be most adaptive to the appraised stimulus. Although not explicitly described as such, this is the description of an evolved behavioral program designed to pair stimulus combinations with states of action readiness (the same job that Frijda (2007) assigned to *behavioral systems*).

A key element of Roseman's model is that the *degree of motive inconsistency* is what differentiates *emotion* from *motivation* more broadly. Roseman (2008) points out that motivation (exemplified by states like hunger and the sex drive) and emotion (exemplified by states like fear and anger) are often discussed in similar contexts, namely, to account for the energization and direction of behavior. His view is that the distinction between them is not sharp, but that *motivated behaviors* tend to be more deliberate, less impulsive, and more flexible than *emotional behaviors* (cf. Simon 1967). Motivations function as non-emergency mechanisms of goal pursuit, governed by appraisals of *degree of consistency* with goals like eating, drinking, having sex, acquiring power, increasing affiliation with others, and so on. One may detect the presence of a goal-inconsistency between current and desired levels of food intake, and this would elicit hunger, which in turn leads to the flexible pursuit of eating (note the difference with Tomkins's 1962 account of hunger, which requires an *affect* to motivate eating).

But suppose now that, as you are looking for food, you detect a lion in the distance. This represents a *change in degree of consistency* with motives (Frijda 2007), and it will preempt motivated goal pursuit when the change in the degree of motive-consistency is sufficiently large, rapid, or important. The intensity of the emotion will reflect the current degree of consistency, which can increase or decrease over time.

In the case at hand, you are likely to immediately stop being motivated to eat, and start being intensely afraid. Your fear-motivated behaviors will consequently be impulsive, in the sense that they will rely on "time-tested default coping behavior patterns" (Roseman 2011, 440), which include behaviors like freezing, fleeing, or fighting. This is what Roseman (2011) refers to when he speaks of the *action tendencies* associated with each emotion, a narrower notion than the notion of action tendency used by Frijda (1986), because it is a tendency to engage in concretely specified behaviors.

However, Roseman (e.g. 2013) also maintains that particular emotions can be associated with a variety of evolved or learned action "readinesses" that allow emotional behavior to differ depending on the specific situations or situation types in which they occur (cf. Frijda 1986). In anger, there may be evolved readiness to shout in response to an *initial* frustration and readiness to hit in response to *prolonged* frustrations (e.g. Potegal & Qiu 2010). There may also be learned readinesses to protest, to sulk, or to withdraw in response to more dominant opponents (Roseman, personal communication, June 20, 2023). To sum up, action readinesses differ from action tendencies in the sense that the former can be manifested more flexibly than the latter.

Roseman (2011) adds that emotions have an even more deliberate mode of goal pursuit available which is connected to their *emotivational goals*. These are relatively abstract goals distinctive for each emotion. For example, the emotivational goal of fear is *getting to safety*. At less intense levels, fear can lead to an open range of maximally flexible behaviors aimed at getting to safety, to be pursued through deliberative considerations. Roseman foresees a range of behaviors being motivated by emotions: on one hand, there are concrete action tendencies to be pursued urgently, and on the other hand, there are broader emotivational goals to be pursued less urgently. What determines where behaviors lie on this continuum is the degree of motive-consistency and consequent emotion intensity. For instance, love's default action tendencies include touching and holding, but its emotivational goal is connecting with the loved one; anger's default action tendencies include yelling, hitting, and criticizing, but its broader emotivational goal is hurting the one standing in the way of our objectives. Roseman points out that, as intensity increases, the functionality of emotional behavior can decrease (as Leeper 1948 had also noted). We may freeze out of intense fear, instead of calmly backing away from a predator, and we may touch someone out of intense love, instead of connecting in ways they would welcome more.

Emotional behavior governed by emotivational goals, and evolved and learned action readinesses jointly explain for Roseman the variability we observe in the bodily changes characteristic of fear, anger, sadness, happiness, love, shame, guilt, and so on. First, there are the two general ways in which emotions can bring about behavior, namely through "organization by emotivational goals [and] organization by action readiness" (*dual organization hypothesis*) (Roseman 2011, 440). Second, each of these two modes of organization can be instantiated in different ways – e.g. multiple concrete action tendencies can be relied on (e.g. freezing and fighting) and innumerable ways exist to pursue any emotivational goal (e.g. one can get to safety with an open range of behaviors tailored to the specific circumstances at hand).[7] I will consider some of the possible limitations of Roseman's theory after I introduce Scherer's theory. Figure 20.5 summarizes Roseman's theory.

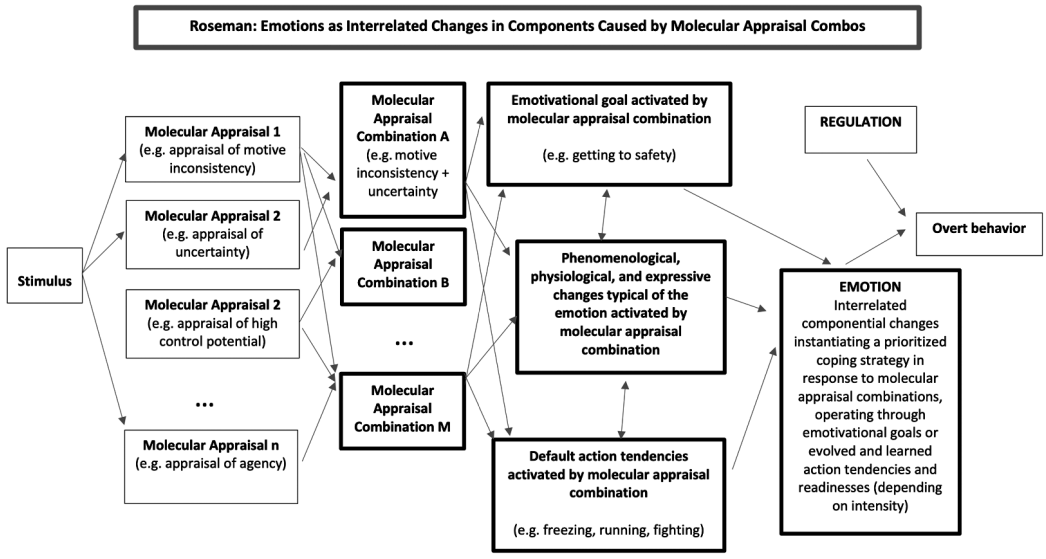

Figure 20.5 Roseman's appraisal theory of emotions. Regulation works with emotivational goals and default action tendencies/readinesses to transform potential action into overt behavior.

Scherer (2005) differs from Roseman (2008) in a number of respects, but none is more important than the fact that for Scherer, there is no evolved behavioral program causally mediating between molecular appraisals and emotions. In fact, emotions are not even the primary target of the analysis – they are emergent consequences of the regular workings of the appraisal system.

Scherer defines emotion as "an episode of interrelated, synchronized changes in the states of all or most of the five organismic subsystems in response to the evaluation of an external or internal stimulus event as relevant to major concerns of the organism" (Scherer 2005, 697).

These subsystems include the *information processing system*, designed to evaluate stimuli (appraisal component); the *support system*, designed to produce bodily changes (neurophysiological component); the *executive system*, designed to direct action (motivational component); the *action system*, designed to communicate reactions and behavioral intentions (motor expression component); and the *monitoring system*, designed to track internal states and organism-environment interactions (subjective feeling component). No mechanism is in charge of orchestrating the synchronization between these five components, but when synchronization occurs as a result of the organism facing stimuli of major relevance, an emotion comes about.

Scherer (2009) distinguishes between 16 *stimulus evaluation checks* (or SECs, his preferred label for molecular appraisals). The SECs include appraisals of relevance (e.g. Is the stimulus new? Will it affect my goals?), appraisals of implications (e.g. Will my goals be promoted or thwarted? Who is responsible for the event?), appraisals of coping potential (Can the event be controlled? Do I have the power to shape it?), and appraisals of normative significance (Does it violate my self-ideal? Is it socially acceptable?).

Three main hypotheses are important for understanding the causal impact of SECs on emotions, and the general structure of Scherer's (1987, 2005) *Component Process Model*. The first is that the SECs are assumed to occur in a specific temporal sequence (in Roseman's 2013 theory, appraisals do not occur in any fixed order). Scherer adds that the sequence of SECs can be extremely quick and is run recursively, in the sense that the appraisal system repeats the sequence of checks continuously until the evolving situation has been adjusted to.

The second hypothesis is that the motivational component drives the changes in all other components except the appraisal component, which causes changes in the motivational component. As Fontaine and Scherer (2013, 185) put it, "emotion is … for doing (or, more precisely, for preparing the doing)". Accordingly, appraisal values trigger "an action tendency value shaping the values of the somatic and expressive [i.e. motoric] component" (Moors and Scherer 2013, 145). In turn, "motivational and somatic components have the function to prepare and support behavior", whereas the motor component has the function "to execute behavior" (Moors and Scherer 2013, 136). The monitoring system, finally, produces feelings, which integrate and represent ongoing information about the synchronized operation of cognitive, motivational, somatic, and expressive components (we will return to this shortly). This causal structure indicates that for Scherer (2005), the *organization of action* is the function served by the synchronization of emotion components. In turn, *synchronization* in response to stimuli relevant to major concerns is the *mark of the emotional*.[8]

The third hypothesis is that each molecular appraisal (or SEC) can directly cause changes in components via the motivational component. For example, the degree to which a stimulus is appraised as goal-relevant directly causally affects the intensity of the action tendency; whether a stimulus is appraised as goal-congruent or incongruent directly causally affects whether the tendency is one of increasing contact or decreasing contact; whether a stimulus is appraised as easy or hard to cope with directly causally affects whether the action tendency is one of dominance or submission; and so on. Each of these motivational changes comes along with its own distinctive neurophysiological and expressive responses. Just to give an example, an appraisal of low control would directly cause "decrease in respiration rate and depth, heart

rate decrease, increase in glandular secretion … lip corner depression, lips parting, jaw dropping, lids drooping, inner brow raise and brow lowered, gaze aversion … few and slowed movements, slumped posture" (Scherer 2009, 1312).

Note that lots and lots of combinations of molecular appraisals will change components without generating emotions, because they do not lead to the degree of synchronization among components required for an emotion to be instantiated. Furthermore, many combinations of molecular appraisals will generate emotions not coded in language. The terms we commonly use – e.g. "anger", "sadness", "disgust" in English – correspond to patterns of appraisal that are especially common in the life of organisms due to recurring challenges and opportunities. Scherer (2005) proposes to call these frequently occurring emotions *modal emotions*. In contrast with basic emotion theory, anger for Scherer is not caused by the activation of an anger program, but is a direct effect of an appraisal profile including "novelty, high goal relevance, other agent and intent, high outcome probability, dissonant expectations, goal obstructiveness, high urgency, high control and power, as well as injustice or immorality" (2009, 1316).

A final ingredient of Scherer's (2009) theory concerns *feelings*, which are commonly present when emotions are instantiated, but are not strictly required. Scherer distinguishes three aspects of feelings. The first is the unconscious representation of the synchronized co-occurrence of cognitive, neurophysiological, motivational, and motor expression components by some kind of monitoring structure in the central nervous system (CNS), which Scherer refers to as a *neural coherence cluster*. The second aspect of feelings is the subjectively experienced portion of the neural coherence cluster, which does not overlap with the whole cluster because not all aspects of the represented synchronization are felt. The third aspect of feelings is the categorization and labeling of the subjective experience, which is key for cognitively manipulating the experience, communicating it to others and remembering it. Scherer suggests that the labeling will capture only a portion of the subjective experience, with the bulk of the rich phenomenology of the subjective experience escaping lexical capture. Figure 20.6 summarizes Scherer's theory.

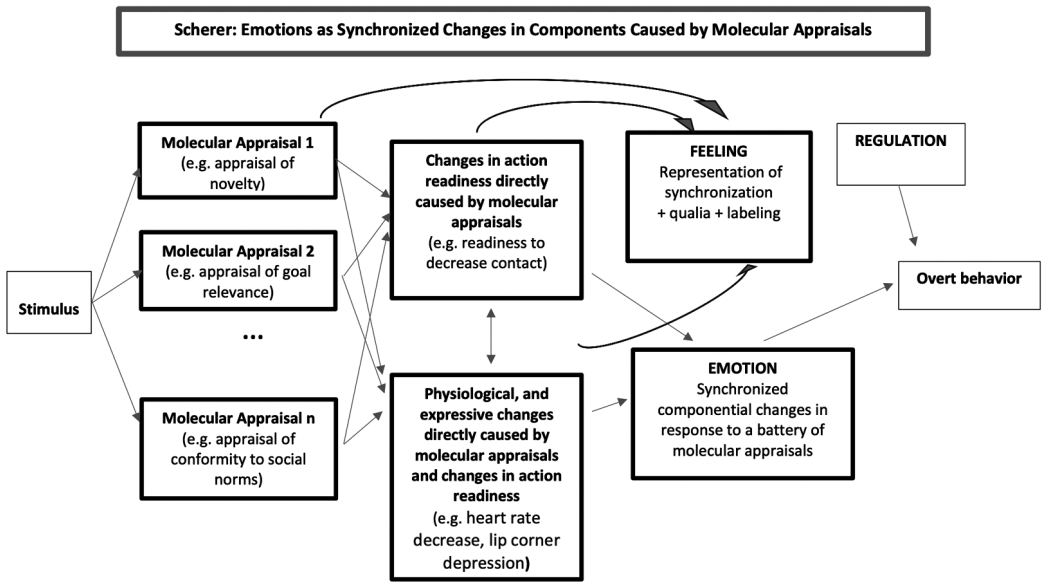

Figure 20.6 Scherer's appraisal theory of emotions. Regulation works jointly with action tendencies to transform potential action into overt behavior.

Appraisal theory has also received its fair share of criticisms. One class of criticisms concerns the role of appraisals as causes of emotions. One problem is that appraisals are often considered to be parts of emotions, and parts cannot cause the wholes to which they belong, any more than eggs can cause omelets (Ellsworth, Chapter 16, this volume). Another problem is that there seem to be mechanisms other than appraisal that can elicit emotions, including direct brain stimulation, music, dance, facial feedback, and so on (see Moors 2022 for discussion).

Another class of criticisms pertains to appraisal theory's reliance on self-reports to draw conclusions about what elicits emotions. At least in early appraisal studies, the structure of the appraisal process was mostly investigated through questionnaires about remembered or imagined emotions or vignette studies. The concern with using self-reports to study appraisals has various facets. First, there are general worries about the reliability of self-reports, ranging from order effects to social desirability bias (Paulhus 1991; Schwarz & Strack 1991). Second, self-reports of the appraisals leading to an emotion are at risk of reporting semantic associations between appraisal concepts and emotion concepts rather than actual memories of the thought processes that elicited the emotion (see Moors 2022).

Third, there are limits to people's ability to introspect on the nature of their mental processes, which may lead to confabulation, especially when it comes to the causes of behavior (Nisbett and Wilson 1977; Wilson and Dunn 2003). Fourth, it has been argued that reports of appraisals conflate the normative question of what would appropriately elicit an emotion with the descriptive question of what actually elicited an emotion (e.g. Frijda 1993; Parkinson 1997). For example, when asked to remember what made them angry in the past two weeks, subjects may predominantly report episodes in which their anger resulted from an appropriate appraisal of the circumstances, which may not be the most common appraisal configuration that causes anger.

These concerns have been addressed by appraisal theorists (see Scherer 2009; Moors 2022). The matter is complicated by controversies on the degree to which self-report data and behavioral data correlate in psychology (e.g. Dang et al. 2020). In part as a result of these controversies, some recent experimental research on appraisal has eschewed self-reports and tried to understand how specific appraisal dimensions manipulated in real-world situations affect specific emotion components (e.g. Fischer et al., 2024, ms). The degree to which this new type of research supports the hypotheses of appraisal remains open to debate (see Scherer and Moors 2019 for a preliminary assessment). It is also worth mentioning recent attempts to provide support for appraisal theory through neuroscientific methods (Sander et al. 2018; see also Kragel, Sander, and LaBar, Chapter 23, this volume).

Let us now turn to the last stop of our investigation: the development of the motivational tradition in the philosophy of emotions. Since philosophers and affective scientists use partially different methods and ask partially different questions, it is worth starting from a brief detour on some of the objectives of a philosophical theory of emotions (see also Brady, Chapter 11, this volume).

The Motivational Tradition in Philosophy: Deonna and Teroni versus Scarantino

Two concerns have loomed large in the philosophy of emotions since the 1960s. One is a concern with the *intentionality* of emotions, namely with the fact that emotions seem to be about objects and states of affairs. The other is a concern with their *phenomenal character*, namely with the fact that emotions seem to be associated with salient subjective experiences. Philosophical theories of emotions have often attempted to reconcile these two features, which

are also discussed in the affective sciences – phenomenal character much more commonly than intentionality – but do not enjoy quite the same prominence as drivers of theorizing as they do in philosophy.

Emotions can be said to have intentionality in two senses: they are about *particular objects* (e.g. fear is about dogs, guns, cancer, war, etc.; anger is about insults, betrayals, unfair accusations, etc.) and they are about *formal objects* (e.g. fear is about danger, anger is about slights). Formal objects are used (among other things) for explaining our normative discourse about emotions (Teroni 2007). We consider fearing a teddy bear inappropriate, but fearing a gun appropriate, and we consider getting angry at an insult appropriate, but getting angry at a kind gesture inappropriate. Why? A common explanation is that formal objects are the evaluative properties (or values) we necessarily impute to particular objects when we have certain emotions toward them. Fearing a teddy bear is imputing to the teddy bear the evaluative property of *dangerousness*. Similarly, getting angry at a kind gesture is imputing to the kind gesture the evaluative property of being a *slight*. Since teddy bears are not dangerous and kind gestures are not slights, fearing a teddy bear and being angry at a kind gesture are both inappropriate.

Psychologists do not use the term *formal object*, and they claim not to be interested in questions of appropriateness per se.[9] However, the way Lazarus described *core relational themes* is very close to the way philosophers describe formal objects. The core relational themes of fear and anger are, respectively, danger and offenses. The difference is that in psychology, core relational themes are supposed to be descriptions of the appraisals that cause emotions, whereas in philosophy, formal objects are supposed to be descriptions of conditions of appropriateness for emotions.[10]

In philosophy, the currently most popular attempt to reconcile the intentionality and phenomenal character of emotions is Perceptualism, the latest embodiment of the influential cognitivist tradition (see Helm, Chapter 2, this volume). There are several varieties of Perceptualism, but here I focus on Tappolet's (2016) version, which is one of the best worked out. According to it, emotions are perceptual experiences of evaluative properties – fear is a perceptual experience of dangerousness, anger is a perceptual experience of slights, sadness is a perceptual experience of losses, and so on. This account aims to account in one fell swoop for the intentionality and phenomenal character of emotions: emotions feel the way they do because they are perceptions, and they are intentional because what is perceived are evaluative properties. Support for Perceptualism comes from the existence of several analogies between emotional experiences and perceptual experiences (see Tappolet 2016).

Motivational theorists of emotions disagree, pointing out some essential disanalogies that exist between emotions and perceptions (see Brady, Chapter 11, this volume). Among the defects ascribed to Perceptualism, the most relevant for our purposes is its inability to account for how emotions motivate behavior.

Suppose fearing a lion is the perceptual experience of the lion as dangerous, as Tappolet (2016) would have it. It seems quite possible to have this perceptual experience but not be motivated to avoid the lion. A lion tamer would be a good example of someone who perceives the lion as dangerous, but is not motivated to avoid it, let alone avoid it with the sort of urgency characteristic of paradigmatic emotional actions. More broadly, we perceive the world as instantiating all kinds of evaluative properties (e.g. dangerousness, humorousness, wrongness, etc.), but the extent to which our motivations track such properties is not settled by our perception of them. Perception just seems to be in a different line of business from emotion, namely the business of grasping what the world is like, rather than the business of motivating behavior (Brady 2013; Scarantino 2014; Gabriel 2021).

I consider two examples of Motivationalism developed in philosophy as an alternative to Perceptualism: Deonna and Teroni's (2012, 2015) Attitudinal Theory, and Scarantino's (2014) Motivational Theory of emotions. Other examples of (broadly) motivational theories of emotions in philosophy include Asma and Gabriel (2019), Hufendiek (2016), Slaby and Wüschner (2014), Shargel and Prinz (2018), and Colombetti (2014).

Deonna and Teroni (2015) and Scarantino (2014) agree that emotions are essentially motivational states, and that each emotion is tied to a distinctive action tendency, understood roughly along the expansive lines of Frijda's (1986) analysis. Deonna, Teroni, and Scarantino also agree that emotions have conditions of appropriateness described by each emotion's formal object: fear is appropriate in the presence of danger, anger is appropriate in the presence of slights/offenses, shame is appropriate in the presence of failures to live up to an ego ideal, sadness is appropriate in the presence of losses, and so on.

The differences between the Attitudinal Theory and the Motivational Theory concern the nature of the relation between the emotion and the action tendency, the centrality of the phenomenal character of emotions, and the way the intentionality of emotions is understood.

Deonna and Teroni (2015) think that Perceptualism commits a fundamental mistake, which is to locate the evaluative aspect of emotions – the aspect in light of which we judge emotions to be appropriate or inappropriate – at the level of *content* rather than at the level of *attitude*. Suppose you believe that your daughter is at daycare. We can distinguish two aspects of your belief: the content, namely that your daughter is at daycare; and the attitude, namely believing it. You could have a different attitude to the same content. For instance, you could have the desiring attitude toward the content that your daughter is at daycare. Conversely, you could have the same attitude of believing, but toward a different content, for example, that Paris is the capital of France.

The difference in attitude between believing and desiring can be captured in terms of another central philosophical distinction, namely the one between *directions of fit*. The attitude of believing that your daughter is at daycare has a mind-to-world direction of fit, in the sense that it aims to match the belief with what the world is like: if your daughter is not at daycare, the believing attitude has failed at its aim (beliefs aim at being true). The attitude of desiring that your daughter is at daycare is said to have a world-to-mind direction of fit, in the sense that it aims to change the world to match what you desire: if your daughter is not at daycare, the desiring attitude has not failed at its aim, but if the world is not changed to make it so that your daughter is at daycare, the desiring attitude has failed at its aim (desires aim at being realized).

Deonna and Teroni argue that Perceptualism takes all emotions to be *perceiving* attitudes, distinguishing them from one another only by their content, namely by *what* is perceived. For instance, fear and anger differ because fear is the perception of danger and anger is the perception of slight. Note that this type of content is a description of each emotion's formal object.

On the contrary, Deonna and Teroni (2015) think that different emotions differ from one another the way beliefs and desires do: they are *different attitudes* one can take to the *same content*. This is why their theory is labeled the Attitudinal Theory.[11] I can have the fear attitude toward the content that my daughter is at daycare (when I hear about a shooting at a local daycare), and I can have the anger attitude toward the content that my daughter is at daycare (if I agreed with my ex-wife that my daughter would go to singing lessons instead). Note that this content is a description of each emotion's particular object.

On this view, emotions are neither perceptions of formal objects nor representations of formal objects of some other kind. Fear is not about the formal object of danger because it

does not represent it in any way, and anger is not about the formal object of slight because it does not represent it in any way. For Deonna and Teroni, emotions have only one form of intentionality: they are exclusively about particular objects (e.g. fear is about my daughter being at daycare). It follows that when we describe the correctness conditions of emotions, i.e. their formal objects, we are describing the manner in which emotions represent their particular objects, not what emotions represent.

How do emotions represent their particular objects? They do so through what Deonna and Teroni call their *cognitive bases*, which are mental states other than emotions. To be afraid that my daughter is at daycare, I need to represent that she is at daycare through believing it, perceiving it, imagining it, remembering it, or in some other way. So my fear that she is at daycare is about her being at daycare by courtesy of some cognitive basis that represents her as being at daycare.

But what exactly are emotional attitudes? Deonna and Teroni tell us that they are *feelings of action tendencies*. This is where the motivational side of the Attitudinal Theory enters the picture. Emotional attitudes are *feelings* in the sense that have what Block (1995) has called *phenomenal consciousness* – there is something that it is like to have them. On the other hand, such feelings may or may not be accessible for report – they may lack what Block (1995) calls *access consciousness*. For example, there may be something it is like to have the fear attitude toward failing in life, but one may not have the ability to report on such attitude at the moment the attitude is ascribed. The assumption that emotions are feelings gives the *phenomenal character* of emotions a definitional role in Deonna and Teroni's (2015) theory, in the sense that emotional attitudes cannot be unfelt because they are feelings by definition.

What are emotional attitudes feelings *of*? Deonna and Teroni propose they are experiences *of* action tendencies. Because action tendencies are sustained by changes in facial and skeletal muscles (e.g. mouth dropped open), autonomic changes (e.g. increased heart rate), and endocrine changes (e.g. adrenaline release), emotions are ultimately feelings of bodily action readiness (on the role of the body, see Deonna and Teroni 2017). For example, fear of a dog is "an experience of one's body being prepared" for avoidance (2015, 303). Anger at a person is "an experience of one's body being prepared to retaliate" (303). In sadness, "the body is felt as though it were prevented from entering into interaction with a certain object" (Deonna and Teroni 2020, 116). The phenomenology of emotional experience is the phenomenology of experiencing bodily reactions to what the cognitive basis of the emotion represents, rather than experiences of evaluative properties as Perceptualism would have it.

The fact that emotions are felt tendencies to act is, for Deonna and Teroni, all we need to explain why they have the appropriateness conditions that they do. For example, the reason why fear is the attitude that is appropriate to have toward dangerous situations is that it is appropriate to have an avoidance tendency toward what is dangerous. The reason why anger is the attitude that is appropriate to have toward slights is that it is appropriate to have a retaliatory tendency toward slights. And so on.

A difference with Frijda's (1986) theory is that, whereas Frijda (1986) was committed to the existence of behavioral systems that cause the action tendency with which the emotion is identified, Deonna and Teroni (2015) remain neutral on what leads from an appraised stimulus to a change in action tendency. Their account is compatible with there being a behavioral system or affect program causally responsible for producing action tendencies, with there being just a roster of molecular or molar appraisals directly causing changes in action tendencies, or with there being an entirely different yet-to-be-specified mechanism.

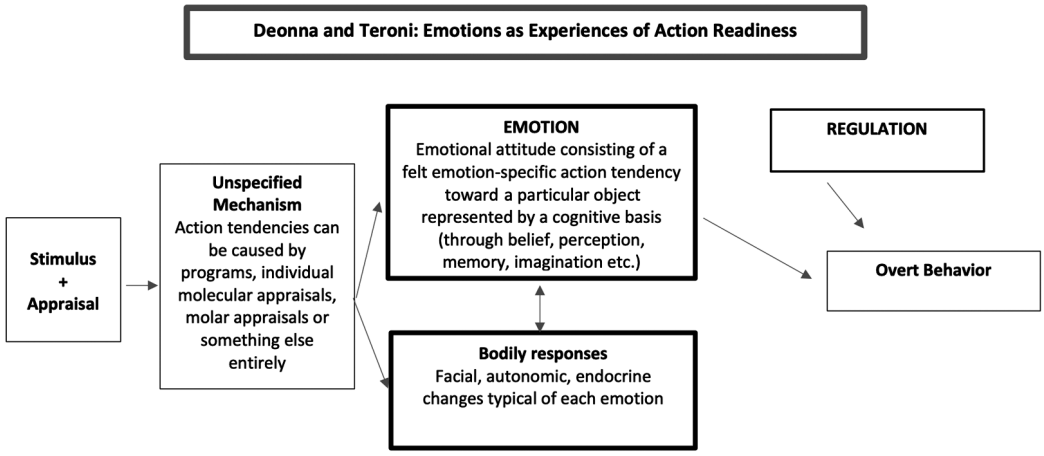

Figure 20.7 Deonna and Teroni's attitudinal theory of emotions. Regulation works jointly with action tendencies to transform potential action into overt behavior.

Figure 20.7 summarizes Deonna and Teroni's (2015) theory.

Several objections can be raised against the Attitudinal Theory. First, it is not clear that emotions can have appropriateness conditions described by formal objects without representing such formal objects (Rossi and Tappolet 2019). As we have seen, Deonna and Teroni propose that fear is inappropriate in the absence of danger because it is inappropriate to feel the tendency to avoid something which is not dangerous (the same schema applies to all emotions). But this begs the question as to *why* it is inappropriate to feel the tendency to avoid something which is not dangerous.

Note that this is also an issue for Frijda's (1986) theory, which provides no explanation for why we judge some instances of fear appropriate and others inappropriate. Given the importance of our normative discourse about emotions, and Frijda's (1986, 2007) stated desire to capture all central aspects of our emotional lives, this is a weakness worth addressing.

The core problem is that a tendency to act – for instance, the tendency to avoid – is a just a disposition to behave a certain way, which is to say that given certain triggering conditions, certain behavioral manifestations will emerge. On what basis do we say that some manifestations of this disposition are appropriate, whereas others are not?

To shed light on this matter, Deonna and Teroni (2022) suggest that if emotions turn out to have an appraisal system which is *sensitive* to the presence of formal objects, then our normative discourse about emotions can be grounded. For example, if fear turns out to have an appraisal system sensitive to danger, then if fear is elicited in the absence of danger, it is inappropriate.

But this won't follow, unless we ascribe to the appraisal system producing the avoidance tendency the *aim* to track danger – being sensitive to danger and trying to track danger are not the same thing. Compare a submergible A disposed to emit a cracking sound when the water pressure gets above a certain limit, and a submergible B designed to emit a warning sound when the water pressure gets above a certain limit. If submergible A does not emit a cracking sound, nothing inappropriate is going on, but if submergible B does not emit a warning sound, it is defective.

If we concede that the mechanism which produces avoidance tendencies aims to do so in the presence of dangers, we have thereby conceded that such mechanism *represents* dangers. This is undeniable for anyone who endorses the function-based theories of representation

commonly used in cognitive science, according to which a system represents what it has the function of tracking (Shea 2018; but see Deonna and Teroni 2020, 102–123). It should be emphasized that this critique does not entail that emotions must be *perceptions* of evaluative properties, as recommended by Perceptualism. Rather, the critique puts pressure on the idea that emotions can be assessable for appropriateness despite not representing evaluative properties in any way (see also Ballard 2021; Deonna and Teroni 2022, sec. 3).

A second objection is that if emotions are essentially motivational states, as Deonna and Teroni (2015) propose, they must also include representations with a world-to-mind direction of fit, the direction of fit typical of desires (Tappolet 2022). In other words, if emotions are to motivate behavior, they must imperatively represent that the world is to be made to be a certain way. We can easily think of a counterpart of fear which aims to track dangers only to motivate their immediate pursuit. Such a counterpart would be evolutionarily implausible, but it makes the point that one thing is to aim to track dangers, and another thing is to aim to avoid them. However, Deonna and Teroni do not take emotions to represent anything other than their particular objects, so they leave no room for emotions to represent imperatively. This raises the question of why the attitude of fear and the attitude of anger to the same particular content – e.g. that my daughter is at daycare – would motivate different behaviors. If different emotions are different motivational states, they should each represent what the world is to be made like.

A third objection has to do with the definitional role given to the phenomenal character of emotions, and to the assumption that emotional feelings are feelings of *bodily preparedness* (Mitchell 2020). We have seen that the idea that emotions are feelings is a staple of common sense, but to preclude the possibility of unconscious emotions *by definition* seems to grant common sense too much power. Unconscious emotions have been proposed to explain a number of scientifically relevant affective phenomena having to do with the subliminal elicitation of emotions (see Dub, Chapter 26, this volume). It is not clear whether these studies target the access consciousness or the phenomenal consciousness of emotions, and only the latter matters to Deonna and Teroni's (2015) claim that emotions must be felt. Nevertheless, there is a long history of commonsense assumptions proven false in science (e.g. parallels meet in the non-Euclidean geometry of relativistic physics). If so, it seems preferable to think of emotions as being *typically* rather than *necessarily* felt once we acknowledge that they are motivational states. Finally, lots of instances of conscious emotions, like admiration for a sunset or regret for a bad hand at poker, lack any salient bodily phenomenology, which may require Deonna and Teroni to reduce their emphasis on emotions as *bodily* tendencies (Mitchell 2020; Tappolet 2022).

Let us now turn to Scarantino's (2014) Motivational Theory, which identifies emotions with appraisal-elicited behavioral programs that bring about modes of action readiness. On this view, the emotion is neither the feeling of action tendency (as suggested by Deonna and Teroni 2015) nor the action tendency itself (as suggested by Frijda 1986). The emotion *is* the mechanism behind the activation of the action tendency – emotion episodes are the consequence of the activation of the mechanism. Following Frijda (1986), Scarantino (2014) also emphasizes that emotional action tendencies differ from garden-variety action tendencies because they have control precedence.

Scarantino proposes that emotion programs have evolved by natural selection or by cultural selection. In both cases, the core idea is that organisms face problems of such importance that selective pressures are generated for finding a special-purpose solution that outperforms any solution that general-purpose capacities could provide.

These problems of high importance have at least four general characteristics:[12] (a) they have reliably and recognizably recurred in the natural or cultural history of the species, (b) they

cannot be negotiated successfully unless various response systems are coordinated in complex ways, (c) they cannot be negotiated successfully through the same coordinated response in all circumstances, and (d) they involve high personal costs if not dealt with properly. Call a problem with these four characteristics a *fundamental problem*.

Scarantino's Motivational Theory is broader in scope than basic emotion theory, but it includes it as a special case. This is because some fundamental problems have emerged on an evolutionary time scale, like the problem of removing a source of obstruction (solution: anger*), the problem of avoiding dangers (solution: fear*), or the problem of avoiding contamination from pathogens (solution: disgust*). The use of * is meant to emphasize that there is no perfect overlap between the folk psychological categories of anger, fear, disgust, and so on and the programs selected to resolve these fundamental evolutionary problems. For instance, the folk psychological category of disgust includes disgust evolved to deal with pathogen contamination, but it also includes moral disgust – these two types of disgust differ in several theoretically important respects (see Tybur, Chapter 33, Volume II). More broadly, Scarantino (2012) has argued that folk psychological emotions categories are too heterogenous to allow for interesting scientific and philosophical generalizations, and they must be split – much like memory types – in search of more homogenous subclasses (see also Griffiths 1997; Barrett 2006; Scarantino and Griffiths 2011).

The Motivational Theory also proposes that emotions can be culturally evolved solutions to fundamental problems that have emerged on a shortened timescale with the growing complexities of the cultural life of an ultrasocial species like the human species. Examples include the problem of repairing intimate relationships damaged by some harm done (solution: guilt*), the problem of reinforcing reciprocity and group cohesion among non-kin (solution: gratitude*), and the problem of promoting social distancing from targets appraised as threatening to group identity (solution: contempt*). In all these cases as well,* is meant to signal lack of perfect overlap between the posited emotion mechanisms and the corresponding folk psychological category.

A critical difference between the Motivational Theory and the Tomkins-Ekman version of basic emotion theory concerns the mechanism of operation of emotion programs. Whereas Tomkins (1962) and Ekman (1992) assumed that such programs work in a reflex-like fashion producing a set of invariant bodily responses, Scarantino (2014) follows Plutchik (1962) in assuming that emotion programs produce impulses for behavior. The problem with reflexive programs is that they are implausible candidates for the solution of fundamental evolutionary and cultural problems. Only behavioral programs whose outputs show exquisite sensitivity to multiple parameters and features of the context can deal adaptively with the problem of danger, or the problem of goal obstruction, or the problem of reinforcing reciprocity, or the problem of promoting social distancing, given the diversity of the ways such abstract problems can be instantiated.

An important difference with Deonna and Teroni's attitudinal theory is that Scarantino (2014) proposes that emotions not only represent particular states of affairs (as Deonna and Teroni acknowledge), but also jointly represent evaluative properties (with a mind-to-world direction of fit) and states of affairs to be pursued (with a world-to-mind direction of fit).[13] For example, fear* that my daughter is at daycare not only represents her as being at daycare, but it also represents being at daycare as dangerous (descriptive representation), and being at daycare as a state of affairs to be avoided (imperative representation).[14] Emotions basically merge the directions of fit of beliefs and desires – they tell us at the same time what the world is like (e.g. dangerous) and what one should do about it (e.g. avoid it!). This *dual intentionality* is important to explain how the emotions can be advantageous, namely by motivating actions (through their imperative representations) which are adaptive to the states of affairs they track (through their descriptive representations).

Finally, Scarantino (2014) does not require emotions to be necessarily associated with feelings. Some instances of emotions are, but other instances are not. This is not to say that feelings play no role in emotions understood as motivational structures. In fact, the role of phenomenology might be very important for the purpose of motivating emotional behavior: (a) emotional phenomenology may be valenced and so intrinsically reinforcing, (b) emotional phenomenology may be key for invigorating behavior through felt arousal, and (c) emotional phenomenology may be key for expanding flexibility due to the integrative informational properties of feelings.

My point is that emotional phenomenology is not strictly required for goal-directedness, arousal, and flexibility. I think of emotions as structures whose essential job is providing "general direction for behavior by selectively potentiating coherent sets of behavioral options" (Gallistel 1980, 322). This selective potentiation seems quite possible in the absence of phenomenology, although phenomenology may improve the efficiency of the direction to behavior that emotions provide. Figure 20.8 summarizes Scarantino's theory.

Various objections can be raised against Scarantino's Motivational Theory. First, it is far from clear that there is a unique mode of action readiness in correspondence to every emotion, a problem for Deonna and Teroni's Attitudinal Theory as well (Tappolet 2022). This objection has various angles. First, some emotions, like fear while watching a horror movie at the theater or admiration of a sunset, have been argued to lack any motivational aspects (Walton 1978; De Sousa 2011; Tappolet 2022). If so, then Scarantino's (2014) theory, Deonna and Teroni's (2015) theory and Frijda's (1986) theory are only applicable to a subset of emotions (but see Scarantino 2022 and Deonna and Teroni 2021 for responses).

Second, it has been argued that different emotions can lead to being similarly motivated, and the same emotion can lead to being differently motivated. Being afraid of a rat and being disgusted by a rat can both lead to an avoidance tendency toward the rat. Conversely, anger at a colleague can lead to attacking the person you are angry with, but also to avoiding her (Kurth 2022). This is ultimately why Frijda and Parrot (2011) suggested that we should associate emotions not with any specific mode of action readiness (or ur-emotion), but rather with a multiplicity of modes of action readiness.

Another reaction to the lack of one-to-one correspondence between emotions and action tendencies may be to broaden the description of the action tendency in question; for example,

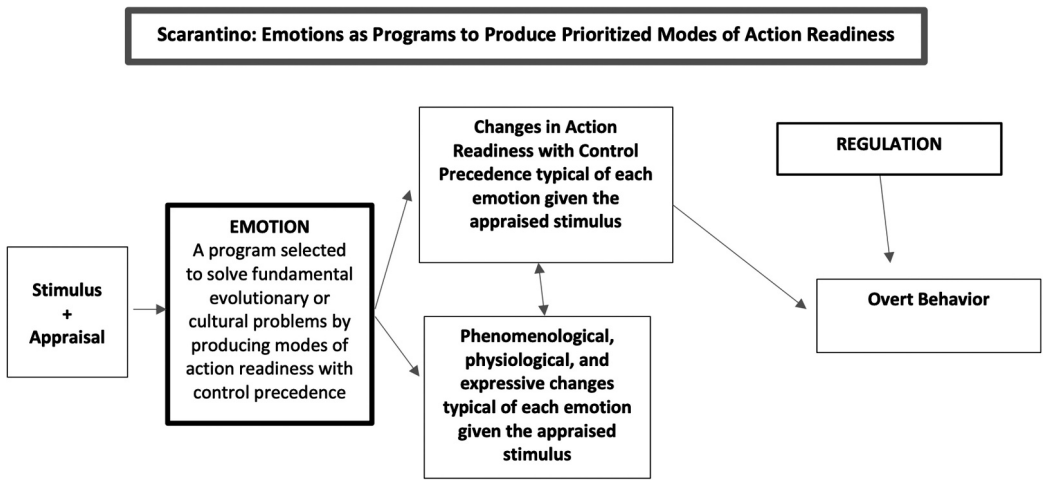

Figure 20.8 Scarantino's motivational theory of emotions. Regulation works jointly with action readiness to transform potential action into actual action.

one could redefine the tendency characteristic of anger as the "tendency to relate negatively to goal obstruction". Moors (2022) has described this as the *strategy of abstract reframing*, pointing out how Scarantino (2014) has used it to deal not only with the variability of the actions emotions motivate, but also with the variability of the bodily responses they involve. Moors (2022) has countered that this strategy risks trivializing the ascription of action tendencies and making them empty of predictive content, because the broader an action tendency is defined, the less it tells us about what the emoter is likely to do next. In addition, this reframing threatens the very idea at the core of Scarantino's (2014) analysis of emotions as special-purpose solutions to fundamental problems. If we thought of anger as a tendency to deal with goal obstruction in a negative way, this would describe a general-purpose mechanism rather than a special-purpose one, due to the vast number of ways in which our goals can be obstructed and the vast number of ways to deal with such obstruction.

A second objection to Scarantino's (2014) theory is that it relies on a problematic theory of representation in claiming that emotions represent descriptively and imperatively. First, there are potential problems with respect to the function-based (or teleosemantic) theory of representation Scarantino relies on to propose that emotions represent what they have the function of tracking (see Schulte and Neander 2022 for discussion). Second, Scarantino's (2014) suggestion that emotions combine descriptive and imperative representations can be questioned. Bauer (2020) has focused his recent critique on Millikan's notion of *pushme-pullyu representations*, but the critique applies equally well to Scarantino's (2014) proposal that emotions like fear jointly represent danger and what to do about it. Bauer (2020) has argued that representations of this sort exist only in primitive systems like bacteria, plants, and simple animals like clams. In complex systems like humans, alleged representations with dual intentionality simply are combinations of descriptive and imperative representations, with no merging of the two dimensions. If this is correct, fear would have to be understood as a conjunction of a descriptive representation that says "danger here" and of an imperative representation that says "avoid it!", with no dual intentionality involved. Bauer (2020) adds that genuine representations must be stand-ins for things in the world and be used as such in the context of cognitive operations, but representations that combine descriptive and directive dimensions would fail to play such a stand-in role because they lead to action directly, and so qualify at best as partial representations. Scarantino's (2014) theory, however, specifies that emotions do not lead to action directly, but rather make behavioral impulses available for cognitive operations like regulation.

Another potential problem with Scarantino's (2014) motivational theory is that it appears to count as emotions mental states intuitively not recognized as emotions. Consider hunger, which seems to have dual intentionality in the same sense in which emotions have dual intentionality. It both represents what the world is like (food supplies have fallen below a threshold) and what to do about it (replenish food supplies!). In addition, hunger is associated with an action tendency to eat food which has some degree of control precedence, the more so as hunger increases in intensity. But hunger is commonly understood as a biological drive rather than an emotion, which suggests that Scarantino's (2014) theory is too broad. This critique can be countered in a number of ways. One is to suggest, following Bindra (1969), that biological drives and emotions are in fact very much alike when it comes to their mechanism of operation. The other is to introduce differences between emotions and motivational structures like hunger (e.g. hunger is cyclical, emotions are not; hunger relies on a homeostatic internal system, emotions do not; etc.). Whether the inclusion of hunger and possibly other biological drives into the category of emotions is a mistake ultimately depends on how one conceives of the relation between folk

psychology and theoretical analysis, in particular with respect to the degree to which ordinary intuitions must be preserved in mature theoretical treatments of a subject matter.

Conclusion

This chapter has offered an overview of several motivational theories of emotions developed in the affective sciences and in philosophy since the 1960s. Motivational theories of emotions claim that understanding emotions requires making a central appeal to motivations as constituents of emotions. My overview has shown that there are several ways to make this central appeal, and consequently several theoretical options when it comes to linking emotion with motivation.

An important distinction has emerged between two types of motivational theories. *Structural motivational theories* take emotions to be structures (or programs or mechanisms or systems or dispositions) designed to cause, sustain, and direct behavior by causing changes in modes of action readiness and attendant changes in other components (e.g. Plutchik's theory, Scarantino's theory). *Episodic motivational theories* take emotions to be behavioral episodes (or events or occurrences or processes) consisting of changes in action readiness, plus attendant changes in other components (e.g. Scherer's theory, Frijda's theory, Deonna and Teroni's theory).

Whereas structural motivational theories take emotions to be things that *persist in time*, episodic motivational theories take emotions to be things that *happen in time* (see Naar, Chapter 21, this volume, for further discussion). Structural motivational theories need to account for how emotion episodes – *occurrent* instances of emotion– emerge in terms of the activation of the relevant structures, whereas episodic motivational theories need to account for what causes emotion episodes in terms of some kind of underlying structure – a behavioral program, an appraisal mechanism – that existed prior to the episode. Some models remain unclear on this central ontological distinction, or ambiguously embrace both options at the same time, using the term *emotion* to refer both the structure and to the manifestations of its activation (e.g. Tomkins and Ekman's theory).

Motivational theories also differ with respect to whether they posit the existence of programs causally responsible for the changes in modes of action readiness (e.g. Roseman's theory, Frijda's theory, Scarantino's theory), or whether they hold that appraisals on their own can bring about changes of action tendency with no mediating program being required (e.g. Scherer's theory). Some theories remain open to both options (Deonna and Teroni's theory). Motivational theories which posit the existence of programs causally responsible for the changes in modes of action readiness differ from one another in terms of whether the program is the emotion (e.g. Scarantino's theory) or some behavioral program other than emotion (e.g. Frijda's theory).

Different motivational theories also draw the distinction between emotional and non-emotional modes of action readiness in dissimilar ways, appealing either to control precedence (Frijda's theory, Scarantino's theory), or to synchronization of components (Scherer's theory), or to degree of goal relevance (Scherer's theory, Roseman's theory). Other motivational theories remain silent on what makes emotional modes of action readiness emotional, presumably assuming that the ends being pursued – e.g. avoiding danger – suffice to make a tendency emotional (Deonna and Teroni's theory).

Finally, some motivational theories assume that there is a unique mode of (broadly defined) action readiness in correspondence with each emotion which drives all emotional behavior (e.g. Scarantino's theory, Deonna and Teroni's theory), whereas other theories allow for multiple modes of action readiness to be associated with the same emotion (Frijda and Parrott's theory). Yet other theories restrict the notion of action tendency to concrete behaviors (e.g. the tendency to hit), leaving the job of motivating flexible behaviors to emotivational goals (e.g. Roseman's theory).

If nothing else, this chapter should give readers a sense of the theoretical possibilities that become available if one decides to make motivation an essential constituent of emotion, although it should be emphasized that not all motivational theories have been mapped. Figure 20.9 takes a stab at summarizing the main theories I have covered, highlighting some similarities and differences between them.

This chapter has also shown that none of the motivational theories currently available is immune from criticisms. Many challenges and questions remain wide open for the motivational research program. They include: (1) whether emotions are continuant structures/mechanisms, or occurrent events/processes, or both; (2) whether changes in emotional action readiness require special-purpose programs; (3) what makes changes in action readiness emotional in the first place; (4) how overt behavior emerges from the interplay between emotion and regulation; (5) what theory of intentionality is best suited to a motivational theory; (6) what are the differences between emotions and other motivational constructs; (7) how exactly motivational theories can be empirically supported or falsified; (8) what role feelings play in motivational theories; and (9) whether all emotions are motivational states, or only some of them. Answering these questions will go a significant way toward developing and strengthening the motivational research program, and clarify which versions of the research program are more fruitful relative to the purposes that a scientific or philosophical analysis of emotions may have.

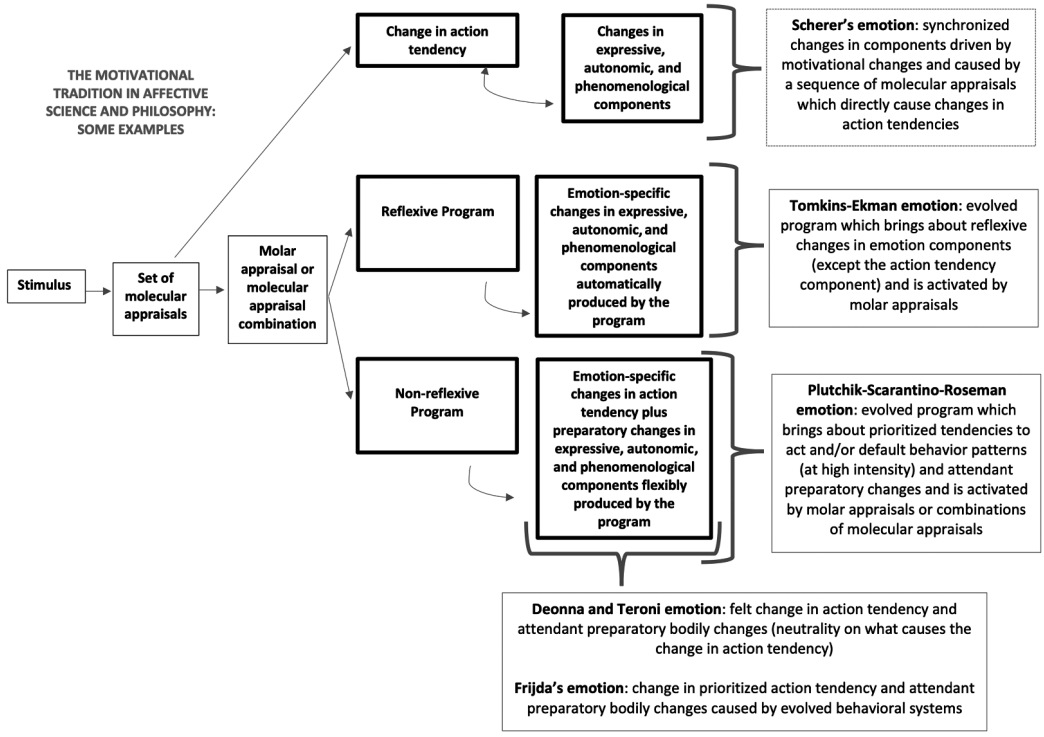

Figure 20.9 Some dividing lines in the family of motivational theories of emotions. Molecular appraisals can either produce changes in action tendencies directly (upper level), or they can do so only when they combine in the form of a group of appraisals (lower level). Once these appraisals have combined, two types of programs can be elicited, reflexive and non-reflexive programs. The figure shows which element of this complex causal network is considered to be the emotion by alternative motivational theories.

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Notes

1 Danziger (1997) has argued that there was a political side to the increasing popularity of the concept of motivation, related to the emergence of mass education with its need to "motivate" students, of the advertisement industry with its need to "motivate" purchases, and of industrial psychology with its need to "motivate" workers.

2 The notion of instinct took two primary forms in the 20th century. There is the *reflexive* notion of instinct, exemplified for instance by James (1890), and the *purposive* notion of instinct, embraced by McDougall (1908) among others. See Kuo (1921) for a discussion of these two notions of instinct, and of why the concept of instinct was eventually abandoned in favor of other motivational constructs.

3 Bindra (1969) acknowledged that external incentives can elicit emotions in a wider range of physiological states than they can elicit biological motives – e.g. a threatening stimulus will elicit fear whether you are "sleepy or highly aroused, hungry or satiated" (1077), whereas food will elicit hunger only if you are not sleepy and not satiated.

4 In the case of joy and sadness, there are no ends being pursued, but we can still make sense of the notion of control precedence if we think of joy prioritizing free activation and sadness prioritizing disengagement over other possible courses of action.

5 Frijda and Parrott (2011) suggest that appraisals are the common cause of modes of action readiness, but that exceptions are possible, as when changes in action readiness are elicited by hearing music or dancing or adopting facial expressions typical of emotions.

6 There is a strand of appraisal theory which does not think of appraisals as causes of emotions (e.g. Clore and Ortony, 2013; Ellsworth 2013). See Ellsworth (Chapter 16, this volume) for discussion.

7 Roseman (2011) emphasizes three additional sources that account for the extensive variability we observe in the manifestations of the same emotion: multiple emotions can occur at the same time, multiple processes other than emotions can occur concomitantly with emotions (e.g. fatigue), and emotions themselves can be regulated.

8 Strictly speaking, this is true only of what Scherer calls *utilitarian emotions*, which are emotions that "facilitat[e] our adaptation to events that have important consequences for our wellbeing" (2005, 706). Scherer contrasts them with aesthetic emotions, which result from appreciation of beauty and other aesthetic properties but do not involve "the preparation of specific, adaptive action tendencies" (Scherer 2005, 706–707). See Scarantino (2022) for a rejection of this distinction.

9 See Dixon-Gordon and Haliczer, Chapter 60, Volume II, for a discussion of emotional pathologies. The chapter shows that appropriateness is discussed in psychology not explicitly, but through the back door of assessing the dysfunctionality of emotions.

10 This similarity in the description of core relational themes and formal objects relates to the criticism of appraisal theory discussed at the end of the previous section, namely that subjects asked to reconstruct what caused an emotion may reveal their views about formal objects (appropriateness conditions) rather than provide relevant information about the appraisals that actually caused the emotion.

11 The notion of attitude used by Deonna and Teroni differs from the notion of attitude used in psychology, where attitudes are positive or negative evaluations. Attitudes for philosophers are simply ways in which mental states relate to propositional contents.

12 This account of recurrent problems is inspired by the discussion in Tooby and Cosmides (2008), but it expands it in various ways.

13 Both representations are grounded in a teleosemantic theory of content: emotions represent the properties what they have the function of tracking (descriptive representation), and they represent the states of affairs they have the function of bringing about (imperative representation) (see also Prinz 2004).
14 Millikan (2004) has labeled representations of this sort as *pushmi-pullyu representations*, arguing that they "represent facts and … represent goals, both at once" (157).

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