

Selections from William James, *The Principles of Psychology*, Ch. 25, "The Emotions"

Objections Considered

Let me now notice a few objections. The replies will make the theory still more plausible.

First Objection. There is no real evidence, it may be said, for the assumption that particular perceptions do produce wide-spread bodily effects by a sort of immediate physical influence, antecedent to the arousal of an emotion or emotional idea?

Reply. There is most assuredly such evidence. In listening to poetry, drama, or heroic narrative we are often surprised at the cutaneous shiver which like a sudden wave flows over us, and at the heart-swelling and the lachrymal effusion that unexpectedly catch us at intervals. In listening to music the same is even more strikingly true. If we abruptly see a dark moving form in the woods, our heart stops beating, and we catch our breath instantly and before any articulate idea of danger can arise. If our friend goes near to the edge of a precipice, we get the well-known feeling of 'all-overishness,' and we shrink back, although we positively know him to be safe, and have no distinct imagination of his fall. The writer well remembers his astonishment, when a boy of seven or eight, at fainting when he saw a horse bled. The blood was in a bucket, with a stick in it, and, if memory does not deceive him, he stirred it round and saw it drip from the stick with no feeling save that of childish curiosity. Suddenly the world grew black before his eyes, his ears began to buzz, and he knew no more. He had never heard of the sight of blood producing faintness or sickness, and he had so little repugnance to it, and so little apprehension of any other sort of danger from it, that even at that tender age, as he well remembers, he could not help wondering how the mere physical presence of a pailful of crimson fluid could occasion in him such formidable bodily effects.

Professor Lange writes:

"No one has ever thought of separating the emotion produced by an unusually loud sound from the true inward affections. No one hesitates to call it a sort of fright, and it shows the ordinary signs of fright. And yet it is by no means combined with the idea of danger, or in any way occasioned by associations, memories, or other mental processes. The phenomena of fright follow the noise immediately without a trace of 'spiritual' fear. Many men can never grow used to standing beside a cannon when it is fired off, although they perfectly know that there is danger neither for themselves nor for others -- the bare sound is too much for them."

Imagine two steel knife-blades with their keen edges crossing each other at right angles, and moving to and fro. Our whole nervous organization is 'on-edge' at the thought; and yet what emotion can be there except the unpleasant nervous feeling itself, or the dread that more of it may come? The entire fund and capital of the emotion here is the senseless bodily effect which the blades immediately arouse. This case is typical of a class: where an ideal emotion seems to precede the bodily symptoms, it is often nothing but an anticipation of the symptoms themselves. One who has already fainted at the sight of blood may witness the preparations for a surgical operation with uncontrollable heart-sinking and anxiety. He anticipates certain feelings, and the anticipation precipitates their arrival. In cases of morbid

terror the subjects often confess that what possesses them seems, more than anything, to be fear of the fear itself. In the various forms of what Professor Pain calls 'tender emotion,' although the appropriate object must usually be directly contemplated before the emotion can be aroused, yet sometimes thinking of the symptoms of the emotion itself may have the same effect. In sentimental natures the thought of 'yearning' will produce real 'yearning.' And, not to speak of coarser examples, a mother's imagination of the caresses she bestows on her child may arouse a spasm of parental longing.

In such cases as these we see plainly how the emotion both begins and ends with what we call its effects or manifestations. It has no mental status except as either the vivid feeling of the manifestations, or the idea of them; and the latter thus constitute its entire material, and sum and substance. And these cases ought to make us see how in all cases the feeling of the manifestations may play a much deeper part in the constitution of the emotion than we are wont to suppose.

The best proof that the immediate cause of emotion is a physical effect on the nerves is furnished by those pathological cases in which the emotion is objectless. One of the chief merits, in fact, of the view which I propose seems to be that we can so easily formulate by its means pathological cases and normal cases under a common scheme. In every asylum we find examples of absolutely unmotivated fear, anger, melancholy, or conceit; and others of an equally unmotivated apathy which persists in spite of the best of outward reasons why it should give way. In the former cases we must suppose the nervous machinery to be so 'labile' in some one emotional direction that almost every stimulus (however inappropriate) causes it to upset in that way, and to engender the particular complex of feelings of which the psychic body of the emotion consists. Thus, to take one special instance, if inability to draw deep breath, fluttering of the heart, and that peculiar epigastric change felt as 'precordial anxiety,' with an irresistible tendency to take a somewhat crouching attitude and to sit still, and with perhaps other visceral processes not now known, all spontaneously occur together in a certain person; his feeling of their combination is the emotion of dread, and he is the victim of what is known as morbid fear. A friend who has had occasional attacks of this most distressing of all maladies tells me that in his case the whole drama seems to centre about the region of the heart and respiratory apparatus, that his main effort during the attacks is to get control of his inspirations and to slow his heart, and that the moment he attains to breathing deeply and to holding himself erect, the dread, ipso facto, seems to depart.

The emotion here is nothing but the feeling of a bodily state, and it has a purely bodily cause.

"All physicians who have been much engaged in general practice have seen cases of dyspepsia in which constant low spirits and occasional attacks of terror rendered the patient's condition pitiable in the extreme. I have observed these cases often, and have watched them closely, and I have never seen greater suffering of any kind than I have witnessed during these attacks. . . . Thus, a man is suffering from what we call nervous dyspepsia. Someday, we will suppose in the middle of the afternoon, without any warning or visible cause, one of these attacks of terror comes on. The first thing the man feels is great but vague discomfort. Then he notices that his heart is beating much too violently. At the same time shocks or flashes as of electrical discharges, so violent as to be almost painful, pass one after another through his body and limbs. Then in a few minutes he falls into a condition of the most intense fear. He is not afraid of anything; he is simply afraid. His mind is perfectly clear. He looks for a cause his

wretched condition, but sees none. Presently his terror is such that he trembles violently and utters low moans; his body is damp with perspiration; his mouth is perfectly dry; and at this stage there are no tears in his eyes, though his suffering is intense. When the climax of the attack is reached and passed, there is a copious flow of tears, or else a mental condition in which the person weeps upon the least provocation. At this stage a large quantity of pale urine is passed. Then the heart's action becomes again normal, and the attack passes off."

Again:

"There are outbreaks of rage so groundless and unbridled that all must admit them to be expressions of disease. For the medical layman hardly anything can be more instructive than the observation of such a pathological attack of rage, especially when it presents itself pure and unmixed with other psychical disturbances. This happens in that rather rare disease named transitory mania. The patient predisposed to this -- otherwise an entirely reasonable person -- will be attacked suddenly without the slightest outward provocation, and thrown (to use the words of the latest writer on the subject, O. Schwartz, *Die transitorische Tobsucht*, Wien, 1880), 'into a paroxysm of the wildest rage, with a fearful and blindly furious impulse to do violence and destroy.' He flies at those about him; strikes, kicks, and throttles whomever he can catch; dashes every object about which he can lay his hands on; breaks and crushes what is near him; tears his clothes; shouts, howls, and roars, with eyes that flash and roll, and shows meanwhile all those symptoms of vaso-motor congestion which we have learned to know as the concomitants of anger. His face is red, swollen, his cheeks hot, his eyes protuberant and their whites bloodshot, the heart beats violently, the pulse marks 100-120 strokes a minutes. The arteries of the neck are full and pulsating, the veins are swollen, the saliva flows. The fit lasts only a few hours, and ends suddenly with a sleep of from 8 to 12 hours, on waking from which the patient has entirely forgotten what has happened."

In these (outwardly) causeless emotional conditions the particular paths which are explosive are discharged by any and every incoming sensation. Just as, when we are seasick, every smell, every taste, every sound, every sight, every movement, every sensible experience whatever, augments our nausea, so the morbid terror or anger is increased by each and every sensation which stirs up the nerve-centres. Absolute quiet is the only treatment for the time. It seems impossible not to admit that in all this the bodily condition takes the lead, and that the mental emotion follows. The intellect may, in fact, be so little affected as to play the cold-blooded spectator all the while, and note the absence of a real object for the emotion.

A few words from Henle may close my reply to this first objection:

"Does it not seem as if the excitations of the bodily nerves met the ideas half way, in order to raise the latter to the height of emotions? [Note how justly this expresses our theory!] That they do so is proved by the cases in which particular nerves, when specially irritable, share in the emotion and determine its quality. When one is suffering from an open wound, any grievous or horrid spectacle will cause pain in the wound. In sufferers from heart-disease there is developed a psychic excitability, which is often incomprehensible to the patients themselves, but which comes from the heart's liability to palpitate. I

said that the very quality of the emotion is determined by the organs disposed to participate in it. Just as surely as a dark foreboding, rightly grounded on inference from the constellations, will be accompanied by a feeling of oppression in the chest, so surely will a similar feeling of oppression, when due to disease of the thoracic organs, be accompanied by groundless forebodings. So small a thing as a bubble of air rising from the stomach through the œsophagus, and loitering on its way a few minutes and exerting pressure on the heart, is able during sleep to occasion a nightmare, and during waking to produce a vague anxiety. On the other hand, we see that joyous thoughts dilate our blood-vessels, and that a suitable quantity of wine, because it dilates the vessels, also disposes us to joyous thoughts. If both the jest and the wine work together, they supplement each other in producing the emotional effect, and our demands on the jest are the more modest in proportion as the wine takes upon itself a larger part of the task."

Second Objection. If our theory be true, a necessary corollary of it ought to be this: that any voluntary and cold-blooded arousal of the so-called manifestations of a special emotion ought to give us the emotion itself. Now this (the objection says) is not found to be the case. An actor can perfectly simulate an emotion and yet be inwardly cold; and we can all pretend to cry and not feel grief; and feign laughter without being amused.

Reply. In the majority of emotions this test is inapplicable; for many of the manifestations are in organs over which we have no voluntary control. Few people in pretending to cry can shed real tears, for example. But, within the limits in which it can be verified, experience corroborates rather than disproves the corollary from our theory, upon which the present objection rests. Everyone knows how panic is increased by flight, and how the giving way to the symptoms of grief or anger increases those passions themselves. Each fit of sobbing makes the sorrow more acute, and calls forth another fit stronger still, until at last repose only ensues with lassitude and with the apparent exhaustion of the machinery. In rage, it is notorious how we 'work ourselves up' to a climax by repeated outbreaks of expression. Refuse to express a passion, and it dies. Count ten before venting your anger, and its occasion seems ridiculous. Whistling to keep up courage is no mere figure of speech. On the other hand, sit all day in a moping posture, sigh, and reply to everything with a dismal voice, and your melancholy lingers. There is no more valuable precept in moral education than this, as all who have experience know: if we wish to conquer undesirable emotional tendencies in ourselves, we must assiduously, and in the first instance cold-bloodedly, go through the outward movements of those contrary dispositions which we prefer to cultivate. The reward of persistency will infallibly come, in the fading out of the sullenness or depression, and the advent of real cheerfulness and kindliness in their stead. Smooth the brow, brighten the eye, contract the dorsal rather than the ventral aspect of the frame, and speak in a major key, pass the genial compliment, and your heart must be frigid indeed if it do not gradually thaw!

This is recognized by all psychologists, only they fail to see its full import. Professor Bain writes, for example:

"We find that a feeble [emotional] wave . . . is suspended inwardly by being arrested outwardly; the currents of the brain and the agitation of the centres die away if the external vent is resisted at every point. It is by such restraint that we are in the habit of suppressing pity, anger, fear, pride -- on many

trifling occasions. If so, it is a fact that the suppression of the actual movements has a tendency to suppress the nervous currents that incite them, so that the external quiescence is followed by the internal. The effect would not happen in any case if there were not some dependence of the cerebral wave upon the free outward vent or manifestation. . . . By the same interposition we may summon up a dormant feeling. By acting out the external manifestations, we gradually infect the nerves leading to them, and finally waken up the diffusive current by a sort of action *ab extra*. . . . Thus it is that we are sometimes able to assume a cheerful tone of mind by forcing a hilarious expression.

We have a mass of other testimony of similar effect. Burke, in his treatise on the Sublime and Beautiful, writes as follows of the physiognomist Campanella:

"This man, it seems, had not only made very accurate observations on human faces, but was very expert in mimicking such as were in any way remarkable. When he had a mind to penetrate into the inclinations of those he had to deal with, he composed his face, his gesture, and his whole body, as nearly as he could, into the exact similitude of the person he intended to examine; and then carefully observed what turn of mind he seemed to acquire by the change. So that, says my author, he was able to enter into the dispositions and thoughts of people as effectually as if he had been changed into the very men. I have often observed [Burke now goes on in his own person] that, on mimicking the looks and gestures of angry, or placid, or frightened, or daring men, I have involuntarily found my mind turned to that passion whose appearance I strove to imitate; nay, I am convinced it is hard to avoid it, though one strove to separate the passion from its corresponding gestures."

Against this it is to be said that many actors who perfectly mimic the outward appearances of emotion in face, gait, and voice declare that they feel no emotion at all. Others, however, according to Mr. Wm. Archer, who has made a very instructive statistical inquiry among them, say that the emotion of the part masters them whenever they play it well. Thus:

"I often turn pale," writes Miss Isabel Bateman, 'in scenes of terror or great excitement. I have been told this many times, and I can feel myself getting very cold and shivering and pale in thrilling situations.' 'When I am playing rage or terror,' writes Mr. Lionel Brough, 'I believe I do turn pale. My mouth gets dry, my tongue cleaves to my palate. In *Bob Acres*, for instance (in the last act), I have to continually moisten my mouth, or I shall become inarticulate. I have to "swallow the lump," as I call it.' All artists who have had much experience of emotional parts are absolutely unanimous. . . . 'Playing with the brain,' says Miss Alma Murray, 'is far less fatiguing than playing with the heart. An adventuress taxes the physique far less than a sympathetic heroine. Muscular exertion has comparatively little to do with it.' . . . 'Emotion while acting,' writes Mr. Howe, 'will induce perspiration much more than physical exertion. I always perspired profusely while acting *Joseph Surface*, which requires little or no exertion.' . . . 'I suffer from fatigue,' writes Mr. Forbes Robertson, 'in proportion to the amount of emotion I may have been called upon to go through, and not from physical exertion.' . . . 'Though I have played *Othello*,' writes Mr. Coleman, 'ever since I was seventeen (at nineteen I had the honor of acting the Moor to Macready's *Iago*), husband my resources as I may, this is the one part, the part of parts, which always leaves me physically prostrate. I have never been able to find a pigment that would stay on my face, though I have tried every preparation in existence. Even the titanic *Edwin Forrest* told me that he was always knocked

over in Othello, and I have heard Charles Kean, Phelps, Brooke, Dillion, say the same thing. On the other hand, I have frequently acted Richard III. without turning a hair."

The explanation for the discrepancy amongst actors is probably that which these quotations suggest. The visceral and organic part of the expression can be suppressed in some men, but not in others, and on this it is probable that the chief part of the felt emotion depends. Coquelin and the other actors who are inwardly cold are probably able to affect the dissociation in a complete way. Prof. Sikorsky of Kieff has contributed an important article on the facial expression of the insane to the *Neurologisches Centralblatt* for 1887. Having practised facial mimicry himself a great deal, he says:

"When I contract my facial muscles in any mimetic combination, I feel no emotional excitement, so that the mimicry is in the fullest sense of the word artificial, although quite irreproachable from the expressive point of view."

We find, however, from the context that Prof. S.'s practice before the mirror has developed in him such a virtuosity in the control of his facial muscles that he can entirely disregard their natural association and contract them in any order of grouping, on either side of the face isolatedly, [p. 466] and each one alone. Probably in him the facial mimicry is an entirely restricted and localized thing, without sympathetic changes of any sort elsewhere.

Third Objection. Manifesting an emotion, so far from increasing it, makes it cease. Rage evaporates after a good outburst; it is pent-up emotions that "work like madness in the brain."

Reply. The objection fails to discriminate between what is felt during and what is felt after the manifestation. During the manifestation the emotion is always felt. In the normal course of things this, being the natural channel of discharge, exhausts the nerve-centres, and emotional calm ensues. But if tears or anger are simply suppressed, whilst the object of grief or rage remains unchanged before the mind, the current which would have invaded the normal channels turns into others, for it must find some outlet of escape. It may then work different and worse effects later on. Thus vengeful brooding may replace a burst of indignation; a dry heat may consume the frame of one who fain would weep, or he may, as Dante says, turn to stone within; and then tears or a storming fit may bring a grateful relief. This is when the current is strong enough to strike into a pathological path when the normal one is dammed. When this is so, an immediate outpour may be best. But here, to quote Prof. Bain again:

"There is nothing more implied than the fact that an emotion may be too strong to be resisted, and we only waste our strength in the endeavor. If we are really able to stem the torrent, there is no more reason for refraining from the attempt than in the case of weaker feelings. And undoubtedly the habitual control of the emotions is not to be attained without a systematic restraint, extended to weak and strong."

When we teach children to repress their emotional talk and display, it is not that they may feel more -- quite the reverse. It is that they may think more; for, to a certain extent, whatever currents are diverted from the regions below, must swell the activity of the thought-tracts of the brain. In apoplexies and other brain injuries we get the opposite condition -- an obstruction, namely, to the passage of currents

among the thought-tracts, and with this an increased tendency of objects to start downward currents into the organs of the body. The consequence is tears, laughter, and temper-fits, on the most insignificant provocation, accompanying a proportional feebleness in logical thought and the power of volitional attention and decision, -- just the sort of thing from which we try to wean our child. It is true that we say of certain persons that "they would feel more if they expressed less." And in another class of persons the explosive energy with which passion manifests itself on critical occasions seems correlated with the way in which they bottle it up during the intervals. But these are only eccentric types of character, and within each type the law of the last paragraph prevails. The sentimentalist is so constructed that 'gushing' is his or her normal mode of expression. Putting a stopper on the 'gush' will only to a limited extent cause more 'real' activities to take its place; in the main it will simply produce listlessness. On the other hand, the ponderous and bilious 'slumbering volcano,' let him repress the expression of his passions as he will, will find them expire if they get no vent at all; whilst if the rare occasions multiply which he deems worthy of their outbreak, he will find them grow in intensity as life proceeds. On the whole, I cannot see that this third objection carries any weight.

If our hypothesis is true, it makes us realize more deeply than ever how much our mental life is knit up with our corporeal frame, in the strictest sense of the term. Rapture, love, ambition, indignation, and pride, considered as feelings, are fruits of the same soil with the grossest bodily sensations of pleasure and of pain. But the reader will remember that we agreed at the outset to affirm this only of what we then called the 'coarser' emotions, and that those inward states of emotional sensibility which appeared devoid at first sight of bodily results should be left out of our account. We must now say a word or two about these latter feelings, the 'subtler' emotions, as we then agreed to call them.