



Correspondence

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To cite this article: Maximilian P. E. Groszmann (1897) Correspondence, The Pedagogical Seminary, 5:2, 306-307, DOI: [10.1080/08919402.1897.10534363](https://doi.org/10.1080/08919402.1897.10534363)

To link to this article: <http://dx.doi.org/10.1080/08919402.1897.10534363>



Published online: 28 Aug 2012.



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CORRESPONDENCE.

To the Editor of THE PEDAGOGICAL SEMINARY:

Dear Sir,—

Mr. Partridge, in a foot note to his interesting study on "Blushing" (PED. SEM., Vol. IV, No. 3,) says: "The literature of the subject. . . . is meagre." Certainly it is, but it does not appear that he has exhausted the material at hand. I wish to call attention to a helpful monograph¹ published somewhere in the eighties (the date is not given, but a copy is in my possession at least 14 or 15 years) whose author discusses the subject in a rather thorough manner and arrives at conclusions similar to those of Mr. Partridge. I translate a few extracts for the benefit of those interested in the subject.

Henle takes exception to Darwin's explanation of the phenomenon of blushing, and also rejects the theory that it is due to an acceleration or stimulation of the action of the heart. He shows that a closer microscopic examination of the tissues composing the walls of the blood vessels reveals the fact that there are involuntary muscles of an annular form imbedded in the elastic fibrous tissue. "The last doubts as to the contractility of the blood vessels have been removed by Bernard . . . who proved that these vessels are controlled by the nerves in the same manner as the voluntary muscles." Consequently, mental states may cause contractions or relaxations of the capillaries, which in their turn will produce a temporary decrease (pallor) or increase (blush) of the volume of blood in these vessels.

That the blush is, in the main, restricted to the face and neck, cannot be explained, as Darwin does, as an effect of the "concentration of attention to the exposed part." "If concentration of attention upon the face were cause enough to increase the quantity of blood in the capillaries of the face, we ought to blush whenever we look attentively at our face in the mirror." And "if we fix our gaze upon the pretty hand of a lady who is conscious of this distinction, we may never observe a blush on her hand, but only, perhaps, in her face."

While this argumentation may be regarded as somewhat superficial, Henle's further statements are interesting. "When it is asked," he says, "why the blush appears mainly and primarily in the face, we must consider that this peculiar localization of effect is characteristic of every case of dilatation of the blood vessels under the influence of an emotional state. I believe to have found an explanation of this fact. The nerves of the blood vessels do not stand alone in this respect; as I have had occasion to show in one of my lectures on anthropology, the nerves of all voluntary and involuntary muscles, the sensory nerves of the skin and even those of the glands, whenever they are at all affected by mental states, participate in the emotional excitement in the same order, viz.: first those of the head (facial muscles, lachrymal gland), and then, in proportion to the intensity of the feeling, from the head downward. The common cause of this sequence must be found in the anatomical arrangement of the nerves of the body: those that innervate the upper part of the body being in greater proximity to the seat of psychic activity than those controlling the lower

¹ "Ueber das Erroethen," von J. Henle, Breslau, S. Schottlaender.

parts. . . . The characteristic feature of the blush of shame, therefore, is not the fact that it covers the face, . . . but that the face blush is the principal, often the only outward sign of the emotions which it signifies. This peculiarity can only be explained by the particular character of the feeling of shame, in distinction from other blush-producing emotions. . . ." (Cf. Mr. Partridge's article, p. 390.)

"The mental state which produces the blush proper, belongs to the class of depressing emotions. The dread to be observed in public, which colors the cheeks of timid maidens (and youths) even on entering a place of social intercourse, or at a greeting in the street; the feeling of alarm at being tempted into revealing a secret, or at the possibility of being caught in an untruth; yes, even the apprehension of arousing the mere suspicion that there is anything to be concealed or that one has been guilty of prevarication: all these are emotions which differ from *fear* of a threatening danger only in degree and mostly also in duration. And it often happens that a blush is immediately followed by the pallor of fear, or that the latter occurs alone when the former might be expected. Even the feeling of shame proper, especially when it is awakened by a surprising, alarming situation, may find expression by a pallor spreading over the face rather than by blushing. How, then, can it happen that moderate fear and terror will make us blush, as a rule, while stronger fear and more intense terror will cause us to turn pale? The explanation of this contradictory behavior is found by remembering that pallor is produced in one of two ways, either by contraction of the blood vessels, or by momentary cessation of the heart beat. Contraction of the blood vessels occurs, as was shown above, in consequence of depressing emotions; but fear and terror, in order to produce this effect, must reach a *certain degree of intensity* and are then accompanied also by other symptoms, such as contraction of other involuntary muscles (of the skin and lungs), and decrease in the power of control over the voluntary muscles (trembling). A temporary *dilatation* of the vessels, however, seem to be the first result of every *less* serious disturbance of the equilibrium of the mind, even of a passing alarm, of a merely incipient fright. If, under such conditions, a pallor is observed instead of a blush, this may be explained by an abnormal condition of the heart, which with many individuals changes its beat from very insignificant causes, and, by a sudden convulsion, or a temporary paralysis, may be prevented from dispatching the normal quantity of blood to the arteries. That the blush is an effect of relatively weak emotions, is also proved by the fact that this one change of physiognomic expression remains the only one . . . the muscular movements which accompany the blush, the drooping of the eyelids, the shifting glance, not being direct reflexes of the emotion, but (like the attempt to conceal one's self or at least one's face) voluntary and purposive actions. . . . It will be plain, then, why I distinguish the feeling of shame only quantitatively from other depressing emotions, so that no sharp line can be drawn between them."

In this connection, it will be instructive to consult Wundt's remarks on the physiology of blushing;¹ his line of argument being very similar to that of Henle, though the latter seems to claim priority for his theory.

Respectfully,

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¹"Grundzüge der physiologischen Psychologie," von Wilhelm Wundt. First edition, 1874, Leipzig, Wilhelm Engelmann.