

Handwritten: The Hands at the same time ^{they} ~~are~~ ^{are} generally ~~held~~ ^{held} ~~up~~ ^{up} ~~the~~ ^{the} ~~lips~~ ^{lips} ~~turned~~ ^{turned} ~~inwards~~ ^{inwards} ~~to~~ ^{to} ~~the~~ ^{the} ~~palms~~ ^{palms} ~~of~~ ^{of} ~~the~~ ^{the} ~~hands~~ ^{hands} ~~to~~ ^{to} ~~show~~ ^{show} ~~the~~ ^{the} ~~astonishment~~ ^{astonishment} ~~of~~ ^{of} ~~the~~ ^{the} ~~face~~ ^{face} ~~and~~ ^{and} ~~the~~ ^{the} ~~mouth~~ ^{mouth} ~~being~~ ^{being} ~~opened~~ ^{opened} ~~wide~~ ^{wide} ~~and~~ ^{and} ~~the~~ ^{the} ~~eyebrows~~ ^{eyebrows} ~~being~~ ^{being} ~~raised~~ ^{raised} ~~?~~ [?]

QUERIES ABOUT EXPRESSION.

- (1.) Is astonishment expressed by the eyes and mouth being opened wide, and by the eyebrows being raised?
- (2.) Does shame excite a blush when the colour of the skin allows it to be visible? and especially how low down the body does the blush extend?
- (3.) When a man is indignant or defiant does he frown, hold his body and head erect, square his shoulders and clench his fists?
- (4.) When considering deeply on any subject, or trying to understand any puzzle, does he frown, or wrinkle the skin beneath the lower eyelids?
- (5.) When in low spirits, are the corners of the mouth depressed, and the inner corner of the eyebrows raised by that muscle which the French call the "Grief muscle?" The eyebrow in this state becomes slightly oblique, with a little swelling at the inner end; and the forehead is transversely wrinkled in the middle part, but not across the whole breadth, as when the eyebrows are raised in surprise.
- (6.) When in good spirits do the eyes sparkle, with the skin a little wrinkled round and under them, and with the mouth a little drawn back at the corners?
- (7.) When a man sneers or snarls at another, is the corner of the upper lip over the canine or eye tooth raised on the side facing the man whom he addresses?
- (8.) Can a dogged or obstinate expression be recognized, which is chiefly shewn by the mouth being firmly closed, lowering brow and a slight frown?
- (9.) Is contempt expressed by a slight protrusion of the lips and by turning up the nose, with a slight expiration?
- (10.) Is disgust shewn by the lower lip being turned down, the upper lip slightly raised, with a sudden expiration, something like incipient vomiting, or like something spat out of the mouth?
- (11.) Is extreme fear expressed in the same general manner as with Europeans?
- (12.) Is laughter ever carried to such an extreme as to bring tears into the eyes?
- (13.) When a man wishes to shew that he cannot prevent something being done, or cannot himself do something, does he shrug his shoulders, turn inwards his elbows, extend outwards his hands and open the palms; with the eyebrows raised? *and not sure*
- (14.) Do the children when sulky, pout or greatly protrude the lips? *Do they pout or protrude the lips?*
- (15.) Can guilty, or sly, or jealous expressions be recognized? though I know not how these can be defined. *Do they know how to define these?*
- (16.) As a sign to keep silent, is a gentle hiss uttered?
- (17.) Is the head nodded vertically in affirmation, and shaken laterally in negation? *Do they nod vertically or shake laterally?*

Observations on natives who have had little communication with Europeans would be of course most valuable, though those made on any natives would be of much interest to me.

General remarks on expression are of comparatively little value; and memory is so deceptive that I earnestly beg it may not be trusted.

A definite description of the countenance under any emotion or frame of mind, with a statement of the circumstances under which it occurred, would possess much value. An answer within six or eight months, or ~~more~~ ^{less} to any single one of the foregoing questions would be gratefully accepted. In sending answers, the questions need not be copied, but reference may be made to the numbers of each query.

DOWN, BROMLEY, KENT,
1867.

CHARLES DARWIN,

CHARLES DARWIN'S
QUERIES ABOUT EXPRESSION

BY
RICHARD BROKE FREEMAN
AND
PETER JACK GAUTREY

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CHARLES DARWIN'S QUERIES ABOUT EXPRESSION

By R. B. FREEMAN & P. J. GAUTREY

THE intention of this paper is to publish, for the first time, the original text of *Queries about expression* which Darwin had had printed for private circulation in 1867, and to compare its text with that of other printed and manuscript versions.

In the first (1872) and all subsequent editions and issues of *The expression of the emotions in man and animals* Darwin writes (page 15): 'Conventional expressions or gestures, acquired by the individual during early life, would probably have differed in the different races, in the same manner as do their languages. Accordingly I circulated, early in the year 1867, the following printed queries with a request, which has been fully responded to, that actual observations, and not memory, might be trusted. These queries were written after a considerable interval of time, during which my attention had been otherwise directed, and I can now see that they might have been greatly improved. To some of the later copies, I appended, in manuscript, a few additional remarks:—'

Then follow sixteen numbered paragraphs, several with more than one query in them, and some final remarks. Another version, with seventeen queries and many other differences, was published by the Smithsonian Institution of Washington in 1868. When the *Darwin Bibliographical Handlist* was published in 1965, these were the only two versions of the queries that were known to us, although the existence of an original was assumed and it is fairly accurately described at No. 231. Since then, six further versions of the text, as well as related manuscript material including a consolidated set of the answers, have come to light. All of these are in the Darwin archive or the Robin Darwin deposit in the University Library at Cambridge. There are now eight texts known as follows:

1. A printed proof with corrections in Darwin's hand. The corrections bring the text, exactly, up to the printed version. Darwin's corrections are all easily legible, and this may be the proof from which the compositor worked, or it may be a copy. It has a printed date of 1867 as in the final work, but, bearing in mind the 'early in the year 1867' quoted above, it may have been pulled late in 1866. (DAR 96).

2. A copy of the original printed version without any manuscript alterations or additions. (DAR 53 [1]).

3. Another copy of No. 2, but with alterations and additions in Darwin's hand to queries (1), (13) and (14), and a small deletion in the final remarks. This copy is reproduced here in facsimile and will serve to represent both this and text form No. 2. The three deleted words are 'even a year'. The additions, so far as they can be read, are as follows:

(1) The hands at the same time being opened and raised high, with the fingers separate and the palms directed towards the person causing the astonishment.

(13) & mouth opened.

(14) . . . Do they press join arm to lips under In blue pencil, left hand margin. No. 31 Dr. Rothrock* keep for Desc. of Man.

It is clear that this copy could never have been sent to a correspondent: the additions are far too illegible. It may have been intended as a key copy for alterations that Darwin wished to make to copies sent out later, but these alterations bear almost no relation to the texts of Nos. 5 and 6. There are also no 'few additional remarks'. (Robin Darwin deposit).

4. A rough draft, entitled Expression of Savages, on both sides of a single sheet, of nine queries on expression, one on ideas of feminine beauty, and three on domestic animals. These are addressed to an unnamed correspondent who was familiar with Tierra del Fuego, Patagonia and the Falkland Islands. The sheet is undated, but there is plentiful evidence (see page 213) that a fair copy of it was sent on January 6th 1860 to 'Mr. Bridges, a catechist residing with the Fuegians'.

5. A copy, dated 1867, in Emma Darwin's hand, but signed by Charles. This copy is accompanied by a letter to Dr F. Müller, written by Mrs. Darwin but again signed by Charles, dated February 28th, without year. The consolidated answers show that the Müller to whom this letter was addressed was Ferdinand Jakob Heinrich (1825-96), Government Botanist of Victoria, Australia, from 1852 until his death, later K.C.M.G., F.R.S. and a Baron. Another F. Müller also sent replies; he was Johann Friedrich Theodor known as Fritz (1822-97), a schoolmaster in Brazil, later to be a personal friend of Darwin and the author of *Für Darwin*. (DAR. 92).

6. A copy in the hand of Dyson Lacy, Aramac, Baccao, near Rockhampton, Queensland, with answers to all seventeen queries and text of sixteen, that for No. 6 being omitted. A note in Darwin's hand at the top of the first page of the manuscript reads 'Observations made by a relative of Mr. E. Wilson on return several hundred miles into interior of Queensland Australia—received Sept. 18, 1868. Edward Wilson of Hayes Place, Kent is mentioned on page 19 of *The expression of the emotions*, and Dyson Lacy, the relative, on page 20. (Robin Darwin deposit).

7. The text in the *Annual Report of the Smithsonian Institution* for 1867, (1868). Miss Mary Sharon Carmody, Research Assistant at the Institution, informs us that no original copy for this version survives in the archives at the present time.

8. The text in *The expression of the emotions* (1872) and all later printings.

All eight texts differ to a greater or lesser extent. No. 1, the proof, needs no further consideration because its corrections, when made, produce No. 2. No. 3 also needs no further consideration because the alterations to it do not relate to the other versions. A detailed collation of the three printed texts, Nos. 2, 7 and 8, shows that all three differ from each other in many points, and a comparison of these differences with the three manuscript texts, Nos. 4, 5 and 6, may throw some light on why the printed ones differ. It is possible, but not probable, that there may have been a

*Spelt Rottrock throughout in the consolidated answers. Joseph Trimble Rothrock, M.D. (1839-1922), American botanist; he answered the queries in relation to his experience with North American Indians.

second, earlier or later, printed version. Darwin says only that he appended in manuscript to later copies: had he had the leaflet reprinted he would surely have mentioned the fact, and it is much more probable that the copy he sent to the printer had the additional material added to it.

The collation of Nos. 2, 7 and 8 is as follows:

Title: 2: Queries about expression

7: Queries about expression for anthropological inquiry

8: [No title], but in index Queries concerning expression.

1. 2. Is astonishment expressed by the eyes and mouth being opened wide and by the eyebrows being raised?
 7. and 8. As 2.
2. 2. Does shame excite a blush when the colour of the skin allows it to be visible? and especially how low down the body does the blush extend?
 7. color. All after the first interrogation point wanting.
 8. As 2.
3. 2. When a man is indignant or defiant does he frown, hold his body and head erect, square his shoulders and clench his fists?
 7. Comma after shoulders.
 8. As 2.
4. 2. When considering deeply on any subject, or trying to understand any puzzle, does he frown, or wrinkle the skin beneath the lower eyelids.
 7. Comma omitted after frown. Interrogation point added at end.
 8. Interrogation point added at end.
5. 2. When in low spirits, are the corners of the mouth depressed, and the inner corner of the eyebrows raised by that muscle which the French call the 'Grief muscle?'. The eyebrow in this state becomes slightly oblique, with a little swelling at the inner end; and the forehead is transversely wrinkled in the middle part, but not across the whole breadth, as when the eyebrows are raised in surprise.
 7. inner corner or angle of the eyebrows. grief l.c.g. Whole of second sentence wanting.
 8. As 2, but 'Grief Muscle'.
6. 2. When in good spirits do the eyes sparkle, with the skin a little wrinkled round and under them, and with the mouth a little drawn back at the corners?
 7. When in good spirits do the eyes sparkle, with the skin around and under them a little wrinkled, and with the corners of the mouth a little drawn back?
 8. As 2.
7. 2. When a man sneers or snarls at another, is the corner of the upper lip over the canine or eye tooth raised on the side facing the man whom he addresses?
 7. the canine teeth.
 8. As 2.
8. 2. Can a dogged or obstinate expression be recognized, which is chiefly shewn

- by the mouth being firmly closed, a lowering brow and a slight frown?
7. shown. Comma after brow.
8. shown.
9. 2. Is contempt expressed by a slight protrusion of the lips and by turning up the nose, with a slight expiration?
7. and turning up of the nose.
8. As 2.
10. 2. Is disgust shewn by the lower lip being turned down, the upper lip slightly raised, with a sudden expiration, something like incipient vomiting, or like something spat out of the mouth?
7. shown. No comma after expiration. Last eight words wanting.
8. shown. spit.
11. 2. Is extreme fear expressed in the same general manner as with Europeans?
7. and 8. As 2.
12. 2. Is laughter ever carried to such an extreme as to bring tears into the eyes?
7. and 8. As 2.
13. 2. When a man wishes to shew that he cannot prevent something being done, or cannot himself do something, does he shrug his shoulders, turn inwards his elbows, extend outwards his hands and open the palms; with the eye-brows raised?
7. show. Comma after hands. Last four words wanting, with interrogation point after palms.
8. show.
14. 2. Do children when sulky, pout or greatly protrude the lips?
7. Comma after children. Comma after pout.
8. As 2.
15. 2. Can guilty, or sly, or jealous expressions be recognized? though I know not how these can be defined.
7. and 8. As 2.
16. 2. As a sign to keep silent, is a gentle hiss uttered?
7. As 2.
8. This query is absent.
17. 2. Is the head nodded vertically in affirmation, and shaken laterally in negation?
7. No comma after affirmation.
8. As 2, but numbered 16.
2. Observations on natives who have had little communication with Europeans would be of course most valuable, though those made on any natives would be of much interest to me.

General remarks on expression are of comparatively little value; and memory is so deceptive that I earnestly beg it may not be trusted. *A definite description of the countenance* under any emotion or frame of mind, with a statement of the circumstances under which it occurred, would possess much value. An answer within six or eight months, or even a year, to any *single* one of the foregoing

questions would be gratefully accepted. In sending answers, the questions need not be copied, but reference may be made to the numbers of each query.

7. Observations on natives who have had little communication with Europeans would be, of course, the most valuable, though those made on any natives would be of much interest.

General remarks on expression are of comparatively little value. A definite description of the countenance under any emotion or frame of mind would possess much more value.

An answer to any single one of the foregoing questions would be gratefully accepted.

Memory is so deceptive on subjects like these that I hope it may not be trusted to.

8. Printed as one paragraph. Expression with an upper case E. No italics. 'An answer . . . of each query' all wanting.
2. is signed to right at foot CHARLES DARWIN and to left and below DOWN, BROMLEY, KENT, /1867.
7. is headed below title and between two short rules BY CHARLES DARWIN, OF DOWN, BROMLEY, KENT, ENGLAND.
8. is without signature or address.

Query numbers are in parentheses, e.g. (2) in 2 and 7, but not in 8, e.g. 2.

It is clear that text version No. 8, that in *The expression of the emotions*, is printed from a printed or a manuscript copy of No. 2, the original printed leaf. The differences are slight; show and shown for shew and shewn; one interrogation point added and one moved, both correcting composition faults; and spit for spat in query 10, perhaps a misprint. The two large changes are the omission of query 16, which results in the renumbering of query 17, and the omission of parts of the final remarks. Darwin purports that he reprints the queries in their original form, and it is possible that he struck out query 16 in some later copies. It does differ from the rest in that it is concerned with language rather than with expression, the matter of the enquiry. The 'gentle hiss' *st* is treated by the *Oxford English dictionary* as an interjection usually verbalized in English as hist, hush, or whist. This query is not discussed in the text of the book. The last two sentences, about how soon he wants the answers and in what form they would be helpful, are irrelevant in the printed book, and could with justification be omitted.

No. 7, what the Smithsonian Institution printed, is more difficult. A minor Americanism, color for colour, and eight added or omitted commas can be ignored. But there are textual differences in queries 2, 5, 6, 7, 9, 10 and 13. In four of them the queries are shorter, the variation in each case being at the end; in query 2 eleven words are wanting; in query 5 the whole of the second sentence of forty words is wanting; in query 10 eight words and in query 13 four. In query 7 there is 'the canine teeth' instead of 'the canine or eyetooth' and in query 9 'turning up of the nose' instead of 'turning up the nose'. In the concluding remarks there are a number of differences, the most important perhaps being the placing of the statement

about not relying on memory at the end, rather than incorporating it in the second sentence.

On the evidence of the three printed versions alone, it is clear that No. 7 could not have been composed from an unaltered copy of No. 2; no editor, let alone a compositor, would have made such alterations to printed copy in front of him. It is possible that No. 7 was printed from a copy of No. 2 with manuscript alterations, but the fact that four of these are conspicuous omissions and the structure of the concluding remarks make this improbable. It is possible also that No. 7 was printed from an earlier version, before the additions and the rewording of the concluding remarks, but there is no evidence for the existence of such a printed leaf.

It is also possible that No. 7 was printed from a manuscript copy sent to the Smithsonian Institution shortly before the printed version was available, and one of the surviving manuscript versions, No. 5, gives some evidence to support this view. This version is a primary source in Mrs Darwin's hand, whereas No. 6, in Dyson Lacy's hand, is secondary, being transcribed in Queensland from some other sources. In No. 7, the absent words in queries, 2, 5, 10 and 13 are exactly the same as in No. 5. Query 7 has 'canine teeth' as in No. 7 rather than 'canine or eye tooth' of No. 2. Query 9 has 'turning up of the nose' as in No. 7 rather than 'turning up the nose' of No. 2. The concluding remarks are as in No. 7, rather than those in No. 2, with the statement about not relying on memory at the end. On this last point, a letter to A. R. Wallace, which is No. 1 of the letters commented on below, gives additional evidence. The only difference is in query 7 which concludes 'with the mouth a little drawn back in the corners' which more closely resembles No. 2 'with the mouth a little drawn back at the corners', rather than No. 7 'with the corners of the mouth a little drawn back.'

On the other hand, there is a letter in the Robin Darwin deposit from George Gibbs to Darwin, headed Smithsonian Institute, Washington, March 31, 1867, which reads 'Professor Baird has shown me your circular "Queries about expression"'. This would tend to suggest a printed text.

The Dyson Lacy version, No. 5, does not give any further evidence. It is a rough transcription throughout, which was perhaps based on a late manuscript copy. The eleven additional words are present in query 2, and query 10 has the last phrase, but query 5 is omitted altogether, although the answer, misnumbered 6, is present. Query 13 is only present in abbreviated form. On the other hand there is 'canine teeth' in query 7 and 'turning up of the nose' in query 9. Two such variants which agree with Mrs Darwin's manuscript and disagree with the first printed version cannot be coincidence. The concluding remarks are omitted.

No. 4 has been left until last because its connection with the printed texts is remote. But its composition is undoubtedly about seven years earlier than the others, and probably represents Darwin's first ideas on the subject.

The evidence for this is fourfold:

1. From the manuscript itself, the different order of the questions, the indication to the copyist to change the order of the questions, and the striking out of the three questions on domestic animals.

2. Also from the manuscript, the use of red crayon for the title and the particular

paper on which it is written is characteristic of around 1859. Indeed this paper is known to students of the Cambridge archive as 'Origin paper' because almost the whole of the long version of *On the origin of species* is written on it.

3. In the consolidated answers, the only set from Tierra del Fuego (No. XXIX, from Mr Bridges) has the seven individual answers to the queries in the same order as they are in No. 4, whereas all the other thirty-four sets have them in the order found in the printed text. For example, the query about nodding and shaking the head is No. 1, that about astonishment No. 3, but in the printed text these are Nos. 17 and 1 respectively.

4. A letter to Sir Charles Lyell (*Life and letters*, Vol. II, pp 264-265) dated January 10th [1860], reads 'By the way I sent off a lot of questions the day before yesterday to Tierra del Fuego on expression.' The internal evidence for the year of this letter is fortunately good. The first volume of Hensleigh Wedgwood's *A dictionary of English etymology*, is referred to as 'new'; it was published in 1859. The insertion of A. R. Wallace's name on page 484 of a new edition of *On the origin of species* is referred to. It occurs on this page only in the fifth thousand, i.e. the second edition, which was published on January 7th, 1860.

The only correspondent in Tierra del Fuego who is referred to in *The expression of the emotions* is 'Mr. Bridges, a catechist residing with the Fuegians' who 'answered some questions about their expression, addressed to him many years ago'. This was Thomas Bridges (1841-1898), a missionary with the South American Mission and later a farmer. In 1860 he would have been working from the Keppel Mission in the Falkland Islands, but later he moved to Ushuaia on the north side of the Beagle Channel (see Riesenbergs, 1940).

He translated two Gospels and the Acts into the language of the Yaghan boat Indians, and compiled a dictionary of it which was not published until 1933, when the Yaghans were extinct. In a brief autobiographical article (1892) Bridges writes that he first entered the service of the mission in 1861, but this may be a slip of memory for Darwin clearly knew him as a catechist very early in 1860.

This set of queries, probably Darwin's first attempt to collect material for what was eventually to become the book, is of sufficient interest to be printed in full:

[Title on Verso, Darwin's hand, red crayon] Expression of Savages
[Recto]

Do the Fuegians or Patagonians λ or both λ nod their heads λ vertically λ to express assent & shake their heads horizontally to express dissent?

Do they blush? & at what sort of things? Is it chiefly or most commonly in relation to personal appearance or in relation to women?

Do they express astonishment by λ widely λ open eyes λ uplifted eyebrows λ & open mouth

Do they evince anger or fear by same expression of countenance & actions as we do?
 λ B [ringed]

Do they express contempt by the same gesture [?]s as we do, namely by turning up nose & puffing out their breath or even spitting?

Do they frown when trying to understand anything or considering any difficulty?

Do they ever shrug their shoulders to show that they are incapable of doing or understanding anything?

[This query is ringed and with an insert mark to show that it should precede the previous two]

Do they sneer, which is chiefly shown by turning up the corners of upper lip?

∧ see Back a [ringed]

What ideas of feminine beauty have the Fuegians; do they admire women with strong American cast of countenance or such as at all approach Europeans in appearance.

[This query is deleted]. Do the Fuegians take any pains in breeding or matching their dogs; or is all left to chance.—The habits of the Fuegian dogs would be worth observing.

E ∧ [ringed]

[Verso]

B [ringed] When out of spirits or (in some [deleted]) dejected do they turn down the corners of the mouth?

a [ringed] Any information on the manner of Expression of countenance of any emotion in savages would be curious, & I believe is a subject, which has been wholly overlooked.—The only satisfactory method to collect information is to make notes at the time.—

[These queries are deleted]. Are the young of the Wild Pigs at the Falkland Islands striped lengthways on the back when first born?

What colour are the calves of the white cattle with red ears, on the Falkland Islands?

Mr. Norman

Write on both sides of paper.

The copyist was Mr Ebenezer Norman, at one time schoolmaster at Downe; he transcribed for Darwin for many years. His transcript survives together with a part only of the answers and presumably it had travelled to the Falkland Islands and back. It is, as ordered, written on both sides of two sheets and signed at the end 'Charles Darwin Down Bromley, Kent January 6 1860'. Oddly, it contains the three queries about animals, and it must be presumed that they were struck out at some later date.

Some other relevant information is available in printed letters and associated editorial comment:

1. A letter to A. R. Wallace (*Alfred Russel Wallace: letters and reminiscences*, Vol. I, page 140) dated March 7, 1860.

'The addresses which you have sent me are capital, especially that to the Rajah; and I have dispatched two sets of queries. I now enclose a copy to

you, and should be very glad of any answers; you must not suppose the P.S. about memory has been lately inserted; please return these queries, as it is my standard copy'.

The two recipients are apparently identified on page 20 of *The expression of the emotions*.

'The Rajah Brooke has given me some information with respect to the Dyaks of Borneo. Respecting the Malays, I have been highly successful; for Mr. F. Geach (to whom I was introduced by Mr. Wallace), during his residence as a mining engineer in the interior of Malacca, observed many natives who had never before associated with white men'. A fragment of manuscript for this passage and a letter identify him more closely as Frederick F. Geach. (Robin Darwin deposit). Rajah C. Brooke is mentioned on page 207 of the book, but the position in relation to the first two Rajahs of Sarawak is confusing.

In 1860, the apparent date of the letter, the first Rajah, Sir James, was still in Sarawak; he retired to England in 1863 and died in 1868. He was succeeded, at his death, by his nephew, his sister's son, Sir Charles Anthony Johnson Brooke.

Although clearly printed as 1860, the date of this letter is suspect. Firstly there is no mention of Rajah James in the book; secondly the letter seems to be in answer to Wallace's reply to one printed in *Life and letters*, No. 4 below, which is dated February 26 [1867], and No. 5, dated March [1867], also relates; thirdly the 'P.S. about memory' could not possibly have been inserted some time before 1860, although it is hinted at in the queries sent to Tierra del Fuego in that year; and fourthly Wallace was in the far-east until 1863, and it is most improbable that Darwin would have sent his standard copy so far and asked for it back. An unpublished letter at Cambridge (Robin Darwin deposit) from Rajah Charles to Darwin, dated from Sarawak Nov. 30/70 reads as follows:

Dear Sir,

Altho' three years have passed since I recd yr note accompanied by the 17 queries about expression—since then I have been a year in Europe or I should have sent a reply before—as I have never lost sight of observing the countenances of the people—more particularly the Dyaks of Sakarang and Sarebus tribes—From Malays I think little originality can be expected as they are early tutored in conducting themselves in an orthodox Mahomedan Code—for instance—when seated on a mat receiving, or visiting a stranger, the feet are not to be shown—they are doubled up underneath—the hands clasped one on the other—not to show the palms—body slightly stooping & head inclined downwards—eyes looking down—in being surprised, they slowly move their heads to & fro without expressing any remark—These customs are brought from other parts more than derived from their forefathers.—I enclose a few answers yr queries—and regret they are not more complete—I have lately forwarded a

female Maias* to the Taunton Museum—I believe a perfect specimen—tho' not large & found in the Rajang river some little distance from Si Munjan & Batang Lupar where Mr. Wallace & Signor Beccari obtained their specimens. If I can be of any service in obtaining a few natural history specimens I shall be happy to do my best.

I am

Dear Sir

Yrs faithfully

C. Brooke

The first sheet of this letter is on mourning paper, presumably for his uncle. In the consolidated list of answers received to the queries, Rajah Brooke's answers are not entered in the list under localities. Had they been, they would have come between the Australian and the Indian ones and numbered XIII. In the list under questions they are entered, without acknowledgement to the Rajah, as No. 36, and there are eleven entries. Mr F. Geach is No. 34 and 35 in both lists. It would seem that both these sets of answers were received after the consolidated lists were made up, perhaps in 1869 or 1870. The letter to Wallace should clearly be dated 1866 or thereabouts.

2. A letter to A. R. Wallace (*Life and letters*, Vol. III, page 95) dated February 26 [1867] states 'I would send such a person a list of queries'.

3. A letter to A. R. Wallace (*Life and letters*, Vol. III page 95) dated March [1867] states 'I will, however, see if I can get the queries inserted in some Indian paper'. This letter clearly relates to No. 2, and probably also to No. 1; the dates for Nos. 2 and 3 are probably correct because their matter concerns the early stages of the production of *The descent of man* which appeared in 1871.

4. A letter to Fritz Müller (*Life and letters*, Vol. III, page 112) dated February 22nd [1869] states 'accordingly I enclose some questions as a guide and if you could answer me even one or two I should feel truly obliged'. Müller answered the queries from Brazil. For the dating of this letter see No. 6 below.

5. A letter to Thomas Henry Huxley (*More letters*, Vol. I, page 287) dated Jan. 30th [1868], states 'Give Mrs. Huxley the enclosed, and ask her to look out when one of her children is struggling and just going to burst out crying'. A footnote refers 'the enclosed' to the queries, presumably at this date in printed form. The first paragraph of this letter refers to the receipt by Huxley of an advance copy of *Variation under domestication* which was published on 30 January 1868, and the third to George Darwin being placed second Wrangler in the Mathematical Tripos for 1868. The Tripos list was posted on 24 January 1868 (*Emma Darwin*, 1904, Vol. II, page 216; 1915, Vol. II, pages 187-88). This letter is probably in reply to an undated note from Huxley a part of which has been printed in *Life and letters of Thomas Henry Huxley*, Vol. I, page 306. This note is stated to belong

*The Dyak word for the orang-outang, more usually anglicized as mias.

'to the very end of this year [1868], or to the beginning of the next'. Its true date must be in the last week of January 1868.

6. A letter to Fritz Müller (*More letters*, Vol. II, page 98) dated January 30th [1868]. The estimated year of this or of No. 4 must be wrong, because this one acknowledges the receipt on October 5th of Müller's answers to the queries, and is dated apparently before the latter was sent out. There is in the Darwin archive a set of fifty-eight letters from Darwin to Müller, copied out by the latter for Francis Darwin, and numbered consecutively. That of 22 February bears the number 13, and the previous letter, 12, has a postscript dated 1 January 1867. The letter dated 30 January, No. 20, immediately precedes one bearing the date 1868. Therefore 30 January [1868] would appear to be correct, whilst that dated 22 February should be [1867] not [1869].

It will be noticed that in none of the letters listed above, nor in the letter to Rajah Charles Brooke, is there any mention of *printed* queries. Printed queries are however mentioned twice in editorial matter:

7. In *Life and letters*, Vol. III, page 134, 'The work required much correspondence, not only with missionaries and others living among savages to whom he sent his printed queries, but among physiologists and physicians'.

8. In *More letters*, Vol. II, page 108. 'Mr. [Francis] Galton had written on Nov. 7th 1872 offering to send to various parts of Africa Darwin's printed list of questions intended to guide observers on expression.' The offer was refused.

The consolidated answers are written on twenty-six half sheets of brief writing paper (12.72 × 8 inches), on one side of the paper. They are mostly in Mrs Darwin's hand in ink, but with some additions by Charles in ink or pencil. The first seven sheets are numbered 1-7, and they summarize the answers by locality, starting with Australia and moving westwards to North America. The correspondents are identified and numbered I-XXXI. The last four, XXXII to XXXV are one from New Zealand and three about Malaysians; these presumably arrived after the rest had been arranged. The remaining nineteen sheets are unnumbered and summarize the results query by query from 1 to 17. The same thirty five sets of answers are used, although they have here Arabic numerals, 1-35. A thirty-sixth set, for the Dyaks, is entered last for eleven of the queries. These are presumably Rajah Charles Brooke's answers, though his name is not mentioned.

These consolidated answers throw no further light on the history of the development of the queries than has been referred to above. They do however form much of the evidence on which almost two-thirds of the book itself is based. They are considered in Chapters VI-XIII, and many of the individual observations are quoted, although the order in which the expressions are considered is not the same as the order of the queries.

CONCLUSIONS

Although the evidence is not complete, certain conclusions may be drawn. It can be seen that Darwin was asking queries about expression of at least one correspondent as early as January 6th 1860. The text of the queries printed by the Smithsonian

Institution in 1868 was composed from an earlier version than that printed as a single leaf in 1867; though whether the copy was manuscript or printed is not apparent. The text printed in *The expression of the emotions*, 1871, was composed from a suitably altered copy of the leaf.

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