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CORRESPONDENCE

To the Editors of 'The Observatory'

Compiling Biographical Encyclopaediae of Astronomers

As mentioned in a review recently published in these pages¹, *The Biographical Encyclopedia of Astronomers* (hereafter *BEA*) edited by Hockey *et al.*² is a substantial work. As a compiler myself, for more than three decades, of directories, dictionaries, and on-line databases of organizations and individuals (see, *e.g.*, ref. 3 and the references quoted therein), I can only praise Hockey and his team for that impressive compendium. Here are, however, a few comments as suggestions for a possible second edition.

First of all, I ran a comparison with an exhaustive list of 82 German and French astronomers based at Strasbourg Observatory during the 19th and 20th Centuries⁴. Out of these, 47 satisfy the *BEA* inclusion criteria, but only ten (21%) appear in it. Among the high-profile ones missing are two of the three German Directors (Julius Bauschinger and Ernst Becker, the latter with the longest German directorship, 22 years — *cf.* refs. 5 & 6), Gilbert Rougier⁷ (later to become Director in Bordeaux), and the renowned astro-optician André Couder⁷. Pierre Lacroute (with the longest overall directorship, 36 years, and the father of the revolutionary astrometric satellite *Hipparcos*) appears with only two lines, although an obituary⁸ and a dedicated paper⁹ were available as sources. Other well-known people are missing such as Walter Wislicenus¹⁰ (founder of the *Astronomischer Jahresbericht*, later to become *Astronomy & Astrophysics Abstracts*), and Paul Muller¹¹, world-wide specialist on double stars.

This surprisingly low rate of inclusion (considering the broad definition of astronomers adopted by the *BEA* compilers — *cf.* ref. 2, p. *vii*) led me to run another independent comparison. The Royal Academy of Belgium is publishing a national biography (*cf.* ref. 12) gathering together notices on high-profile personalities from the country, including so far 58 astronomers satisfying the *BEA* inclusion criteria. Out of these, only 13 (22%) appear in the *BEA*, a result consistent with the previous one. Thus there seems to be plenty of room for additional inclusions, at least from European countries, in a possible second edition of the *BEA*.

Actually, what is the geographical distribution of the *BEA* entries? To investigate this, I keyed in all names, plus years of birth and death, and calculated the mid-life years. The countries of death were retained as being, in most cases, representative of the places where the professional activities had developed. After removing from the *BEA* listings those few people still alive and those whose temporal data were too vague, I ended up with a sample of 1317 entries, sizeable enough for significant statistics.

Table I lists the 24 most populated countries, with England, Scotland, Northern Ireland, and Wales gathered together under 'United Kingdom', contrary to the *BEA* where that 'country' never appears throughout the two volumes — an amazing inconsistency with what is done for other countries (Germany, Italy, Spain, *etc.*) and with what is claimed on *BEA*'s page *xlvii*. UK is the modern country to which England and the other above entities belong.

Note that I have in principle nothing against working with regions instead of countries, but then this should be done throughout the world and, first of all, for Spain and Germany whose regions have nowadays certainly achieved the largest degree of political autonomy. There are other points regarding the usage

TABLE I

Overall geographical distribution of the *BEA* entries
(24 most populated countries)

USA	288	Belgium	16
UK	227	Denmark	15
Germany	152	Ireland	15
France	148	South Africa	15
Italy	86	Spain	14
Russia	37	Australia	13
Netherlands	28	Canada	13
Sweden	25	China	13
Greece	22	Japan	13
Iran	19	Poland	13
Austria	18	Switzerland	13
Turkey	18	Egypt	12

TABLE II

Distribution of the *BEA* sample over the centuries
(based on mid-life years)

Centuries	–5th to 9th	10th	11th	12th	13th	14th	15th	16th	17th	18th	19th	20th
Numbers	45	30	8	12	23	14	23	67	118	138	404	435

TABLE III

Cross-distribution of the *BEA* sample
over the five most populated countries and the five last centuries

Country	16th Century (67 astron.)	17th Century (118 astron.)	18th Century (138 astron.)	19th Century (404 astron.)	20th Century (435 astron.)
USA	0	1	5	185	197
UK	12	26	35	89	55
Germany	15	13	18	63	32
France	6	22	37	51	20
Italy	12	21	10	23	3

of country names in the *BEA* that could be commented upon. For instance, it would be much more informative to say that Hans Bethe was born in “Strasbourg (Germany, now France), 2 July 1906” than what is currently recorded; it is the key to that scientist’s itinerary. Such ‘details’ are the price to be paid for full exactitude when putting together historico-international compilations, be it only to show that one masters fully European history with its changes of borders.

An historical breakdown of the *BEA* entries is given in Table II (from mid-life years). It shows a sharp increase in the 19th and 20th Centuries. Should one conclude, by crossing Tables I & II, that the *BEA* is biased towards Anglo-American astronomers from the 19th and 20th Centuries? Such a hasty conclusion is tempered by Table III giving a cross-distribution over the five most populated countries (in terms of *BEA* astronomers) and the five last centuries.

The trend towards US astronomy over the most recent centuries (*via* a reinforcement by European astronomers in the 19th Century) is obvious, but the

under-representation of European astronomers illustrated at the beginning of this note remains an issue. A legitimate question from a statistical stand is: was this induced by the deliberate selection of American editors only?¹³ The participation of Europeans in the *BEA* Editorial Board would have probably reduced some of the sample biases.

Europeans could have helped in other areas too. For instance, an acute *hyphenitis* has struck the way many first names are spelled in the *BEA*. In this part of the world, people are given several first names at birth, a tradition linked to religious godfather/motherhood. But only one first name is used in practice and is often underlined in CVs and official documents (or the secondary ones put between brackets). A hyphen builds a solid entity between two first names. ‘Jean-Pierre’ or ‘André-Marie’ is not the same as ‘Jean Pierre’ or ‘André Marie’. The first gentleman has to be greeted by “Hello, Jean-Pierre”, not with “Hello, Jean” or “Hello, Pierre”. In view of this, the plethora of hyphens used in first names for quite a number of *BEA* entries can only appear as a nonsense. It is unthinkable that French astronomer Pouillet, for instance, would have been hailed by his pals as “Hello, Claude-Servais-Mathias-Marie-Rolland, how are you doing today?” The usual first name of Belgian astronomer Houzeau de Lehaie is Jean-Charles, not Jean-Charles-Hippolyte-Joseph. Many further examples could be given.

As in any other cataloguing activity, precision and consistency in directories are paramount. Hence the particles *da, de, di, du, la, le, van, von, etc.*, should have received the same treatment as *d’* or *D’* and should have come ahead of the names. In the part of the world from which he originated, nobody would search for Gérard de Vaucouleurs under ‘Vaucouleurs’, but under ‘de Vaucouleurs’. If different policies are followed, pointers from alternative classifications should always be provided, including in the indices. Note that case can be important: lower-case *de* (or *d’*) is generally an indication of nobility, which is not so for the upper-case *De* (nor *D’*). By the way, *Graf* (as in ‘Hahn, Graf Friedrich von’) means *Count* in German. Titles should not be mentioned, unless one decides to include all of them. But then, good luck with such a policy!

I wish also the *BEA* compilers had decided consistently whether to use the English wording of names or the original one. Again, cross-pointers should always be added here. Strange linguistic mixtures must be avoided. Thus the English-German contraction for Hildegard of Bingen-am-Rhine should appear as (in German) Hildegard von Bingen-am-Rhein and/or as (in English) Hildegard of Bingen-on-Rhine. Bernard of Le Treille is ‘Franglais’, probably echoed from the *Dictionary of Scientific Biography*. Do not hesitate to insert additional cross-pointers such as ‘Guillaume de Conches’ for William of Conches and ‘Guillaume de Saint-Cloud’ for William of Saint-Cloud, otherwise those gentlemen are untraceable under their original names, particularly for their fellow countrymen.

To end this letter on a different tone, I tried to answer a fashionable query: are astronomers living longer? The overall distribution for the sample at hand is given in Table IV (from the full years lived). It shows a maximum in the sixties-seventies, with a significant number of astronomers reaching their eighties and nineties.

As life expectation has increased in the past couple of centuries, it was interesting to investigate whether this would be reflected here. Table V (again from the number of full years lived and with the century of mid-life as reference) definitely shows such a trend. In the 16th Century, the number of astronomers dying in their fifties, sixties, and seventies is roughly the same, with a maximum becoming increasingly pronounced in the seventies during the 17th, 18th, and 19th Centuries. In the 20th Century, that maximum has shifted to the eighties, with a

TABLE IV

Global distribution of ages
(full years lived)

Age intervals	≤ 20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	≥ 101
Number	0	5	37	94	158	301	391	261	69	1

TABLE V

Distribution of ages for recent centuries
(full years lived, centuries of mid-life years)

Age intervals	16th Cent.	17th Cent.	18th Cent.	19th Cent.	20th Cent.
≤ 20	0	0	0	0	0
21-30	0	3	1	0	0
31-40	2	10	7	9	6
41-50	9	19	10	32	9
51-60	18	16	19	46	24
61-70	16	27	37	105	75
71-80	18	30	43	131	129
81-90	4	13	17	72	140
91-100	0	0	4	9	51
≥ 101	0	0	0	0	1

significant overflow in the nineties. Detailed data are unfortunately missing from other scientific communities for comparison.

I am very grateful to Harry Blom (Springer) for providing me with a copy of *BEA* and to Françoise Thomas (Royal Academy of Belgium) for communicating a comprehensive table of contents of all their *Biographie Nationale* and *Nouvelle Biographie Nationale* volumes.

Yours faithfully,
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