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## Rudolf Erich Raspe in Schottland

Der Schriftsteller, Kunsthistoriker, Geognost und Mineraloge Rudolf Erich Raspe (1736-1794)<sup>1</sup> ist heute – wenn überhaupt – als Autor des Romans von *Baron Munchhausen's Narrative of his Marvellous Travels and Campaigns in Russia* bekannt.<sup>2</sup> 1775 verließ er nicht ganz freiwillig seine Heimat in Deutschland, nachdem sein Diebstahl aus der Münzsammlung seines Arbeitgebers, des hessischen Landgrafen Friedrich II. von Hessen-Kassel, entdeckt wurde;<sup>3</sup> er lebte danach bis an sein Lebensende in Großbritannien und Irland. Nachdem er sich in Deutschland schon einen Namen durch empirische Untersuchungen und Publikationen in den Forschungsgebieten Geologie und Mineralogie gemacht hatte,<sup>4</sup> arbeitete er nun auf den britischen Inseln als Prospektor und Berater im Auftrag von Bergwerksbetreibern und Landbesitzern. Bisher unveröffentlichte Korrespondenz mit dem damaligen Duke of Argyll aus dem Familienarchiv in Inveraray liefern nähere Einzelheiten über Raspes Arbeit für den Herzog im Laufe einer schottischen Rundreise im Jahre 1789.<sup>5</sup> Detaillierte Berichte über seine Funde und Beratungen über technische und wirtschaftliche Aspekte des Steinabbaus belegen Raspes Fachkenntnisse, veranschaulichen seine Arbeitsmethoden und lassen sein Erzähltalent und seine schillernde Persönlichkeit durchscheinen. In diesem Beitrag soll Raspe anhand dieser Berichte als Fachmann wieder zu Wort kommen, um seine Kompetenz als Prospektor seinem Münchhausen-Ruf als Hochstapler entgegenzuhalten und um ein weiteres Beispiel der engen Verbindungen zwischen Deutschland und Schottland in dieser Zeit anzuführen.

1787-88 war Raspe in London und katalogisierte in Leicester Fields die Medaillonsammlung des erfolgreichen schottischen Edelsteinmodellierers und -gravierers, James Tassie. 1791 veröffentlichte Raspe einen gewichtigen zweibändigen Katalog auf Englisch und Französisch der Tassieschen

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<sup>1</sup> Uwe Meier, »Raspe, Rudolf Erich« – In: *Neue Deutsche Biographie* 21 (2003), S. 164-166 [Online-Version]; URL: <https://www.deutsche-biographie.de/pnd118787888.html#ndbcontent>. Accessed 2 December 2021.

<sup>2</sup> Dieser Band erschien 1785 anonym in London ohne Verlagsangabe. Ob Raspe die davor erschienenen deutschen Anekdoten eines Herrn M-h-s-n in einem *Vademecum für lustige Leute*, das 1781 bei August Mylius in Berlin erschien, verfasste, ist unbekannt, aber er übersetzte sie ins Englische und führte die Geschichten weiter aus. Eine deutsche Übersetzung des Buches erschien schon 1786: *Wunderbare Reisen zu Wasser und Lande, Feldzüge und lustige Abentheuer des Freyherrn von Münchhausen [...]. Aus dem Englischen nach der neuesten Ausgabe übersetzt [von Gottfried August Bürger]*, London, Göttingen: Johann Christian Dieterich 1786.

<sup>3</sup> Vgl. zu den Umständen John Carswell, *The Prospector. Being the Life and Times of Rudolf Erich Raspe (1737–1794)*, London: Cresset 1950. Carswells Biographie war eine unentbehrliche Quelle für diesen Aufsatz.

<sup>4</sup> Vgl. die ausführliche Bibliographie in Carswell: *The Prospector*, S. 262-266.

<sup>5</sup> Ich danke dem Duke of Argyll, mit dessen freundlicher Genehmigung ich aus diesem Bestand zitiere. Der Archivarin der Argyll Papers, Alison Diamond, gilt auch mein herzlicher Dank für die Bereitstellung der Kopien und anderer Informationen.

Sammlungen.<sup>6</sup> Ein Medaillon-Porträt, das Tassie 1784 verfertigte, ist das einzige bekannte Bildnis von Raspe.<sup>7</sup> Durch Tassie machte Raspe die Bekanntschaft vieler namhafter Schotten und besuchte auch die Versammlungen der 1778 gegründeten ›Highland Society of London‹, wo schottische Abgeordnete und Landbesitzer über die Förderung des Fortschritts und des Allgemeinwohls in den Highlands berieten.<sup>8</sup> Hier lernte er zum Beispiel den Abgeordneten für Caithness, Ökonom und Agrarreformer Sir John Sinclair von Ulbster kennen, der in den 1790er Jahren den ersten *Statistical Account of Scotland* vorbereitete.<sup>9</sup> Einen weiteren wichtigen schottischen Mäzen gewann Raspe in London in der Person des 5. Duke of Argyll, eines der Hauptlandbesitzer in Schottland, der nach seiner ehrenvollen militärischen Karriere sich der Verbesserung der Agrarwirtschaft widmete. Er war Präsident der 1784 gegründeten ›Highland Society of Edinburgh‹, deren Hauptauftrag die bessere Selbstversorgung der Pächter war, die sich selbst nicht immer vom Ertrag des Pachtlandes ernähren konnten. Der 3. Herzog von Argyll war als passionierter Sammler von Edelsteinen und Münzen bekannt, und eine Anekdote von Samuel Johnsons und James Boswells Reise durch Schottland weist auf ähnliche Interessen bei seinem Enkel.<sup>10</sup>

Raspe bot im Mai 1789 den Landbesitzern in Nordengland und Schottland seine Dienste als Prospektor an und versuchte Subskriptienten zu finden, um seine Arbeit zu finanzieren.<sup>11</sup> Er schrieb am 9. Mai 1789:

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<sup>6</sup> *A descriptive catalogue of a general collection of ancient and modern engraved gems, cameos as well as intaglios, taken from the most celebrated cabinets in Europe; and cast in coloured pastes, white enamel, and sulphur, by James Tassie, modeller; arranged and described by R.E. Raspe; and illustrated with copper-plates. To which is prefixed, an introduction on the various uses of this collection, the origin of the art of engraving on hard stones, and the progress of pastes.* London: James Tassie and J. Murray 1791.

<sup>7</sup> <https://www.nationalgalleries.org/art-and-artists/3541/rudolf-erich-raspe-1737-1794-author-antiquary-and-mineralogist>.

<sup>8</sup> <https://www.highlandsocietyoflondon.org/>.

<sup>9</sup> Zu dieser Freundschaft, vgl. Carswell: *The Prospector*, S. 211, 215f., 221–222. In dem ersten *Statistical Account* beruft sich Sinclair mehrmals auf Raspes Untersuchungen <https://stataccscot.edina.ac.uk/static/statacc/dist/home>. Raspe arbeitete auch 1789 für ihn und für den Marquess von Breadalbane, vgl. Carswell: *The Prospector*, S. 226–231.

<sup>10</sup> »The Duke wanted to show a specimen of marble. He sent the Colonel for it, who brought a wrong piece; upon which he had to go back again to the other room, where it lay.« *To the Hebrides. Samuel Johnson's ›Journey to the Western Islands of Scotland‹ and James Boswell's ›Journal of a Tour to the Hebrides‹*. Hrsg. von Ronald Black, Edinburgh: Birlinn 2007, S. 419.

<sup>11</sup> Im August erschien ein Bericht über das Projekt in *The Scots Magazine* (Bd. 51, August 1789, S. 409). »The meeting highly approved of the proceedings of the committee of directors, in allowing an interim sum of 25l.[£25] to Mr Raspe, a native of Germany, now employed, under patronage of several noblemen and gentlemen of this country, by voluntary subscription, in making a mineralogical survey of the Highlands and Islands; and earnestly recommended to all the members of the society residing in these parts of the country, to pay particular attention to Mr Raspe in the course of his investigation, as discoveries may be made by a man of such abilities and knowledge as a practical miner, as Mr Raspe has been represented to the Society, of general importance to the country at large.« Raspe legte schon am 2. Januar 1790 der Highland Society einen vorläufigen Bericht vor (*The Sederunt Books of the*

Mr. Raspe proposes setting out on his mineralogical Survey on Saturday next the 16. day of May.

He will pass through Yorkshire and Northumberland to Edinburgh. Thence he goes to Glasgow and through the Western Highlands towards the North. After having surveyed Caithness and the Orkney Islands he will return by Sutherland, Ros[s-]shire and the Towns of Inverness, Banf[f] and Perth to Edinburgh, and make his way back to London by Dumfriesshire, Airshire [Ayrshire], Cumberland, Westmoreland, Lancashire, Cheshire, Shropshire and Derbyshire.<sup>12</sup>

The expense of his Survey, from his being obliged to carry with him a portable laboratory and several Instruments, will amount to at least Two hundred Pounds, which it is proposed to raise by Subscription.

On the Estates of such Noblemen and Gentlemen as subscribe Five and twenty Pounds he will spend a fortnight, not including any Time he may be detain[e]d by contrary winds and so on in proportion to the smaller or greater amount of the Sum subscribed.

It is expected that one half of the Sum subscribed will be paid on Subscribing to Mr. James Tassie, n. 20. Leicesterfields, who will give a Receipt for the same, and the other half by the respective Stewards on the Estate, when the Survey is completed & approved of by the proprietor.

If any Labourers are necessary to clear pits or try the ground, their wages to be paid by the proprietors.

Reports will be drawn up of the quality of the Soil of such Estates as are surveyed, and will be delivered to each Proprietor; and it is proposed to publish a general mineralogical View of the Country gone through, in hopes that it may be the means of forming a Company to make fair trials where any mines are discovered.<sup>13</sup>

In Edinburgh war er bei John M’Gouan zu Gast, einem Sammler von Medaillien, Raritäten und Kuriositäten, wo er viele Vertreter der schottischen Aufklärung wie den Geologen James Hutton, den Physiker und Chemiker Joseph Black, und den Historiker, Philosophen und Soziologen Adam Ferguson kennenlernte.<sup>14</sup>

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*Highland Society of Scotland* [unveröffentlichte handschriftliche Berichte im Bestand der *Royal Highland and Agricultural Society of Scotland*: <https://rhass.org.uk/archive/>].

<sup>12</sup> Raspes Orthographie ist manchmal irreführend. In solchen Fällen werden fehlende Buchstaben bzw. die heutige Schreibweise des ganzen Wortes in eckigen Klammern [ ] eingesetzt.

<sup>13</sup> Argyll Papers at Inveraray Castle 1209-175, S. 3-4. Dieser Vorschlag wurde nicht realisiert, aber vgl. Anm. 52.

<sup>14</sup> Vgl. Carswell: *The Prospector*, S. 220f., 231. John M’Gouans breit angelegte Sammlung wurde 1803 nach seinem Tod in Edinburgh versteigert: *A catalogue of the library, manuscripts, paintings, minerals*,

Raspe schickte am 9. Mai von 19 Porter Street, Newport Market in London aus dieses Rundschreiben zusammen mit einem Brief an die herzogliche Londoner Residenz, Argyle House, und führte spezifische Erkundungsvorschläge auf:

To your Graces patronage and Subscription I submit the enclosed specific Proposals; humbly requesting at the same time Your Graces orders concerning any particular object of enquiry within my line in Your extensive territories in the North West of Scotland.

The Serpentine<sup>15</sup> or Gabbro<sup>16</sup> quarries near Inverara[y];

the Marble Quarry in the Island of Tiree;

some promising quarries in that of Arran; and a Seam of Coal in the Isle of Mull, reported to be inaccessible by the badness of the roads

are objects, which I humbly presume deserving of Your Graces attention and of the best exertion of my powers and dutyfull respect.<sup>17</sup>

Inveraray ist der Hauptsitz des Herzogs in Schottland. Das jetzige Schloss dort wurde in dem Jahr von Raspes Besuch fertig, und an diesem Ort kann man einen Verbindungsbogen zu Achim von Arnim schlagen, dessen *Ehenschmiede* hier spielt und deren Held eine Einladung ins Schloss bekam.<sup>18</sup> Tiree, Arran und Mull sind Inseln der Inneren Hebriden und waren damals Teil des herzoglichen Besitzes.<sup>19</sup>

In drei Briefen schrieb Raspe detaillierte Berichte über die Standorte, die er für den Herzog besuchte. Raspe versicherte dem Herzog gleich am Anfang »I was every where well received, assisted and directed by the Officers, to whom Your Grace has pleased to direct me; nor was I less well received

*Roman and Grecian antiquities, Chinese, American and South Sea articles [...] collected [...] by John M'Gouan [...] to be peremptorily sold off by auction by Mr Elliot, in [...] Edinburgh, on [...] 14 April [1803] and ten following days*, Edinburgh: Alex. Smellie for Cornelius Elliot 1803.

<sup>15</sup> »A rock or mineral, consisting mainly of hydrous magnesium silicate, of a dull green colour with markings resembling those of a serpent's skin. Also, an ornamental stone made of this.« *OED Online*, Oxford University Press September 2021. [www.oed.com/view/Entry/176562](http://www.oed.com/view/Entry/176562). Accessed 4 October 2021. Im Folgenden beschränke ich mich auf Erläuterungen von Fachbegriffen, die für das allgemeine Verständnis von Raspes Argument notwendig sind.

<sup>16</sup> »A dark, coarse-grained igneous rock formed from the crystallization of basic magma and consisting mainly of plagioclase feldspar (typically labradorite or bytownite), pyroxene (typically augite), iron oxides (typically magnetite), and often olivine.« *OED Online*, Oxford University Press September 2021. [www.oed.com/view/Entry/75911](http://www.oed.com/view/Entry/75911). Accessed 4 October 2021.

<sup>17</sup> Argyll Papers at Inveraray Castle 1209-175, S. 2.

<sup>18</sup> Vgl. Achim von Arnim, *Sämtliche Erzählungen 1818–1830*. Hrsg. von Renate Moering, Frankfurt am Main: Deutscher Klassiker Verlag 1992. Bd. 4 von *Achim von Arnim: Werke in sechs Bänden*. Hrsg. von Roswitha Burwick, Jürgen Knaack, Paul Michael Lützel, Renate Moering, Ulfert Ricklefs und Hermann F. Weiss. 6 Bde. 1989–1992, S. 882-946.

<sup>19</sup> Vgl. Eric Cregeen, »A West Highland Census of 1779: Social and Economic Trends on the Argyll Estate.« – In: *Northern Scotland* 5 (2014), 75– 105, S. 76.

and treated by many of Your Graces Jacksmen,<sup>20</sup> whom I found in my way.«<sup>21</sup> Der erste Brief wurde am 30. Juli auf der kleinen Insel Easdale, einer der Schieferinseln 10km südöstlich von Mull, angefangen und am 6. August in dem Dorf Aros auf der Insel Mull abgeschlossen und abgeschickt. Raspe schreibt hier über Inveraray, die Schieferinseln, die Garvellach-Inseln und Tiree. Der nächste Brief ist am 20. August in Fort William datiert und führt Raspes Bericht über Mull und über die Halbinsel Morvern, von Mull durch eine enge Wasserstraße getrennt, auf. Schließlich schrieb Raspe einen letzten Brief am 29. August, ebenfalls in Fort William, mit weiteren Informationen zu Morvern, deren Ausführung durch Krankheit aufgehoben werden musste: »Upon the Mines in Morvern I must beg leave to draw up another report; which I hope to send off by next Post as a little Fever, contracted by too bold exertion is likely to stop me here for a couple of days.« (2, S. 19)

Raspes Dienstreise für den Herzog begann also in Inveraray. Am 3. Juli besichtigte er die St. Catherine's Quarry an Loch Fyne, die gute Zukunftsperspektiven aufwies. Der hiesige Chlorit-Schieferstein wurde unter anderem für das Schloss und andere Gebäude auf dem herzoglichen Gutshof verwendet.<sup>22</sup> Am nächsten Tag inspizierte Raspe zwei Marmorsteinbrüche in Carloonan<sup>23</sup> und Tom Breac,<sup>24</sup> aber er vertröstete den Herzog auf seinen späteren Bericht über Tiree, wo er ausführlicher auf das Thema Marmor eingehen wollte. Zwei Bergwerke in der Parkanlage von Inveraray ergaben keine interessanten Funde. Erfolg meldete Raspe aber auf den Garvellach-Inseln, wo er am 11. Juli landete und wo viel Kalkstein und Marmor zu finden war. Dieser Kalkstein »might supply all the Highlands with Lime« (1, S. 6) laut Raspe, und der Marmor sei »singular and cheap on account of its Situation and nature and commendable for its fine grain and cheapness« (ebenda). Anschließend fuhr Raspe am 22. Juli zur Insel Tiree »in an open Boat with Oars and Sails«, was bei günstigem Wind »nur« 6 Stunden dauerte (1, S. 10). Auf Tiree interessierte sich Raspe für den Lehm, »because your Grace had pleased to mention it to me and because the Highlands which I have hitherto seen are really in Want of Clay«, und den Marmor, für den die Insel schon bekannt war, denn »I was acquainted with its excellence, but wanted to ascertain its quantity, Situation and Varieties« (1, S. 10-11). Darüber schrieb Raspe im Detail und fügte eine Karte hinzu.

Auf der Insel Iona besichtigte Raspe ab dem 25. Juli im Nordwesten vermeintliche Blei- und Silberablagerungen, fand aber nur Kalk. Er bemerkte dazu, »it gave me great concern to blast the hopes and expectations, which my numerous attendants had formed on the foundation of this

<sup>20</sup> ›Jackman‹: »An attendant or retainer kept by a nobleman or landowner.« *OED Online*, Oxford University Press September 2021. [www.oed.com/view/Entry/100526](http://www.oed.com/view/Entry/100526). Accessed 4 October 2021.

<sup>21</sup> Brief 1, S. 1. Die Signaturen der drei Briefe in der Sammlung Argyll Papers at Inveraray Castle sind: Brief 1, 30 July-6 August, 1209-615-01; Brief 2, 20 August, 1209-615-02; Brief 3, 29 August, 1209-615-03. Im Folgenden wird die Briefzahl gefolgt von der Seitenangabe im laufenden Text angegeben.

<sup>22</sup> <https://canmore.org.uk/site/158999/st-catherines-quarry>.

<sup>23</sup> <https://canmore.org.uk/collection/458417>. Raspe schreibt ›Carlonton‹.

<sup>24</sup> <https://canmore.org.uk/site/23431/inveraray-castle-estate-tom-breac-dairy>. Raspe schreibt ›Tombreak‹, was als alternative Schreibweise gilt.

imaginary Mountain of Lead and Silver« (1, S. 19). In Hinblick auf diese Enttäuschung gratulierte Raspe mit »heartfelt pleasure« dem Herzog zum weißen Marmorbruch im Süden der Insel, von wo aus große Blöcke leicht zu extrahieren und zu transportieren seien (ebenda).<sup>25</sup> Auf Mull berichtete Raspe über Granit, Basalt und Kohle; in Morvern ab dem 6. August über Granit, Lehm und Kohle, und zum Schluss gab er Auskunft über zwei Bergwerke in Morvern: Ein Kupferbergwerk anderhalb Meilen nördlich von Loch Ternate: »Its stately Width, which every where appears to be from 4. to 6. Foot, certainly justified and in my opinion still justifies reasonable hopes of Success« (3, S. 2) und die Bleibergwerke von Glendon,<sup>26</sup> vier Meilen nördlich von Kinlochaline Castle, wo Sanierungsarbeiten nötig waren aber künftige Erträge vielversprechend. Danach trat Raspe seine Reise weiter nördlich nach Thurso zum Landgut von Sir John Sinclair an.<sup>27</sup>

### Raspe als Mineraloge und Geologe

Raspe wollte sich natürlich seinem reichen und einflussreichen Mäzen als Fachmann präsentieren, und seine Briefe enthalten viele Ausführungen über die Mineralogie und die Geologie und seine eigenen Forschungserkenntnisse. Er benutzte seinen Bericht über den Steinbruch in Carloonan, um einen Beweis seiner These über die Entstehung kalkhafter Substanzen auszulegen:

The first Quarry is at Carlonton near the Lime Kiln. It showed me a Phenomenon, which is of consequence in Mineralogy – a Stratum of limestone or Marble under a large Bed of Red Granite – and full proof that many Closet Philosophers are strangely mistaken in their assertion, that Lime Stone and calcareous compounds are formed of decomposed Shells and animal Substances into adventitious or Secondary Strata and that consequently they always lie and must lie above the primitive Beds or Basis of Granite. Common Sense ought always have suggested to them what the Carlonton Quarry and other calcareous Strata in the Highlands prove in an unquestionable manner, that there is primitive Limestone and calcareous Matter, as primitive in point of Situation and mixture as any Granite or Siliceous Matter can be, and that the contrary assertion implies an absurdity. (1, S. 4)

Als Geologe publizierte Raspe zuerst als Neptunist, d. h. er vertrat die These, dass alle Gesteine aus der Kristallisation von Mineralien in den frühen Ozeanen der Erde entstanden seien.<sup>28</sup> Er änderte jedoch seine Meinung durch Studien in Hessen, vor allem mit Bezug auf den Habichtswald, und

<sup>25</sup> Dieses Bergwerk war lange vor Raspes Besuch bekannt. Vgl. <https://visitmullandiona.co.uk/listings/the-marble-quarry/>. Der Iona-Marmor ist ein weiß-grüner lichtdurchlässiger Stein.

<sup>26</sup> <https://canmore.org.uk/site/72854/liddesdale-lead-mines>.

<sup>27</sup> Raspe kam im Oktober in Thurso an (vgl. Carswell: *The Prospector*, S. 227).

<sup>28</sup> »Neptunism«: »The theory that rocks such as granite and basalt were formed by crystallization from the waters of a primeval ocean, rather than by solidification from magma.« *OED Online*, Oxford University Press September 2021, [www.oed.com/view/Entry/126157](http://www.oed.com/view/Entry/126157). Accessed 4 October 2021.



publizierte zwischen 1771 und 1774<sup>29</sup> auf der Basis der entgegengesetzten plutonischen oder vulkanischen Theorie, wonach Gesteine infolge magmatischer Aktivität entstehen.<sup>30</sup> Die Debatte wurde zu dieser Zeit rege geführt; Goethe äußerte sich auch dazu und erwähnte Raspe, dessen Aufsatz 1771 über den Basalt in Hessen er als bahnbrechend bezeichnete, als einen der ersten Vulkanisten.<sup>31</sup> Raspe scheute sich nicht davor, in dem Brief an den Herzog von Argyll viele Details zu diesen fachlichen Auseinandersetzungen und zu seinem Meinungswechsel zu geben und sogar den Fachkollegen Faujas de Saint Fond als Plagiator zu denunzieren:

The Cliffs and the long extending Shore of Ardtun, whither I went July 25. for the purpose of examining a Coal Mine upon Your Graces Estate, showed even at a distance of a couple of miles a curious and long extending Mass of different Stratifications of prismatic or columnar Basaltés, which in my and I thrust [trust] in every Mineralogists opinion was not at all favourable to the report that a Bed or Seam of Coal was discovered under the same. I had seen Coal above Basaltés in the Habichswald in Hesse, but that it could be found immediately under such a Stratum was improbable to me, till I came to the Spot, when ocular proof at once cured me of my former Idea »that columnar Basaltés and Lava are one and the same thing – productions of volcanic Fire, differently cooled and by different external circumstances of eruption, Air and Water shaped into different forms.« This Idea I had formed upon the plausible evidense of some extinct Volcanoes in the interior parts of Germany which I examined and

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<sup>29</sup> Raspes erstes geologisches Werk (als Neptunist) war *Specimen historiae naturalis globi terraquei, praecipue de novis e mari natis insulis, et ex bis exactius descriptis & observatis, ulterius confirmanda, Hookiana telluris hypothesi, de origine montium et corporum petrefactorum*, Amsterdam und Leipzig: J. Schreuder und P. Mortier 1763. Als Vulkanist verfasste er »A Letter from Mr. R. E. Raspe, F.R.S. to M. Maty, M.D. Sec. R.S. containing a short Account of some Basalt Hills in Hassia«, datiert »Cassel, November 29, 1769«, und mit dem Vermerk »read 8<sup>th</sup> Feb 1770«, der aber erst 1771 in den *Philosophical Transactions of the Royal Society* Bd. 61 (S. 580–583) veröffentlicht wurde. Eine deutsche Version, datiert Oktober 20, 1769, »Nachricht von einigen niederhessischen Basalten, besonders aber einem Säulen-Basaltstein-Gebürge bei Felsberg und den Spuren eines verlöschten brennenden Berges am Habichtswalde über Weissenstein nahe bei Cassel« erschien in den *Deutschen Schriften der Königlichen Societät der Wissenschaften in Göttingen* 1 (1771), S. 72–83. Danach publizierte Raspe einzelne Beiträge in einer von ihm herausgegebenen Zeitschrift, *Der Casselische Zuschauer*, der 1772 erschien und gleich in demselben Jahr eingestellt wurde (vgl. Carswell: *The Prospector*, S. 266). 1774 erschien sein Buch: *Beytrag zur allerältesten und natürlichen Historie von Hessen; oder Beschreibung des Habichtswaldes und verschiedener anderer Niederhessischen alten Vulcane in der Nachbarschaft von Cassel*, Cassel: Cramer 1774. 1776 erschien die englische Übersetzung, von Raspe selbst übersetzt.

<sup>30</sup> »Plutonism«: »The theory that crystalline rocks such as granite and basalt were formed by solidification from magma originating deep within the earth.« *OED Online*, Oxford University Press September 2021, [www.oed.com/view/Entry/146260](http://www.oed.com/view/Entry/146260). Accessed 4 October 2021.

<sup>31</sup> »1771 und 1773 erschienen Raspe und Ferber als deutsche Vulkanisten, der letztere jedoch sehr mäßig gesinnt.« *Goethes Werke: Herausgegeben im Auftrage der Großherzogin Sophie von Sachsen. II. Abtheilung: Goethes Naturwissenschaftliche Schriften*. 9. Band: *Zur Naturwissenschaft überhaupt: Mineralogie und Geologie*. I. Theil, 1749–1832, Weimar: Böhlau 1892. S. 183–195, S. 184.



described in the years 69. and 72.<sup>32</sup> and it has had more followers than it deserves, for almost all the subsequent or later Volcano-Finders have adopted it and that great Plagiary Mr. Foujaj De Saint Fond has even taken it from my publications with all their typographical errors and given it as his own,<sup>33</sup> with the same impudence as he first came to see Lord Dundonalds Tar manufactory at Colebrook dale<sup>34</sup> and then secured it to himself in France by Letters Patent as a discovery of his own. As it is by no means a harmless error of philosophic Speculation and apt to mislead the judgement of the Miner in trials for Coal and other Minerals, I shall now candidly give it up and as the King of France in one of his late Letters to Mr. Necker,<sup>35</sup> say to the Publick: Behold me at onse enlightened and better informed! for what accident could possibly have preserved a Bed or Seam of fine Pit – or rather jetty Kennel [Cannel] Coal from the natural effects of volcanic Fire or the Heat of an immense Mass of red hot and liquid Lava running over it at the time of a volcanic eruption? Those, who have done me the honour of adopting my former erroneous Idea, must now join in my recantation or persist in their error, not longer my own, and then assert or rather prove, contrary to experience, that Fire and Heat have no effect upon Coal under ground and that this Bed or Seam of the Ardtun Kennel Coal so far from being destroyed by the heat of a running Lava was rather produced by the same and by distillation per descensum impregnated and saturated with Petroleum. Leaving these gentlemen to settle that matter at their own leasure in their Closets, I must for myself and in the name of the Publick

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<sup>32</sup> Vermutlich verweist Raspe hier auf seinen Artikel, der 1769 geschrieben aber erst 1771 veröffentlicht wurde und auf seine selbst herausgegebene Zeitschrift *Der Casselische Zuschauer* (vgl. Anm. 29).

<sup>33</sup> Barthélemy Faujas de Saint-Fond (1741–1819) war ein französischer Geologe und Vulkanologe. In seinen *Recherches sur les volcans éteints du Vivarais et du Velay* Grenoble und Paris: Cuchet, Nyon, Née und Masquelier 1778 entwickelte er eine Theorie zur Entstehung von Vulkanen. Vgl. zum Streit der Neptunisten und Vulkanisten Erich Haarmann, »Ein Munchhausen als Geologe.« – In: *Geologische Rundschau* 33, September 1942, S. 104–20. Zum Plagiatsvorwurf Raspes vgl. Helmut Veil, *Mitten im Umsturz Europas: der Geologe und Revolutionär Faujas de Saint-Fond (1741 bis 1819)*, Frankfurt/Main: Humanities Online 2012, S. 143: Im Kapitel »Spion oder Wissenschaftler« urteilt er aufgrund seiner Analyse von Foujas' Aktivitäten und Publikationen, es sei auf jeden Fall vertretbar Foujas zu unterstellen, er habe sich aus Raspes Veröffentlichungen über Kassel bedient.

<sup>34</sup> Archibald Cochrane, 9th Earl of Dundonald gründete 1780 »The British Tar Company« auf seinem Landgut Culross in Süd-Schottland. Ab 1786 arbeitete er zusammen mit William und Richard Reynolds in Coalbrookdale, einer Ortschaft in der Nähe von Shrewsbury in England, im achtzehnten Jahrhundert eine wichtige Produktionsstätte für Eisenverhüttung. vgl. Paul Luter, »Archibald Cochrane, 9th Earl of Dundonald (1748-1831). Father of the British Tar Industry«:

[https://oldcopper.org/broseley/lord\\_dundonald.html#\\_Toc432406087](https://oldcopper.org/broseley/lord_dundonald.html#_Toc432406087). 1784 besuchte Faujas die britischen Inseln. 1785 beschäftigte er sich intensiv mit den Methoden, die er in der Stahlproduktion in England beobachtet hatte. In diesem Jahr in Paris demonstrierte er im *Jardin du roi* »mit einer in England abgekupferten Apparatur« vor einem auserlesenen Publikum die Herstellung von Koks unter Gewinnung von Teer und Ammoniak, publizierte einen Aufsatz zu diesem Thema und erwarb ein Handelsprivileg für Teer, das er aber nicht in Anspruch nahm, vgl. Veil: *Mitten im Umsturz*, S. 87.

<sup>35</sup> Jacques Necker (1732-1804) war Finanzminister unter Ludwig XVI. und Vater von Madame de Staël. Als Steuer- und Verfassungsreformer geriet er mit dem König in Konflikt und wurde 1789 zum zweiten Mal entlassen.

thank Your Grace for having been led through Your Graces munificence to examine the Cliffs of Ardtun in Mull and for having seen there fine jetty Kennel Coal between and under two Stratifications of Basaltés – a fact hitherto unobserved by Mineralogists, which as any other well established and proved fact in Mineralogy cannot fail to be useful to the practical Miner. (2, S. 5-7)

Beweise seiner Fachkompetenz in anderen Bereichen der Gesteinskunde lieferte Raspe ebenfalls durch Verweise auf Publikationen und seine eigene Forschung im Ausland. Zu den Granitfelsen am Ross of Mull im Südwesten von Mull entlang schrieb er:

Besides these regular Chasms the same Granite Rocks and Cliffs show many Joints of oblique Intersections in almost every Sense, so that these huge masses of Granite, according to the different points of View they are seen or intersected in, show and affect rudely regular forms of large Slabs, rhombic, prismatic nay even columnar and that in that respect the English Minister at Venice Mr. Strange<sup>36</sup> may be justified for having said in his account of the Euganean Mountains and of Monte Rosso near Vicenza »that the columnar Basaltés in Monte Rosso and S. Ilarione [Sant’Ilario dello Ionio] seems to him to be Granite fused in Statu quo.«<sup>37</sup> though Chemists, who are the most conversant with Fire, Heat and their effects, cannot well form an Idea of such a Kind of Fusion, because Fusion is Solution and consequently destruction of Shape and Form. (2, S. 2-3)<sup>38</sup>

Und zum Basalt in Morvern:

This rotten Whinstone, which has been washed down from the higher parts, forms immediately under grass large Beds, from F[i]unary as far as Ardtornish; and the luxuriant vegetation all along that Shore seems to be partly owing to this Kind of Stone, which without having the external properties of Marl is perfectly like it in its effects, not only here but also in those parts of Germany where I have formerly found it and chiefly in Hesse about the Castle of Weissenstein and the slope of the Habichswald or the famous Carlsberg which is above it with its famous Cascades and Jets d’Eau.<sup>39</sup>

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<sup>36</sup> Johann Strange (1732-1799) war britischer Diplomat (1773-1788 in Venedig) und Schriftsteller. Er war Verfasser mehrerer mineralogischer und geologischer Aufsätze, vor allem über Italien.

<sup>37</sup>Johann Strange, *Abhandlung von den säulenartigen Gebürgen und andern vulkanischen Naturerscheinungen im venetianischen Gebiete*. Aus dem Italiänischen von F. A. Weber, Heidelberg: Pfähler 1780, S. 48.

<sup>38</sup> <http://www.mull-historical-society.co.uk/geology/>. Granit von Mull wurde weltweit exportiert, vgl. <https://www.isle-of-mull.net/attractions/scenic-attractions/tormore-granite-quarry/>.

<sup>39</sup> Der Bergpark Wilhelmshöhe in Kassel, zu dem der Habichtswald mit seinem Karlsberg gehört, ist für seine Gartenkunst und Wasserspiele bekannt. Raspe wohnte 1767–1775 dort, als er von Friedrich II., dem Landgrafen von Hesse-Cassel, als Kurator angestellt war.

In diesem Zusammenhang dozierte er auch über die richtige Namensnennung von vulkanischem Stein:

This Southwestern part and coast of Morvern extends along the Sound of Mull from F[i]unary to the Ferry over Loch Kinlochalin [Loch Aline] and past it as far as Artornish [Ardtornish] in very rich Cornfields and pasture grounds, gently ascending from the Sea Shore into a long ridge of high towering and steep Mountains of that Kind of Stone, which forward Philosophers have indiscriminately called volcanic, and which the good people of Scotland call Whin or Whinstone,<sup>40</sup> by a generic name which without any pretence to deep Scientific Knowledge or hypothesis they give with great propriety to a numerous Class of stones of an irony argillaceous and siliceous mixture, yet wonderfully different in point of hardness, form, Situation and Stratification, and consequently distinguished by a great variety of different Names, such as Puzzolana, Tarras, Tufo, Hornstone, Trap, Lava, Pitchstone, Toadstone, Basaltés and Rowley Ragg. According to the simpler Scotch denomination I shall call the looser or decomposed or mouldering Sort rotten Whinstone; the harder of undetermined form, wheither found stratified or in Veins, Whinstone, and the hardest Sort of a determined columner and prismatic form, Basaltés. (2, S. 10-11)

Diese Ausführungen beweisen Raspe anhaltendes Engagement mit dem Fach, und sie könnten von Interesse für den Herzog gewesen sein, der angeblich Hobbymineraloge war. Hauptzweck des Antrages an Raspe war es jedoch, Informationen über die möglichen wirtschaftlichen Erträge der Mineralien im herzoglichen Besitz zu erhalten. Diese lieferten Raspe allerdings ausführlich und akribisch.

### **Zur Zusammensetzung der Steine und Raffinationsverfahren**

Raspe untersuchte die chemische Zusammensetzung der verschiedenen Steine, zum Beispiel des eben erwähnten Basalts (Whinstone):

It is a loose spungy and honeycombed dull brown light sort of Stone full of small white nodules, which look like lime and which proved to be white fibrous or amorphous Zeolithe. 240. parts pulverized lost by Solution with effervescence and boiling in weak Aqua Regia no more than 30. of Iron, Lime and Clay. The Lime, which by this operation, must have been dissolved and extracted entirely, appeared by the Test of vitriolic Acid to be in a very small proportion, forming with the same a Precipitate of Gypsum, which was no more than 4/240. The Solution had now a strong aluminous taste, which proved a great proportion of Clay and the phlogisticated Alkali precipitated abundance of Iron – of both which Substances more would

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<sup>40</sup> ›Whinstone‹: »A name for various very hard dark-coloured rocks or stones, as greenstone, basalt, chert, or quartzose sandstone.« *OED Online*, Oxford University Press September 2021, [www.oed.com/view/Entry/228402](http://www.oed.com/view/Entry/228402). Accessed 4 October 2021.

have been disengaged by further boiling in vitriolic Acid and subsequent fusion of the Residium with Alkali, which, in the stage my departure from Ar[d]tornish obliged me to leave it, was of a dark grey colour and contained 210. parts of undecomposed and consequently undetermined proportions of Iron and Clay and siliceous Earth – the two latter undoubtedly in the greatest proportions. From this, as to Lime perfect and satisfactory Analysis, so much appears unquestionable that Lime and its affinity to fixed Air, is not the only fertilizing principle of Marl and that the power of this rotten Stone depends rather upon the loose adhesion or combination of the argillaceous and siliceous matter and the State of phlogistication of the Iron particles which seem to be their Gluten till their elective attraction or affinity with other elastic aerial Fluids brings on their respective spontaneous decomposition and quickenes the Plants. (2, S. 12-13)

Aufgrund seiner Analyse der Zusammensetzung der Steine konnte er Aussagen über das Raffinationsverfahren machen:

Before I have done with this rotten Whinstone, not even the just apprehension of appearing tedious can or ought to prevent me from observing, that one remarkable light and spungy reddish and grey Sort, free from Zeolithe, and very common on these Shores and Cliffs of Morvern and on those of nether Lorn about Ardmaddy and Kilmartin, is in its appearance very like and in its effect perfectly similar to the Italian Puzzolana or Kapillo and to the German or Dutch Tarrai, which since the times of Vitruvius is known and used as an excellent ingredient for making with a proper mixture of Quicklime and treatment a Cement and Mortar of superior quality both in the open Air and under Water. Walls and Arches of invincible Strength have been and are cast by its means and by a method, which the Italians call far'a Sanc and for which I am unacquainted with a sufficiently oppressive English technical term. It is this, that the Shell or Mould of the Arch or Vault having been properly formed from Dealboard and secured by props, it is covered over with coarse Sail cloth and then the Mortar and Stones are thrown upon it promiscuously by Tumbrils and Cartloads, observing however that the whole Mass must be kept wet for a couple of days by the means of Fire-Engines or otherwise, till the whole sets and forms one solid mass. The lightest and most spungy honeycombed Stones are fittest for this kind of Arching, for they are a less incumbrance to the outwalls and Props and embody best with this petrifying Cement. It is undoubtedly the most expeditious and cheapest method of arching, for it saves all the expense of the Stone-cutter – (la coupe des pierres) and answers perfectly in Arches and Vaults which have little to carry and which need not be Bomb-Proof. (2, S. 13-14)

Die Abbaumethoden waren ausschlaggebend für die Gewinnung marktfähiger Produkte. Das galt vor allem für den wertvollen Marmor:

I have no doubt, but much larger Slabs of this kind, and thicker ones also, will be raised here by carefull removal of the inconsiderable overburden<sup>41</sup> of useless Headstone and by as carefull use of the Wedge and Cran[e].

In Squaring them the Hammer and Mallet and Chissel must be used with great discretion and always edgeways – for rising think in proportion to their Surface and being of a very close and fine grain this Marble is apt to fly and break under any imprudent or misapplied Stroke of the Hammer, not more however than any other Marble, by Art sawed equally thin. The fastest and cheapest method of Squaring it will be Sawing; and Chissel and Mallet should be used only sideways on curvilinear Edges. (1, S. 8)

[...]

The Soundness of this Marble and the Seize of its Blocks, as of any other Marble, depends greatly upon a carefull and proper manner of quarrying it. Blasting is expeditious, but cruel work. It should be wholly proscribed; for as soon as the Marble Course shall be properly opened or cut free on both sides by a trench in the dead rock which runs along of it and from the moment it shall have been shaped into Stopes,<sup>42</sup> the Jumper,<sup>43</sup> Borier[Borer], Chissel, Pick, Wedge, Mallet, Crow and Saw will do the business; slower undoubtedly but in a more saving manner – chiefly if the chinks and natural Joints be properly attended to. In the dead work only Blasting may be allowed, under a general command to the Workmen, never to use Iron but Copper Prongs in the tamping<sup>44</sup> up their Shot or in touching up their fusees – for Granite and many other hard Stones make fire with Iron and hundreds of Lives and Limbs are lost from listless and habitual neglect of common Workmen, who had better to be enslaved by humanity. (1, S. 17-18)

Zusätzlich zu seinen Empfehlungen für den zukünftigen Steinabbau kritisierte Raspe frühere Unternehmungen, vor allem am Kupferbergwerk in Morvern:

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<sup>41</sup> ›Overburden‹: »*Mining*. As a mass noun: overlying rock, clay, etc., which has to be removed in quarrying or mining in order to reach the deposit worked.« *OED Online*, Oxford University Press September 2021, [www.oed.com/view/Entry/134355](http://www.oed.com/view/Entry/134355). Accessed 20 October 2021.

<sup>42</sup> ›To stope‹: »To cut (mineral ground) in stopes; to excavate horizontally, layer after layer; to extract (ore) by this process.« *OED Online*, Oxford University Press September 2021, [www.oed.com/view/Entry/190895](http://www.oed.com/view/Entry/190895). Accessed 20 October 2021.

<sup>43</sup> ›Jumper‹: »Applied to various tools or contrivances having a jumping motion. **a.** *Quarrying*. A heavy drill worked either by hand or by means of a hammer, used in making blasting-holes in rock, etc.« *OED Online*, Oxford University Press September 2021, [www.oed.com/view/Entry/102039](http://www.oed.com/view/Entry/102039). Accessed 20 October 2021.

<sup>44</sup> ›To tamp‹: »*Mining*. **a.** To stop up (a bore-hole) with clay, sand, etc., rammed in upon the charge before firing the shot; also, to pack up (a gallery of a military mine) before firing it, in order to concentrate the effect.« *OED Online*, Oxford University Press September 2021, [www.oed.com/view/Entry/197416](http://www.oed.com/view/Entry/197416). Accessed 20 October 2021.

From what I have seen myself on the Spot I am obliged to say, that these works were carried on with unpardonable neglect and ignorance on the part of the adventurers<sup>45</sup> and that on the part of their Overseer, Captain or Manager they were drowned with premediated malice or a fraudulent intention to prevent controul and enquiry – for one of the Shafts, which his still in timber, was sunk on the Vein, not above 4. foot from nor above 2. foot above the Level of the Brook as it was in the dry Summer Weather when I saw it, so that any or the first heavy Rain – or Winter Flood must unavoidably have filled it with Water and drowned the Works, which depend upon it. This and no other was the Flood, which by the vage report of the old Men stopt the Mine and swept off 150. £. worth of Tools, under which they probably comprised Timber, Tackle, Ore and utensils and mining Instruments. A similar abomination I never have seen any where. yet I might have passed unnoticed this effectual method of settling unjustifiable amounts of underground works, as a well deserved and just punishment of blind confidence in the Skill and honour of unqualified or roguish Overseers, had it not in its consequences brought on very great difficulties, expense and danger to those, who under Your Graces Grant and Patronage might be desirous of setting the Mine to work again. (3, S. 3-4)

Raspe erläuterte die notwendigen Sanierungsmaßnahmen, die, um das Leben der Arbeiter vor den Gefahren neuer Überflutungen zu schützen, sehr teuer sein würden. Raspe empfahl jedoch diese Maßnahmen, »for I hardly ever have seen external appearances more promising in themselves and more engaging in their Situation« (3, S. 7). Zusammenfassend verwarf er alle bisherigen Bergwerkunternehmer als Scharlatane:

On this head I may comprise every thing in a few words, saying that all the former mining Companies in the Highlands were Strangers, who had no view in their mining Speculations but robbing the Surface, without any regard to the preservation of the works and mines. I may and I must add, that mining and mines being private property in Great Britain, are not likely to be well conducted, till the Lords and Proprietors of large tracts of land shall have agreed upon general principles of their management and expressed them as sine qua non conditions and under penalty in their respective grants. (3, S. 7)

Raspe untersuchte mit Hilfe seines tragbaren Labors wenn möglich die Steine vor Ort, transportierte aber auch Steine, um dem Herzog in London bearbeitete Proben vorlegen zu können:

[T]o try experiments upon the various improvements by backing painting and glazing, I have taken with me about one hundred weight of the Stone [des Natursteins vom St. Catherine-Bergwerk] – of which and the Experiments tied upon it I shall have the Honour to lay Specimens before Your Grace at my return to London. (1, S. 3)

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<sup>45</sup> Die Aktionäre eines Bergwerkes hießen in Cornwall ›Adventurers‹, vgl. <https://navsbooks.wordpress.com/2018/10/29/some-cornish-mining-terms/>.

[...]

Of all these [Tiree] Marbles I collected a Horse load of Specimens, which when cut and polished I shall have the honour on my return to London to exhibit to Your Grace and all those, who may be desirous of giving orders by these Samples or what perhaps will be more desirable of opening and working these Quarries under such regulations and upon such terms As Your Grace shall please to make and to grant. (1, S. 16)

[...]

On its [des Kupferbergwerkes in Morvern] Silver I cannot speak but at my return to London, Edinburgh and Glasgow, where if Your Grace approves of it, I shall not fail to give this Mine the good Character it deserves. (3, S. 7)

In manchen Fällen war die Verschiebung der Untersuchungen wetterbedingt, zum Beispiel zu den Granitklippen auf dem Ross of Mull: »What Metal, Ore or Substance they contained can be ascertained only by future trials upon deeper Levels and by more minute enquiry than my time and the rainy Weather would allow me to think of for the present when I was on the Spot.« (2, S. 2)

### **Zu Preisen und Verwendungszwecken**

Ausschlaggebend für die Rentabilität des Steinabbaus waren die möglichen Verwendungszwecke und die aktuellen Preise. Hier war Raspe auch bemüht, Fachwissen und Insiderinformationen nachzuweisen. Der Naturstein in St. Catherine's Quarry war laut Raspe geeignet für »[p]lain Chemney pieces, Ovens, Stoves, chemical Laboratories, Canisters and Magazines for Tea, Tobacco, Snuff and other dry Materials« (1, S. 3). Die Marmorblöcke in den Inveraray-Steinbrüchen wären, »if cut on the Spot, cheaper than they can be cut at London, Bristol or Glasgow from Carara<sup>46</sup> Marble Blocks« (1, S. 5). Diejenigen auf den Garvellach-Inseln waren leicht zu spalten und deswegen als »Tables, Chemney pieces and Flooring Slabs« (1, S. 7) kostengünstig zu vermarkten. Zum Kupfererz in Morven berichtete Raspe von dem gegenwärtigen Preissturz:

I have not yet had either opportunity or leasure exactly to ascertain the proportions of its contents, but I may take upon me to say, that it contains between 12. and 15. in 100. of Copper, that its reduction and refining will be easy, because it is not infected with Lead, irony sulpherated Zinck or other troublesome base Metals, and that at the present low Price of Copper it is worth between 9. and 10. £. per Ton. of 21. hdw. On my return to London I shall try it for Gold and Silver and further report upon it.

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<sup>46</sup> Cararra in der Toskana ist seit dem Mittelalter weltweit bekannt durch seinen weißen Marmor.



Such as it is, it would be desirable to have plenty of it, for the Cornish Copper Ore, upon which so many thousands depend for their subsistence, falls upon an average but at 7. £ St. and that of Anglesea is hardly worth 4. £. (3, S. 2)<sup>47</sup>

Zum Basalt oder ›Whinstone‹ berichtete Raspe detailliert und stellte seine Kenntnisse des internationalen Marktes heraus:

In the laying the Foundation of Houses or large Piles of Buildings in swampy grounds, it is also of great use. [...] Walls are cast in a similar manner in moulds or frames of planks. In the building of harbours, moles, or jetties, Docks, Locks, Bridges, Canals, Weirs, Mills, & Dykes it is of approved and unparalleled excellence; and Cisterns, and Aqueducts cannot be plastered or paved over with any other Cement equally or more Water tight than this. – so that the demand of Puzzolana or German and Dutch Tarras is uninterrupted and great in every part of the World where such works are created. The Dutch, always attentive to their mercantile interest, have for ages past supplied this and other Kingdoms with Tarras, which on their Timber Floats on the Rhine they pick up for Ballast near Franckfort and Andernach. It costs them nothing but the trouble of grinding it to powder in many Mills erected and working near Delff and Utrecht; and yet it sells at London at the rate of 2/6. 3. and upwards to 5. Schillings per Bushel according to its plenty, Scarcity or demand. Experiments, which I tried upon a similar rotten Whinstone of the Habbichwald in Hesse and which were immediately after in the year 1772. tried at large in the Waterworks, Reservoirs and Cascades of Weissenstein answered every expectation, and I am confident in anticipating the hope of similar Success in those which Mr. Campbel Lochend has promised to try upon the Armady [Ardmaddy] and Kilmartin rotten Whin according to some general directions, which I have left him. (2, S. 14-16)

[...]

What I have chiefly to observe and to say of these gigantic and romantic Masses of Granite is, that in point of grain, texture colour and hardness it is perfectly similar to the Egyptian Granite rosso antico of which our Antiquaries, Virtuosi and Connaisseurs now and then import Table Slabs, flawed, cut and polished at Rome, where it is found amongst the ruins of ancient Egyptian and Roman magnificence and sold at an enormous price, both on account of its pretended Scarcity and the great difficulty of cutting and polishing it by hand.

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<sup>47</sup> Raspe arbeitete 1782–1786 in den Kupferbergwerken von Matthew Boulton und James Watt in Cornwall. Vgl. Carswell: *The Prospector*, S. 156–180. Zum Unternehmen im Allgemeinen vgl. Mary O’Sullivan, »Power & Profit: Copper Mines & Steam Engines in Late 18th Century Cornwall«: <https://www.researchgate.net/publication/348972685>. Überproduktion und Rückgang von Nachfrage führte ab Mitte der 1780er Jahre zu drastisch fallenden Kupferpreisen (ebenda, S. 20f.).

It rises in this part of Mull in very large Blocks. I observed many 20. foot long and one in particular, which I measured, 23. foot long and perfectly sound. Whether as in the Quarries of Upper Egypt it will rise in the future Quarries of Mull in Blocks of 140. or 150. foot big enough for Obelisks, is another question and then only of importance when the rearing of Obelisks of one single Stone shall be more fashionable than it is now. For common Columns, and architectonical Ornaments, Chemney Pieces, Table Slabs, Mill- and Kirb-Stones this Mull-Granite is equal to the Egyptian and much superior to any I have seen in Cornwall, which has supplied the Kirb-Stones of Westminster-Bridge and most modern Streets at London. (2, S. 3-4)

### **Zu den Kosten**

Angesichts des abgelegenen und schwierigen Terrains in Nord-Schottland waren die Abbaukosten und -methoden sehr wichtige Faktoren in der Aufwands-Ertrags-Relationsberechnung. Zum Marmor auf Tiree behauptete Raspe:

[V]ast quantities of this Marble may be raised at a very small expense, hardly without any cost or trouble of deads or overburden, which is one great advantage, arising from its Situation. Another, not less conducive to cheapness, is the very singular Nature of this Marble to split and to divide as Slate into thicker or thinner Slabs which are in proportion to the Seize [size] and thickness of its Strata – I have found and split it perfectly sound, into Flags and Slabs from ½ Inch to 1. and 1½. Foot thickness – a circumstance to my knowledge never observed in any other Marble-Quarry, which will justify systematical Mineralogists to call it Marmor fissile or Slatey Marble, and, what is more to the purpose, which saves the great expense of sawing it into Slabs. (1, S. 7)

Er informierte auch über Transportwege:

The Northwest Coast of the Island being inaccessible to Vessels of any burden, the Marble of the Cliffs and Quarry under Ben Balephetrish must in fair Weather be loaded on large Boats and rowed round the North passage between Col[1] to the Harbour of Scar[i]nish on the East Coast, where Ships of 20. Or 30. Ton lie pretty safe during the Summer Months; or a road must be made to that place, which will be no great expense, the distance being but a couple of miles over a country generally level and rocky, a few swampy passages excepted. (1, S. 18)

Was die Kohle in Ardtun auf Mull anbetraf, empfahl Raspe eine pragmatische Kosten-Nutzen-Betrachtung:

This Seam of Coal, excellent as it is and Safe to work on account of its firm and safe Roof or Cover under Cliff, will never pay the expense of taking it out by means of Levels driven upon it

from the Shore on its Sole,<sup>48</sup> because at least 4. or 5. foot overburden, the greater part hard Basaltes must be cut away, most of it I apprehend by blasting. However the great want of Coal in this part of the Highlands justifies it and I humbly recommend it to a fair trial by boring West of the before mentioned Whinstone Dyke on the back of the Cliffs inland, where the Country is pretty flat and gently sinks towards the Farmhouses of Ardtun, so that a wide and pretty extensive Field may be expected, worth working and taking out if by boring, this first Seam should appear to be thicker inland or another and thicker one should be found under it upon a deeper [one] and even below the Level of the Sea. At any rate this trial by boring through a large body and roof of Basaltes will be hard and expensive Work. (2, S. 8)

Zum Kupfer in Morvern übertrug Raspe jedoch dem Herzog weitere Hintergrundrecherchen:

What quantity of it was raised might perhaps be ascertained by the Dues, received by Your Graces ancestors; and if the works were any way managed with a Show or View to good order and regularity, there might probably be amongst Your Graces Surveys of Morvern a Survey of the Works and their Depth, Length, Connexion and State when the Mine was dropt. it ought to have been delivered; and it would be of the utmost consequence in the eventual resumption of the works, in the Statement of the necessary expenses and probable prospects and in the direction of the first works. (3, S. 2-3)

### **Wirtschaftliche Vorteile für die Highlands**

Es ging dem Herzog nicht nur um eigene wirtschaftliche Erträge, sondern er war als Landesherr und Clan Chief (und als Präsident der ›Highland Society‹) sowohl der wirtschaftlichen Bedeutung neu geschaffener Arbeitsplätze als auch der Verfügbarkeit von Rohstoffen für die Highlands bewusst.<sup>49</sup> Diese Aspekte hob auch Raspe hervor:

Zum möglichen reichen Kohleflöze: »I sincerely wish it may soon prove so in Mull and the Hebrides which are all in great want of Coal – that excellent and great Staple commodity of Great Britain.« (2, S. 7)

Zum Kalkstein: I have the pleasure to inform Your Grace »that the whole Island consists of an enormous Mass of Limestone, which accounts for its excellent Pasture and might supply all the Highlands with Lime« (1, S. 6).

Zum Marmor: »I felt doubly happy in the better Success of my expections of a Marble Quarry on the same Island [auf Iona, wo sich der Blei- und Silberbergwerk als Kalk entpuppte], which stands in so much need of usefull employment.« (1, S. 19)

<sup>48</sup> ›Sole‹: »Mining. The bottom or floor of a vein, level, or working.« *OED Online*, Oxford University Press September 2021, [www.oed.com/view/Entry/184121](http://www.oed.com/view/Entry/184121). Accessed 20 October 2021.

<sup>49</sup> Vgl. Cregeen: »West Highland Census«, S. 80 zum 5. Duke als engagiertem Landesherrn.

Raspe empfahl den Marmor auf Tiree vor Ort zu verarbeiten, damit »the industrious may have the more employment at Tirie and that the Marble Merchant or Dealer may have not handle whatever left, to beat down its price« (1, S. 17), und zu möglichen neuen Arbeitsplätzen im Granitabbau schrieb er: »I am perhaps too warm and sanguine in my wishes and hopes to see these remote parts enlivened by useful Industry; but the growing opulence, taste and luxury of these united Kingdoms seems to justify almost any Speculation and it will be my duty on my return to London to blow the Spirit of adventure into a Flame, and to direct it towards the Highlands.« (2, S. 4-5) Um diese ehrgeizigen Ziele zu erreichen wollte Raspe weitere Arbeiten für den Herzog übernehmen:

On other particulars, quarrying, sawing, polishing, overburden, dead Rock, Opall, Marble, Jade, and means of forming a safe Company for the purpose of taking up this very great concern – item Sawing – Grinding – turning – and polishing Mills – I must not for the present engage Your Graces attention but shall be happy to give the best information I can another time. (1, S. 19)

Besonders vielversprechend waren zukünftige Geschäfte mit Marmor.

### **Der Marmor**

Raspe hatte am Anfang seiner Arbeit zwei Marmorsteinbrüche in der Parkanlage von Inveraray besichtigt, die nicht besonders wichtig waren. Die meisten Blöcke »will answer the common purpose of Marble and Stone Cutters, that is they will furnish good Table Slabs, and Chemney Pieces« (1, S. 5). Britischer Marmor ist jedoch äußerst selten und konnte eigentlich nur in Nordwest-Schottland und auf den Inseln Iona, Mull und Skye abgebaut werden. Angesichts der guten wirtschaftlichen Aussichten beim Ausheben der Marmorgruben auf Tiree verfertigte Raspe eine ausführliche Beschreibung und eine Karte (vgl. **Illustration**):

On the Marble Quarries I hope to give to Your Grace full Satisfaction.

I saw, examined and surveyed them on the 23. and 24. of July, and that I may be the better understood and the conciser in my account I submit to Your Grace a slight Sketch of the same, together with my humble congratulations, that Your Grace is possessed of an immense Stock and great Variety of Marble of exquisite Beauty in Situations which are exceedingly favourable:

They are situated in, under and about Ben Balephetrish on the North West Coast of the Island – and seem to depend upon different Veins or Courses of Marble running West South West through Granite. The two Quarries M. and N. South and South East of Ben Belephetrish or rather the Marble Courses, which have been cut there, seem to have no immediate connexion with the main Course, which further West runs or seems to run from the Glen D. down to the Sea Shore E. and F.

This has been opened and cut years ago in the Quarry B. under the Glen, on the descent of the Hill near the Farm house of Mr. Campbel of Belephetrish. In this place it cannot be less in width from North to South than 50. foot, which is the Width of the narrow Glen, immediately above it on both sides bordered by steep ridges of Granite. It may be wider. It has not yet been cut through; the greatest Depth of this Quarry to a Spring of fresh Water at C. being but 15. feet. By boring, its Depth, Width and extent and run from East to West may be easily ascertained – for in the Quarry it has hardly any overburden of dead rock, nor is much of it to be apprehended, either upwards in the Glen or downwards to the Sea Shore, the Marble Rocks F. of which, lying in the same line with the Quarry B. and the Glen D. above it, and being mostly of the same nature in the Marble of the Quarry, leave hardly any doubt of its uninterrupted Course of some hundred Fathoms from East to West in Length.

From these Data, and (to compensate the Offfall<sup>50</sup> in Quarrying) supposing that there is no Marble in the Glen D. above, nor any below 15. Feet from the Surface, from the Quarry B. down to Low Water; an Estimate of the Cubic Contents of this Marble Course may be formed, as also of its Value in Money considered simply as a raw Material or as Marble in Blocks.

It is no less a Mass than 900,000. Cubic Feet; and at the lowest estimation of 20% per Cubic Foot in Blocks no less a Sum than 900,000 £ Sterling. – Sums, which, underrated as they are in many respects, will easily enough engage the Speculation of adventurers<sup>51</sup> and at any rate and very greatly draw Your Graces attention towards Tirie. (1, S. 11-13)

Auf Grund dieses Berichtes und nach einem weiteren Besuch und Bericht Raspes im nächsten Jahr gründete der Herzog zusammen mit dem Eisenhütteninhaber William Cadell ›The Argyll Quarry Company‹, bei der Raspe als Fachberater angestellt wurde.<sup>52</sup> Transport- und Finanzprobleme ließen das Unternehmen jedoch schon nach drei Jahren scheitern.

### **Raspes Schreibstil**

Raspe war natürlich nicht nur Mineraloge und Geologe sondern auch Literat und Dichter. Seinem komplexen und schillernden Charakter entsprechend wurde seine fachkundige Beratung, seine Schmeicheleien und sein Eigenlob in diesen drei Briefen auf eine sehr elegante Art verfasst und mit anekdotischen Nebenbemerkungen und Kommentaren gepaart, zum Beispiel bemerkte er zu den Bergwerken in Inveraray: »The expense is sure but better success and more engaging Symptoms at

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<sup>50</sup> ›Offal‹: »That which falls or is thrown off from some process, as husks from milling grain, chips from dressing wood, etc.; residue or waste products.« *OED Online*, Oxford University Press September 2021, [www.oed.com/view/Entry/130568](http://www.oed.com/view/Entry/130568). Accessed 20 October 2021.

<sup>51</sup> Vgl. Anm. 45.

<sup>52</sup> Dieses Mal besuchte Raspe Tiree und Iona und legte am 11. Januar 1791 einen Bericht über den dortigen Marmor nebst Proben davon der ›Highland Society‹ in Edinburgh vor (*The Sederunt Books of the Highland Society of Scotland*, vgl. Anm. 11).

least as problematical, as good Prizes in a Lottery.« (1, S. 6) Zum Marmorschatz auf Tiree verkündete er: »Success therefore to this new Scotch Carrara! And thanks to my good Gennies [Genies] which brought me there.« (1, S. 20) Seine Beschreibung dieser Marmorgruben vergleicht die naturwissenschaftliche und die dichterische Perspektive:

Greater and more Varieties appear in the West End of the Course on the Beach in the Cliffs (F.) where this Course of Marble seems to be a great deal wider between the Granite, Porphyry and Granituous Slate Cliffs (Cc.) than higher up in the Country under and on the Hill. They are between 24. And 30. Feet above the sandy Beach and Low Water, and having been exposed during an undeterminable Series of Ages to Wind and Weather and the washing and battering of the Atlantic Ocean at High Water, they have been wonderfully corroded and washed away into Caves, meand[e]ring in the rock, or shaped into very romantic forms according to their respective Hardness, Softness or Texture. The richest and most excentric Fancy of a Painter would see these Cliffs with admiration and improvement, nor can barely any thing in nature serve as a finer Prototype of the magnificent Haunts and Habitations of Neptune and his retinue. Up to Highwater mark they are covered with Limpets, Clams, Shells, Sea Eggs and Muscles[Mussels], and hung with every Sort of Sea Wrack and Tang, under which that beautyfull Crimson or Purple coloured Mol[l]usca Doris<sup>53</sup> has hitherto delighted to dwell in Safety till some Chemist shall make her subservient to a new Crimson or Purple Dye. To a Mineralogist and practical Observer these Cliffs are of a far greater consequence. Besides showing the width and Depth of this West End of the Marble Course and its total freedom of Overburden or dead Headstone, they consist in the first place of Masses perfectly sound, though externally corroded, for whatever was any way soluble by Air or Sea Water has been washed out long since. (1, S. 14-15)

Hier und auch in Hinblick auf andere Standorte zieht Raspe die naturwissenschaftlichen und wirtschaftlichen Aspekte vor, wie es seinem Auftrag geziemte:

I must suppress many remarks, suggested by the higher and looser Limestone Cliffs of Garvel[l]ach and by the vertical Whinstone Courses or Veins, which intersect them. They might at best be of use to speculative Philosophers, who build and create Systems of the World in their Closets. In this Report there is no Room for them, as being wholly devoted to objects of more consequence to Your Grace's patriotic and paternal intentions. (1, S. 9)

[...]

Flat or gently inclined beds have been decomposed or washed or worked out [neben den Granitfelsspalten am Ross of Mull] in a similar manner, leaving empty chasms with flat and

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<sup>53</sup> Eine Gattung von Meeresschnecken.

even roof and Sole, so as to show large mountains, as it were without support or foundation suspended and hanging in the Air. This appears in particular in three places North of Fid[d]en and West of Loch Laigh<sup>54</sup> – a wonder well worth the attention and pencil of those who travel for the sake of wonderful Sights and novelty, but much more of the speculative Miner, who must acknowledge in these Chasms Veins decomposed or worked out. (2, S. 2-3)

Jedoch plädierte Raspe als Antiquar für den Schutz der heiligen Insel Iona, der Wiege des Christentums in Schottland und Nordengland, mit ihrer Abtei aus dem sechsten Jahrhundert:

On the 21. of July I reached Icolmkill<sup>55</sup> and took a general View of the Ruins of that ancient Seat of Monkish Learning and Superstition. As an Antiquarian I cannot suppress an humble request that your Grace would please to protect them against future dilapidations and decay, for they are very respectable even on account of Gothic Forms and Ornaments, of which I have observed some particular to this place. As a Mineralogist and Naturalist I must own that they showed me very little which could have engaged me to a second Visit of this holy Land. (1, S. 9)

Raspe merkte an, dass der Altartisch nicht mehr existierte, weil Teile davon immer als Souvenir entwendet worden waren. Raspe wollte jetzt die Fachwelt über den ursprünglichen Standort solcher Bruchstücke informieren:

Not a bit of Marble is to be seen or left, for a large Altar Table, reported to have been of Marble, has wholly disappeared having been frittered to pieces and carried off in small bits by superstitious travellers from a notion that it must have a Scent or Flavour of its former holiness. I have seen pieces of it in some Cabinets and Antiquarians have differed about the Place from which it came. I shall soon have the pleasure to mention the Quarry from which it rose. (Ebenda)

## Schluss

Raspe führte ein abenteuerreiches Leben, aber die letzten zwei Stationen – Schottland und Irland – gelten meistens bloß als die letzten Stufen seines Abstiegs. Die Korrespondenz mit dem Duke of Argyll zusammen mit den Spuren, die Raspe in öffentlichen Quellen wie *The Scots Magazine*, der *Statistical Account of Scotland* und den Berichten der ›Highland Society‹ hinterließ, verleihen jedoch dieser kurzen Episode neue Farbe und bieten einen tieferen Einblick in seine Arbeit als Prospektor. Über diese Arbeit wurden die üblichen Vorwürfe erhoben, dass er seine Auftraggeber – vor allem Sinclair – betrogen habe; aber ohne handfeste Beweise. Er soll sogar als Vorbild für einen Hochstapler bei Walter Scott gedient haben: aber eigentlich nur, weil er wandernder Deutscher in Schottland war.<sup>56</sup> Dieser bestimmte Stock war immer schnell gefunden, wenn man jenen Hund

<sup>54</sup> Vermutlich Lochan Beinn Lighe.

<sup>55</sup> Alte Bezeichnung für die Insel Iona.

<sup>56</sup> Vgl. Carswell: *The Prospector*, S. 228-230.



schlagen wollte. Mir fehlen die Fachkenntnisse, um ein Urteil über die Befunde Raspes für den Herzog von Argyll zu fällen, aber seine Briefe gelten auf jeden Fall als Dokument seiner ausführlichen Begutachtungen und zeugen sowohl von seinem fachlichen Wissen als auch von seinem persönlichen Engagement. Sie sind des Weiteren noch ein beachtenswertes Beispiel von den Verbindungen zwischen Schottland und Deutschland am Ende des achtzehnten Jahrhunderts und beleuchten ein doch noch wichtiges Kapitel in Raspes Leben.