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Commentary on “Kant on Newton, Genius, and Scientific Discovery”

Bernd Buldt

October 20, 2011

0. Introduction

I think Bryan was very successful in writing a clear and well-organized paper. I shall therefore refrain from summarizing any of its contents. Rather, I will identify the two claims I decided to make some remarks on—remarks which I hope will serve their intended service of facilitating a fruitful exchange.

Bryan writes, among others,

1. “[in the *Critique of Judgement*, § 46], there are four explicit criteria used to distinguish geniuses from scientists” (p. 3).
2. “If a scientific discovery cannot be explained in terms of a logic of discovery while also meeting all of Kant’s other criteria for genius [...] then it should be considered an example of scientific genius by Kant’s own lights” (p. 2); “I will argue that if an example of scientific discovery can meet [the first three of Kant’s criteria for what makes a genius,] then it should be considered an example of scientific genius by Kant’s own lights” (p. 3).

1. Kant's four criteria to distinguish a genius from a scientist.

I'm skeptical that this is what Kant does in § 46 of the *CJ*. Let me mention three reservations.

- Nothing in the context of § 46 of the *CJ* suggests that Kant would be concerned with science or its practitioners. Sure, two sections earlier, in § 44, Kant defends the claim that there is neither a science of what is beautiful (*Wissenschaft des Schönen*) nor beautiful science (*schöne Wissenschaft*). The only reason to do so, however, or so I'd argue, is the random fact that the German language happened to render the French expression *belles lettres* as “beautiful science” (*schöne Wissenschaft*). Since the German expression “beautiful science” was well-established and widely used during Kant's time, Kant had to make it very clear that, contrary what his readers may assume, there is no such thing as a “beautiful science” (and, consequently, Kant won't be dealing with it). All there is are fine arts, which are called “beautiful arts” (*schöne Künste*) in German (from the French *beaux arts*). I thus propose that “science” is mentioned here only to avoid any confusion that might result from the language of the time.

But didn't make Kant references to the sciences in § 46 itself? For example, according to his third criterion a genius can't scientifically account for how she produces works of arts¹, and according to the fourth criterion Nature dictates to the genius rules of art, not science.²

Let me make two observations. First, if we take the 40,000 word (160 pages) entry “genius” in the *Grimm'sche Wörterbuch* as representative, then in Kant times it went without saying that we find geniuses only in the arts, and especially in poetry. This is exactly what we also find in Kant.

Only an artist is called a genius.³

Poetry (which owes most to genius) occupies the highest rank among all the fine arts.⁴

¹A genius can't *beschreiben, oder wissenschaftlich anzeigen [...] wie es seine Produkte zu Stande bringe*.

²*[...] die Natur durch das Genie nicht der Wissenschaft sondern der Kunst die Regel vorschreibe*.

³*Man legt aber diesen Namen immer nur einem Künstler bei, Anthropology, § 54.*

⁴*Unter allen [schönen Künsten] behauptet die Dichtkunst (die fast gänzlich dem Genie ihren Ursprung verdankt [...]) den obersten Rang, CJ, § 53.*

Second, what Kant added to the discussion of his time, then—a time where writers constantly used the phrase “arts and sciences” (*Wissenschaft und Künste*)—were arguments why we shouldn’t expect it any other way. In other words, Kant was not concerned with distinguishing artists or geniuses from scientists but with confirming expectations of his time. As far as I know, the first who broadened the conception of genius in a conscious efforts to include scientists was (which, I readily admit, may very well be due to my ignorance) Herder in his anti-Kantian pamphlet *Kalligone* (1800).

- Kant listed four criteria; *viz.*, a genius is (i) original, (ii) exemplary, (iii) can’t explain herself, and (iv) Nature dictates her its own rules. I can’t say whether those four criteria were truisms during Kant’s times; what seems safe to say, though, is that we find them in the most-read writers on aesthetics in the 18th Century, Christian Fürchtegott Gellert (1715–1769) and Gotthold Ephraim Lessing (1729–1781) in particular. For example, Lessing stated,

a genius, whom nature determined to becomes an exemplary spirit, is who she is by herself, without rules;⁵

and Gellert wrote,

“men followed the inspirations of their genius and their taste and their examples became rules; but what else are all rules of art than voices, orders of nature which the greatest geniuses heard, understood, and executed?”⁶

I can’t find nothing in the text of the *CJ* that would indicate why Kant thinks that Gellert’s and Lessing’s characterization of what makes a powerful wordsmith or good poet has any implications for what a scientist is not or on what distinguishes an artist from a scientist.

- Kant didn’t the use the word “scientist.” Although the dictionaries (*Wörterbuch*) by Joachim Heinrich Campe (1807, 7:747) and by the

⁵“*ein geist, den die natur zum mustergeist beschlosz, ist, was er ist, durch sich, wird ohne regeln grosz.*”

⁶“*männer [...] folgten den eingebungen ihres genies, ihres geschmacks [...] ihre exempeln wurden zu regeln [...] was sind alle regeln der kunst anders, als stimmen, befehle der natur, welche die gröszten geister gehört, verstanden und ausgeübt haben?*” Observe that in 18th Century Germany most writers have not yet adopted the French *Genie* but still use the German *Geist* instead.

brothers Grimm (30:798) list both lemmata *Wissenschaftler* and *Wissenschaftler*, neither term occurs in the *Akademie-Ausgabe* of Kant’s works. This may suggest that the “scientist”—say, considered as a type of personality, or as defined by her social role(s), or conceived of in terms of character traits conducive to the profession—was of no interest to Kant. I’m not sure how compelling this evidence is, for we know that the whole science-terminology will emerge only after Kant. But due to my inability to recall anything in Kant that would compensate for the absence of the term “scientist,” I’m prepared to say that, due to the lack of the concept, it was impossible for Kant to try to distinguish the scientist from the genius in *CJ*, § 46.

- **Summary.** Yes, Kant, after all a philosopher of Newtonian physics, included in his *CJ* a brief comparison between Newton, inventor and scientist, and Homer, inventor, artist, and genius (§47). No, I haven’t seen anything in favor of the much stronger thesis that Kant wanted to set up criteria to distinguish genius from scientist.

2. Newton must be considered a genius by Kant’s own lights.

Bryan writes in footnote 8 that he will ignore the question “whether scientists can possess ‘spirit’ in the Kantian sense” (pp. 3f.). I think this omission is fatal and will argue that, according to Kant, a scientist can never be a genius unless she would start dealing in aesthetic ideas.

- Kant defines “spirit” (*Geist*) to be the vivifying principle in man.⁷ What makes the spirit vivifying are aesthetic ideas which spark our interest (A, § 57) and serve as some sort of intellectual *perpetuum mobile*, namely, they kick off a game the faculties of our soul play and which maintains itself and which recruits the forces necessary to keep it going.⁸ The secret of how aesthetic ideas incentivize souls to play these potentially never-ending intellectual games lies in their definition. An aesthetic idea is a “representation of the power of imagination which triggers a lot of thinking to which, however, no single thought, no concept, could possibly be adequate.” As such, aesthetic ideas are beyond the reach of language and the exact counterparts to

⁷ *Geist ist das belebende Prinzip im Menschen, Anthropology*, §§ 57, 71; . . . *im Gemüthe, CJ*, § 49.

⁸ [. . .] *ein solches Spiel [der Gemüthskräfte], welches sich von selbst erhält und selbst die Kräfte dazu stärkt, CJ*, § 49.

ideas of reason which are concepts without adequate representation in intuition.⁹

- I mentioned above that we can find the four criteria for what makes a genius in other authors of Kant’s time. I therefore conclude that it won’t be here where we find Kant showing his true colors. What I haven’t seen in any other author, however, is how, towards the end of § 49, Kant reformulates those four criteria in terms of aesthetic ideas. A piece of art, according to Kant, results from a delicate balancing act between the two faculties of understanding and imagination, which results in the expression of an aesthetic idea such that the expressed balance strikes us as beautiful. These three characteristics make his first point almost redundant: genius can only be understood as a gift for the arts (*Talent zur Kunst*).
- **Summary.** I take the fact that Kant’s re-definition of what a genius is in terms of aesthetic ideas by using the transcendental language of his critical philosophy as a clue that it is only here where we find the true Kant. If this is correct, then there is no way that any scientist could ever be a genius, for he deals in concepts but not in aesthetic ideas. The sciences don’t speak to our spirit, but the arts do and this is what makes them arts and elevate them above the sciences.

3. Conclusion

Herder, in his book *Kalligone* mentioned above, discussed, adopted, and extended Kant’s four criteria (from § 46) for being a genius. As a reminder, those four were the following: a genius is (i) original, (ii) exemplary, (iii) can’t explain herself, and (iv) Nature dictates her its own rules. This approach makes it possible for Herder to extend the scope of the concept “genius” and to include scientists. This is what Bryan has been doing as well. The true Kant, however, I argued, gives a transcendental definition of what genius is using, among others, the notion of aesthetic ideas. This definition doesn’t permit us to include scientists. Bryan is therefore talking about ideas philosophers like Herder were happy to defend, but not Kant.

⁹[...] unter einer ästhetischen Idee aber verstehe ich diejenige Vorstellung der Einbildungskraft, die viel zu denken veranlasst, ohne dass ihr doch irgend ein bestimmter Gedanke, d. i. Begriff adäquat sein kann, die folglich keine Sprache völlig erreicht und verständlich machen kann, CJ, § 49.