

# Quotes from Henry Sully’s *Règle Artificielle du Tem(p)s* (1714/17/37 editions)

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Written on 5 August 2022 by Robert St-Louis, Ottawa, Canada

Updated 1 May 2024

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*Detail from frontispiece of 1714 edition of Sully’s book, printed in Vienna*

## **Introduction:**

Since Henry Sully’s influential horological book “*Règle artificielle du temps*” [Artificial Regulation of Time] was never translated into English, translations of some interesting statements that appear in

different parts of the book are offered below, to give an idea to an English reader of some of Sully's views about various horological subjects. Many of these passages, dealing with choosing good watches, and the importance of good workers doing the repairs, stem from Sully's excellent apprenticeship in Gretton's shop in London, as well as the many years he spent, in the Netherlands and France, repairing clocks and watches of all types and qualities.

The source text (and referenced page numbering) are from the 1714, 1717, and final 1737 editions, as indicated. Note that the 1737 edition of Sully's book differed from the two earlier editions, in that the Publisher, in partnership with Julien Le Roy, edited the original text – in some cases rewording sentences that sounded a bit too much as if they were written by an anglophone; in other cases eliminating paragraphs or shortening them, when it was felt that the original text was unnecessarily wordy. This probably doesn't come across too much in these current translations, but in reading similar sections of the book, one is struck by the differences in style and sentence structure/content when comparing the text in the original (i.e. 1714/1717) versus the later (1737), reworked edition. It makes for an interesting occasional pastime to compare Sully's original words with those of the publisher/Le Roy - there is something of Sully's English personality that comes across in his original French wording.

*All translations and notes below by Robert St-Louis.*

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**Quotes from Règle artificielle du tem(p)s, by Henry Sully.**

*I should warn [the reader] that it's not enough to read this small treatise purely to satisfy one's curiosity; this would not suffice to transmit so many rules and instructions which, even for such a small subject, demand constant attention, especially of those who have no prior knowledge of such things. Learned people may discover a few things they had not thought about, yet the author, being someone who has not pursued advanced academic studies, may require their indulgence, as he is well aware of the difficulties to write well, to dare flatter himself of having succeeded.*

*There may also be those who see a problem with instructions presented to them by an artisan; I don't say they are completely wrong, since there is so little in common between handling the file and the pen; but even if it would be foolish for a man of the trade to consider himself a "bel esprit" [person of wit], may the reader have the kindness to consider that there are some who work in the trenches, who could well know how to direct field advances, and that any man who is proud to call himself a soldier, does not limit himself to carrying a musket.*

*In the end, the Republic of Fine Arts is a free country, and although it would be difficult for one to show oneself in public without becoming assaulted from one side or another, one can, it seems to me, manage well if one has the right intention, by showing that the desire to serve the public has more to do with what one undertakes, than seeking profit or vanity.*

(above from *Preface* to 1714 edition of Sully's book)

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*Having come to Paris after the printing of my book [1714 edition], and having shown it to some of my friends; an illustrious scholar made me realize that I started too quickly in giving distinct ideas about all sorts of clocks and watches, and that it was necessary that I first provide a better and more detailed understanding of what is a clock and a watch, to allow the mind of my reader to better understand the rest of my text. I found this advice so appropriate that I started to write what presently follows, and which in a future printing will become the first chapter.<sup>1</sup>*

*Since being in Paris, I had another opportunity to increase my book by adding a Memoir on Horology, that I had the honour to read at the Académie Royale des Sciences in the month of June 1716, and which is found at the end of this work. Although I hope that this memoir will be understandable as presented here, in order to make it more useful for workers, I plan on joining figures that will better explain certain things regarding execution. In this printing, I have thus placed in the text, wherever needed, references to figures, even though they are not yet completed. These figures will be printed shortly, which along with the explanations I will add, will form a supplement to this memoir.<sup>2</sup>*

(Above from 1717 edition of Sully's book)

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(Below all from 1737 edition of Sully's book)

*The unfortunate thing in our Art is that skillful and honest men are most disadvantaged, while negligent masters and workers, unskillful or of bad faith, very easily do well in their business. The reason is that since there is almost no one who can judge the products of our Art, the choices are generally made on two factors: the external beauty, and the most affordable price. It's easy to see who profits from these criteria as applied by most customers. Mediocre workers focus on producing something attractive for the eyes, not concerned about the goodness or perfection of their work; they find ways to make them at a cheap price, and sell them in this condition.<sup>3</sup> But a skillful man will place more importance on the internal quality than the external beauty, and when he adds ornaments, he chooses something of good taste and well made, which consequently costs more. Thus, his work finds few customers, and the skillful man finds himself faced with a sad choice: either to satisfy himself with his ability and quality of work, lamenting public ignorance, or to put aside his honour and knowledge, and do like the others, in order to benefit, after much regret, of a better fortune. (Pages 39-40)*

*Two things are important to use a watch well, and be happy with it: firstly, one must be educated on the principles of its construction, to judge what degree of exactitude it is and is not capable of; secondly is to learn about and apply oneself to using it well, in order to make the movement as accurate as possible. It's through lack of these small facts that many people expect unreasonable and even*

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1 It should be noted that other than the Preface and introductory section in the 1717 (Paris) edition, the rest of the text from Chapter I to the end, is exactly the same as in the 1714 (Vienna) edition.

2 Perhaps the very early copies of the 1717 edition did not have the foldout page containing the diagrams referenced in the text related to the new watch construction. This page certainly is present in the 1737 edition, so was probably added at some later stage in printing of the 1717 edition.

3 Sully had no patience for superfluous eye-catching decorative detail or other watch functions, that some makers incorporated into their watches to attract unsuspecting buyers, while neglecting the quality of the time-keeping components of the watch, which Sully felt were vastly more important.

*impossible precision from their watches, and that they sometimes sing their praises in absurd ways, falsely and ridiculously; or conversely, are continually dismayed at either small or large variations observed, that it is up to them to correct.* (Pages 44-45)

*A long pendulum clock [pendule à seconde] is capable of surprising regularity. Mr. Quare<sup>4</sup> one time assured me, about eight or ten years ago [i.e. 1697-99] that he had so well regulated two pendulum clocks to each other, that at the time he was speaking to me, the clocks had strayed in eight months only twenty seconds from each other.<sup>5</sup>* (Page 48)

*I will demonstrate that it is impossible to ensure the best and most accurate pocket watch, vary only as much in 24 hours, as a well-adjusted pendulum clock would in an entire year.<sup>6</sup>* (Page 49)

*Because so few people know how to distinguish a good from a poor watch, there are many brokers, dealers<sup>7</sup>, and even watchmakers who take advantage of the public ignorance or gullibility. If I had to rely either on the “reputation and honour” of a watchmaker, or rely on science and judgment, I know which one I would rely upon [in choosing a good watch]. [...] If money counterfeiters deserve to be hung, must we regard as honest men those who, to fool the public, place on their lesser quality works the names of the most illustrious horologists of Europe?* (Page 122)

*Three signs of a bad or mediocre watch are: firstly, when a master watchmaker sells at a low price works that feature his own name – only good workers make good watches, and being in low numbers compared to bad ones, are much sought after by the best watchmakers. Such skilled workers would not work for those who only pay them half for their work, when they could be well compensated by a good watchmaker who appreciates their merit. A second sign is when one sees on a watch a bizarre novelty or ridiculous invention that only serves to amuse those who, like children, are drawn to such curiosities. These include: hour numbers that appear to jump in a hole on the dial; watches that show the balance wheel through a hole in the dial and plate; enameled portraits appearing inside a watch, which spoil the movement by encouraging the watch to be opened frequently [causing dust to enter].<sup>8</sup> Finally, a third sign is when a watch engraved with the name of a renowned master is sold at a low or paltry price.* (Page 125-127)

*In order to determine if a watch has good regularity, it is important to compare it to a well-adjusted pendulum clock or a sun-dial, and not compare it to public clocks, that are generally not well*

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4 Daniel Quare (1649-1724), also born in Somerset, was one of the London makers recognized as being examples of the Golden Age of Clockmaking (others being Edward East, Thomas Tompion, George Graham, Joseph Windmills, Joseph Knibb, et. al.). During the ten years (1695-1705) that Sully spent as apprentice then journeyman under Charles Gretton of Fleet Street, he would have had an opportunity to meet many of the key makers and their workers.

5 This illustrates well the accuracy that a good clockmaker like Quare could obtain from a fine clock. The challenge for marine timekeepers, of course, was trying to at least approach this level of accuracy on a sea-going clock aboard a ship.

6 Sully does a good job of educating watch owners, even fine ones, of the fact that they cannot expect anywhere close to the accuracy of a fine pendulum clock.

7 This suggests that even in 1714/17, a customer not only was able to purchase a watch directly from a watchmaker, but also from brokers or dealers, and that the latter would often be purveyors of second class watches (often originating in Geneva, emulating the French style, and even sometimes fraudulently putting the names of famous French makers on them).

8 Another indication of Sully's intolerance for curiosities or novelty features on watches, meant to fool unsuspecting buyers.

*maintained or adjusted.<sup>9</sup> If such a watch gains or loses a minute per day, that is admirable regularity, and as well as one can expect from a watch.<sup>10</sup> One should not neglect to advance or retard the movement before the daily inaccuracies become too great. (Pages. 139-141)*

*The irregularities of bad watches are mainly due to: a defective or not well proportioned fusée, which is not well suited to the mainspring in the watch – this is particularly evident during the end of the mainspring, 3-4 hours past 24; inability to maintain regularity when used in different positions (held in a vest pocket, suspended on a hook, or resting flat on a table) – bad watches will display an irregularity of 4-5 or more minutes per 24 hours in different positions. One must always wind the watch at the same time, and hold it as much as possible in the same position.<sup>11</sup> (Pages 142-143, 173)*

*A perfect watch coming from a good maker, can easily be made imperfect by a clumsy worker. There is no better way to be assured of the quality of watches and clocks, than to rely entirely on the honour of makers, whose reputation of being knowledgeable and of good faith, is established by indubitable experience.<sup>12</sup> (Pages 152-153)*

*It is important for all those who own a watch to never open them, unless there is an absolute necessity to adjust the hairspring. If one must open it, one must take care that the powder in hair or wigs<sup>13</sup>, or other dirt, do not fall into the movement. One must conserve a watch like the most precious jewel. (Page 173)*

*The art of repairing watches is as useful and important to the public as that of making them.<sup>14</sup> There are many people who believe that it doesn't matter to whom they entrust their watch for repair; but if they knew the consequence, they would rather send a watch a hundred miles away to have it repaired by a skillful artisan. (Pages 174-175)*

*By a good watch, I mean one where the materials are well selected, that the parts are positioned and proportioned with judgment and skill, that it is made with all the care and skill possible. Such a watch must undoubtedly run well. By a bad watch, I mean one that has opposite qualities, whose materials*

9 A reminder that in Sully's time, in Paris and elsewhere, public clocks were not regularly adjusted and maintained, which means that their time indication was often woefully inaccurate, and varied greatly between different public clocks.

10 This is a clear indication from Sully of the best precision one could expect from even a finely made watch at that time, i.e. a variance of a minute per day.

11 Interesting specific indications by Sully of some of the greatest sources of inaccuracy in a watch. A well suited fusée is not something one would think of, but clearly it was an important and fine technical consideration for the careful watchmaker in the final design and "finishing" of a watch. This also required matching well the strength of the mainspring (thickness and other dimensions) to the chain and fusée dimensions.

12 Though Sully was not really a "maker" at this stage of his life, one can get a sense of the kind of values he respected in a good maker (such as his friend Julien Le Roy) and that he no doubt worked to instill in the workers that he hired and trained in his sadly short-lived horological factories (1719-21).

13 This is an interesting reference to white powder used in wigs at the time, being a particular problem for the fine movement of a watch, and the importance of only opening the watch case when absolutely required. In French watches, unlike the English ones at the time, the owner would wind the watch by flipping the front (glass) cover, and winding through the dial. English watches required opening the rear dial cover of the watch, unless protected by a cuvette cover, and wind the watch with the movement exposed.

14 As someone who spent much of his professional life repairing watches (and clocks), Sully would have well been aware of the importance of a good repairer, who needed to understand all aspects and components of a timepiece, and be able to repair them all, whereas the actual making of a timepiece would involve many specialists who specialized in only a few components.

*are imperfect and whose essential parts are positioned with neglect and no skill. Such a watch must run badly. Bad watches have such numerous defects that produce innumerable sorts of irregularities, more or less present in each watch. Such watches can be made better by an honest and intelligent artisan, but it will never be as good nor as durable as one that had been well made from the start.*<sup>15</sup> (Pages 179-180)

*When I consider how few skillful artists there are who can ably repair both good and bad watches, I can only feel sorry for the people who own them, exposed to the trickeries of bad workers who, by getting involved in something they don't understand, only bring doubt and dishonour to such an interesting and useful Art. I am sorry that I cannot deal with this matter in more detail without condemning many people in our Art, which is not my goal. Moreover, there are many honest people in this profession who just lack opportunities and the inclination to learn how to work better. One day I hope to contribute to making them learn to be more useful. In the meantime, I have presented to amateurs of the products of our Art, this little treatise which I hope is intelligible and useful.*<sup>16</sup> (Pages 181-183)

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15 A comment that is no doubt borne of the experience of Sully who repaired timepieces for many years, and no doubt saw all types and qualities of watches/clocks cross his workbench, and had to repair both flaws in the original construction, but also from improper or uncaring previous repairs.

16 Comments like this probably did not endear Sully to some members of the watch making or repair communities, but he spoke from the heart and from his experience, and from a true desire to see the quality of horological work improved overall. He no doubt attempted to instill this approach to quality of work in the horological factories he briefly led, but also in his frequent meetings and discussions with watch and clock makers of all stripes, in an honest attempt to improve the practices and quality of work in his chosen profession. Julien Le Roy certainly underlines this positive influence of Sully in the biographical text he wrote about his friend in the 1737 edition of his book, notably on pages 381-382 “*I saw him, full of zeal, go from door to door preaching to clock-watchmakers the perfection of their Art, and to encourage them by his discourse and advice to perfect themselves more and more.*”