Proceedings of the European Society for Aesthetics

Volume 16, 2024

Edited by Vítor Moura and Christopher Earley

Published by

European Society for Aesthetics

Proceedings of the European Society for Aesthetics
Founded in 2009 by Fabian Dorsch
Internet: http://proceedings.eurosa.org
Email: proceedings@eurosa.org
ISSN: 1664 – 5278

Publisher

The European Society for Aesthetics

European Society for Aesthetics

Department of Philosophy
University of Fribourg
Avenue de l'Europe 20
1700 Fribourg
Switzerland

Effort in Aesthetic Appreciation: from Avant-Garde to AI

Emanuele Arielli[1]

ABSTRACT. This paper starts from the debates on whether the seemingly *effortless* creation of AI artworks, and by extension some avant-garde pieces, diminishes their artistic value. This leads to a broader inquiry into how effort, or the lack thereof, influences our perception of an artwork's quality and significance. Traditionally, effort in art has been seen in two ways. On the one hand, a skilled artist's work, which may appear effortless, is often valued for its apparent ease, reflecting genius or inspiration. On the other hand, the Romantic era highlighted the artist's internal struggle, shifting emphasis from technical proficiency to emotional and intellectual effort. Contemporary empirical research seems to confirm the existence of an "effort heuristic", suggesting that artworks perceived as requiring more effort are generally valued higher. Finally, this paper suggests defining a notion of "distributed effort" as a category for the appreciation of content and artworks that are the product of complex influences, traditions, and technological advancements. In conclusion, this paper suggests that we must investigate the possibility of "artificial effort" in AI-generated art.

1. Introduction

The contemporary discourse surrounding AI-generated artifacts – spanning images, texts, musical compositions, and beyond – appears to overlook a crucial implicit assumption: beneath the prevailing skepticism toward artificial intelligence lies a deeper, largely unexamined concern linked to the apparent ease with which these technologies can produce human-like creative works.

[1] arielli@iuav.it

Traditional creative processes typically demand substantial investments of time, skill development, and cognitive resources. In contrast, AI systems can now generate sophisticated cultural artifacts with minimal human input, democratizing capabilities once reserved for skilled professionals. This radical reduction in the "cost" of creation – measured in terms of human labor, time, and expertise – may implicitly influence negative perceptions of AI-generated works. AI-generated outputs would be thought to be less valuable due to their quick, automated, and apparently effortless production. In other words, since those artifacts lack human *effort* then there is no sign of any kind of creative struggle, which may be defined as overcoming some material, technical but also cultural and mental barrier.

This paper examines whether resistance to generative AI might be partially rooted in an implicit devaluation of creative works that circumvent traditional human effort and mastery. Does the very efficiency of AI-driven creation paradoxically diminish the perceived value of its outputs in the eyes of critics and audiences? This point is well illustrated by the following anecdote: singer and songwriter Nick Cave runs a blog called *The Red Hand Files* where he engages directly with his fans. One particularly enthusiastic fan wanted to pay tribute to the singer with a song generated by ChatGPT "in Nick Cave's style." This was Nick Cave's response:

> "This song sucks. […] Songs arise out of suffering, by which I mean they are predicated upon the complex, internal human struggle of creation and, well, as far as I know, algorithms don't feel. Data doesn't suffer. […] Writing a good song is not mimicry, or replication, or pastiche, it is the opposite. It is an act of self-murder that destroys all one has strived to produce in the past. […] It's a blood and guts business, here at my desk, that requires something of me to initiate the new and fresh idea."[2]

A fundamental observation about AI systems is their essentially "Platonic" mode of operation: they first extract generalized patterns from training data, then generate specific instances based on these abstractions. While generating variations requires minimal computational effort, the real work occurs during the training phase when these patterns are extracted. This process differs fundamentally from human artistic creation. An artist does not simply implement pre-existing

[2] https://www.theredhandfiles.com/chat-gpt-what-do-you-think/

patterns. Rather, their creative process involves *uncertain* explorations, moving through various possibilities without predetermined paths. As Nick Cave suggests, artistic creation is characterized by an exploratory process that defies established rules, where each variation stands independently and must establish its own aesthetic validity. Thus, creative effort inherently involves grappling with uncertainty and the possibility of failure. In contrast, AI-generated outputs can appear overly predictable and mechanistic, lacking this essential element of uncertainty; what they do appears too smooth, mechanical, and pre-determined.

This tension also echoes significant debates from 20th-century art history, when critics and audiences questioned the apparent "simplicity" of certain avant-garde art forms—ready-mades, abstract minimalism, conceptual art, and performance pieces. The criticism primarily targeted the perceived minimalism of the artistic gesture (such as Lucio Fontana's canvas cuts), questioning whether such apparently simple actions sufficiently justified the works' artistic value.[3]

This leads us to explore an essential aspect of aesthetic evaluation: the role of *perceived* effort in shaping our appreciation and judgment of artworks. When engaging with an aesthetic object, viewers often assess not only the end result but also the artist's labor, time, and energy involved in its creation. This perceived investment plays a key role in how we attribute both artistic and conceptual value to the work. "Perceived effort" is conceptually distinct from actual effort. While actual effort refers to the actual amount of time and energy invested in creating a work, perceived effort relates to the viewer's interpretation or sense of that investment.

The connection between perceived effort and aesthetic appreciation functions on several levels. First, there is the immediate sense of technical skill and time commitment—whether in the detailed precision of a painting, the complexity of a musical composition, or the skilled craftsmanship of a sculpture. Second, there is the perception of intellectual and creative effort—the idea that the artist has engaged deeply with their medium, confronted artistic challenges, and arrived at original solutions. Finally, we acknowledge the "learning" effort—the years of practice, training, and experimentation that underpin artistic expertise.

This point raises the issues whether effort is just an indicator of an artwork's relevance and quality, or if it has *intrinsic* value and quality in its own right, that is, we *aesthetically* value the

[3] See, for instance, the post-war debate in Italy on this issue see Cavellini, 1961.

effort, since we may tend to judge the end product by our knowledge of how it was made. In other words, is effort merely an indirect *signal* of an artwork's quality, or does it possess aesthetic value when it is perceived or assumed by the viewer? This has also been empirically investigated in recent times, but the philosophical and conceptual underpinning of this fact has not always been clear-cut. In fact, the history of aesthetics also shows that attitudes on this issue are quite different to what we might consider intuitively: in fact, too much effort is not necessarily a good thing in aesthetic evaluation, as it will be discussed in the next section.

AI aesthetics, therefore, touches on a general theoretical question: if (perceived) effort determines our aesthetic judgment, would you look, listen or read the work with different eyes according to how much "suffering" there is behind it? And since machines do not suffer (as Nick Cave says), could this be an element of our suspicious attitude toward AI-generated artworks? Or, alternatively, could machines suffer (make effort) or at least *show* (aesthetically pleasing) effort?

2. The Origins of the Debate

First, it is necessary to clarify what is meant by "effort," but doing this in a systematic fashion would go well beyond the scope of this paper. Quite surprisingly, there are not many explicit definitions of effort in philosophy or psychology: we may start from Aristotle's theory of habit formation, or in the discussion of the transition from possibility to actuality in the *Metaphysics*, or see effort through the lens of the notion of "conatus" in the ancient philosophy of nature, or look to Spinoza, Nietzsche, or today's attempts at a definition in analytic philosophy (Gendolla & Wright, 2009; Massin, 2017; Bermúdez & Massin, 2023). According to Massin (2017), the analysis of effort has traditionally followed four main conceptual approaches. The first views effort as a primitive feeling – an immediately accessible, irreducible sensation (see also James, 1880). However, this view struggles to account for effort's goal-directed nature and its role as an action rather than a mere sensation. The second approach focuses on explaining our awareness of effort through the comparison between intended and actual outcomes, but fails to fully capture effort's intensity independent of success. A third view analyzes effort in terms of resource expenditure or energy consumption, seeing effort as the allocation of limited resources toward goals. The fourth

perspective, which Massin favors, understands effort as essentially involving the exertion of force against resistance. On this force-based account, effort consists of two key components: a force intentionally exerted by an agent and a resistive force that opposes it. This view helps explain why we consider efforts praiseworthy—because they involve overcoming resistance—and how we can enjoy effortful activities despite their inherent unpleasantness, through the satisfaction that comes from meeting challenges. The force-based account captures several essential features of effort: its intentional and goal-directed nature, its connection to resistance and difficulty, its potential for success or failure, and its role as grounds for both enjoyment and moral (and, we might add, aesthetic) praise.

In applying the concept of "effort" in the specific domain of art, we similarly find a range of meanings that illuminate its role in the creative process. Firstly, effort can be seen as the straightforward use of time and materials in artistic work (effort as *labor*). This perspective focuses on the physical resources and time invested in creation. However, effort might also concern the application of learnt skill and the capacity of the artist to deploy it in order to overcome limits, solve problems, and reach a specific goal (effort as *achievement* – see Bradford, 2013; 2015). Effort, in this sense, is a proxy for the very idea of *agency*, that is, the fact of one being able to bring about an intended state of the world by means of actions that are able to transform an environment that resists such changes. From this perspective, mastery and effort serve to impress or engage viewers of the artist's feats. On the subjective level, effort can be considered a deeply internal experience, involving emotional and psychological challenges that the artists go through. This internal struggle, though less visible, is a crucial part of the creative journey. Lastly, effort might imply a connection to exceptionality in the skills needed to realize a specific work (effort as a proxy of *scarcity*): the artist's mastery is a rare gift, thanks to which artworks are made possible in ways other humans would not be able to realize. The artist, so to speak, is capable of a kind of effort other people would not be able to display. The time and dedication needed to complete a work, combined with the limited number of individuals capable of such a creation, add a unique value to the art.

As mentioned earlier, besides defining what effort can actually be, one important point is that it can be the object of observation, feeling, and judgment: the public might *feel* or *see* effort in

what the artists did, and the artist could more or less openly *display* effort in the creative process and in the artwork. “Perceived effort” is, therefore, a matter of attribution by the audience but also of exhibition of effort by the artist.

In the domain of visual arts, we might assume that the knowledge that a painting required months of labor, rather than being completed in a single day, significantly influences its appreciation. On this point, we might observe a historically bivalent attitude toward effort in craftmanship. The degree of an artist's or craftsman's skill might reveal – as said – what Leonardo da Vinci called *ostinato rigore* (stubborn rigor or tenacious application). But from another perspective, the wonder and admiration of the artist’s product might even be *inversely* related to the effort exercised in creative process. Skilled artists or craftsmen can produce artifacts with less effort compared to novices. And we admire exactly the skillful mastery in realizing through *apparent effortlessness* something that less skilled artists would manage to produce only by means of great effort and difficulty, if at all. On this point, we could recall a famous quote by Michelangelo: “If people knew how hard I had to work to gain my mastery, it would not seem so wonderful at all”. That is, the talented artist might show geniality or (even divine) inspiration not in his effort but in his *ease* in accomplishing what others cannot do or in manifesting *sprezzatura* (Castiglione 1528/1975), the apparent effortlessness in his craft.

From this perspective, art should conceal its artificiality and give an *appearance* of effortlessness even though it actually required great effort both in the realization and in the *concealment* of this effort. The Latin saying *Ars est celare artem*, which translates to “Art is to conceal the art,” emphasizes the idea that true and valuable art often hides the effort put into its creation. This principle suggests that the most impressive art appears effortless, even though it may require immense skill and labor (see D’Angelo, 2018). For human artists, achieving a seamless and effortless appearance in their work often requires a high level of mastery and skill. The artist's struggle, experimentation, and refinement are hidden behind the final product, which appears natural and gracious (Kant, 1790**)**. Contrary to that, the appearance of too much struggle and pain is not a positive thing; it signals that the artist may not be that capable or inspired and appears too contrived and *artificial*. This inverse relationship, however, could imply that skill is the outcome of *past efforts* applied through a lengthy learning process, or it can be attributed to the artist's

exceptional and unusual abilities: the artist is great because he seems able to do effortlessly what other people could do only with great effort or are not able to do at all. Excessive effort can, in a way, indicate a lack of learning, experience, or talent.

On the other hand, the notion of effort has also been understood in history as an active struggle, both material and spiritual, in the creative process which adds value to the final product. Particularly, the Romantic artist's struggle for self-expression and his quest to find the best means of conveying his ideas focuses on the internal (mental and spiritual) effort than on the material and technical effort in the creative process. Romantic authors, in this respect, criticized the affected and artificial nature of art forms bound by formal conventions, advocating instead for the immediate authenticity of their own spirituality. They rejected the idea of excessive formal effort in favor of expressive spontaneity. At the same time, while they downplayed effort as diligence in the formal construction of poems, artworks, or compositions, they placed great value on effort as inner struggle and personal turmoil.

This perspective somewhat anticipated the radical shift in the role of technical effort in craftsmanship within the traditional avant-garde. Here, the geniality of the conceptual idea was more important than the length of time and effort in crafting a work. Lucio Fontana's cut canvases serve as a prime example of this shift. Fontana's straightforward yet innovative act of slicing through the canvas redefined the concept of effort, moving away from labor-intensive techniques towards an emphasis on conceptual depth and its provocative aspect. His work illustrates that a single, decisive gesture charged with conceptual genius could override traditional measures of effort and skill in the realm of art.

The effort and skill involved in conceptual art are predominantly intellectual in nature, and it is important to recognize that intellectual prowess can be as commendable as physical effort and technical skill. However, the challenge lies in the fact that this is not always readily apparent to the broader public. The worn-out phrase “even my kid could do that” reveals that, contrary to audiences appreciating the artist’s “sprezzatura” – namely the artist’s apparent effortlessness in doing something that would require effort for the normal individual – they see in the work an apparent effortlessness in doing something that everyone else could also do. Due to its non-obvious nature, these kinds of contemporary artworks always risked being perceived as irrelevant or less engaging.

Consequently, it became imperative for artists and art gallery curators to clearly articulate how a piece of conceptual art embodies effort and skill on a more abstract, spiritual, and mental level. For instance, early detractors of Jackson Pollock's drip paintings criticized them as creations anyone could replicate. Art critic Leo Steinberg, intending to dismiss these criticisms, pointed out: "Questions as to the validity of Pollock's work, though they remain perfectly good in theory, are simply blasted out of relevance by these manifestations of Herculean effort, this evidence of mortal struggle between the man and his art." (Steinberg, 1955).

The misunderstanding with the broad public stems from the fact that intellectual effort does not consist in some kind of formal and technical mastery, but involves the ability to break away from pre-existing rules and generate innovation and originality. While it is true that anyone can now cut a canvas as Fontana did, it was Fontana who first conceived of this innovative and provocative gesture. The distinction in creating something new does not lie in the inability of others to replicate a specific technical skill, but rather in their inability to replicate a comparable capacity (and effort) for innovation. One point that should be noted in these debates is the fact that all sides still agree on the assumption that effort and value are correlated: no matter if technical or intellectual, material or spiritual, value necessarily must emerge from some kind of hardship. There is no value without struggle, and there is still the strong assumption that the appreciation of effort and skill is linked to concepts of moral excellence and authenticity.[4]

3. Empirical Evidence: the "Effort Heuristic"

It is interesting to consider some relatively recent empirical evidence that has been done on this issue, confirming the tendency – defined as "effort heuristics" – to use effort as a proxy of aesthetic value.

Kruger and others conducted an experiment in 2004 where adult participants were asked to evaluate two abstract paintings in terms of their likability, quality, and economic value. The

[4] Algoe & Haidt, 2009 and Bloom, 2010 have linked the appreciation of effort and skill to concepts of moral excellence and authenticity. This seems to be validated also by empirical studies that show how we naturally link effort with value, see Liu et al, 2017.

participants were divided into two groups. One group was informed that the first painting took four hours to complete while the second took twenty-four hours. The other group was given the reverse information. In both scenarios, participants consistently showed a preference for the painting they *believed* took longer to create. They also rated it higher in quality and assigned it a greater monetary value.

We could suggest, in this regard, a similar ideal experiment conducted with AI-generated artifacts, by showing participants under experimental conditions images or texts generated by a machine that are described as having taken less or more time, or using less or more computational effort, or have recombined and explored a more or less extensive training database. If we get similar results, then "effort" should be understood here as the sum of all physical or temporal resources used by the machine. This would extend effort beyond the perspective of goal-directed human agency and would include mechanical effort as relevant for aesthetic appreciation. Mechanical effort, in turn, is an expression of the human effort invested in the creation of this technology and in the data on which it has been trained.

One recent empirical research has sought to transpose this issue onto the subjective evaluation of works created with the aid of AI. A study by Chamberlain et al. (2018), for instance, shows how people exhibit different prejudices against computer-generated art. They mostly argue that intentionality, authenticity, and – most of all - effort play a role in their acceptance and appreciation of an artwork. The answers people gave to this investigation are quite straightforward:

> 'I did favor the ones I now know are not AI, since I do value the time, skill, and effort put into those. As an artist, it's insulting seeing people pass off these generated images as their own art, since these images are still using others' hard work.' Many other commentaries confirm the point we are here making: 'Yes, because AI-generated images will never require as much effort, sweat, and years of practice as human-made drawings. [...] each stroke requires judgment and incredible artistic knowledge in order for the composition of the drawing to piece together. I'm actually very surprised by what AI can achieve after taking this test, but it will never (to me), be able to achieve the sensibility humans can convey in their drawings.' (Chamberlain et al, 2018).

The issue of appropriating "others' hard work" concerns the fact that AI models fundamentally rely on vast repositories of human cultural production for their training, whilst being so far inherently

incapable of generating genuinely novel content or artistic styles. This observation illuminates a deeper point about our conception of effort in the artistic domain: we primarily understand effort as an *individual* undertaking. Whilst we acknowledge the notion of collective effort in certain domains – the construction of the pyramids, space exploration, or the management of complex organizations – and recognize these as paradigmatic instances of coordinated human endeavor, our understanding of artistic effort remains largely individualistic. To be sure, certain artistic enterprises, such as moviemaking, do exemplify collective achievement. Such complex collaborative works command our admiration precisely because they transcend the capabilities of individual effort, thereby demonstrating humanity's remarkable capacity for cooperative work.

But in domains like text writing or image production, *less* value could be perceived if something is seen as the product of a collective effort instead of an individual endeavor. To investigate this point, consider the empirical work by Smith et al. (2014). They showed that when literary artworks were attributed to *multiple* authors, they were perceived as requiring less effort, which seemed to lower their perceived quality. In their study, some participants were asked to write a poem, either alone or in a group of three. When a separate group of participants rated these poems without knowing how they were produced, the method of production had no impact on their ratings. However, if these raters were informed that the poem was written by a single person, they judged it to be of higher quality than if they were told it was written by three people. Collective group effort was therefore linked to *less* individual effort and implicitly used as a cue in the quality evaluation of the poem.

4. Distributed Effort and *Artificial Sprezzatura*

The idea that AI-generated art is "too easy" and lacking in effort can be challenged in at least two ways. First, beyond casual or amateur usage, the work of artists using AI systems is far from simple or automatic. It requires a deep understanding of the medium and the technologies involved, along with a complex, detailed process to bring the final work to fruition. For instance, crafting a sufficiently sophisticated prompt to capture the artist's precise creative vision is often a demanding

task that is anything but automatic. Second, the issue arises whether we can conceptualize a form of "machine effort" or "artificial struggle" in the production of content by AI systems.

The issue of collective effort, mentioned before, becomes particularly relevant in discussions about AI-generated art. While some may perceive AI art as “too easy” and lacking in effort, this view overlooks the considerable work involved in developing AI technologies and the human contributions implicitly embedded in the training datasets. The outputs of these systems are not the product of an openly coordinated, collective group effort but rather emerge from the amalgamation of diverse influences and content from different periods, as the systems learn from the works of past artists. Instead of collective effort, we might define the concept of a *distributed* aesthetic effort, which allows us to appreciate the cumulative impact of past influences, individual contributions, and technological progress leading to a specific artifact or artwork. The distributed nature of AI's development and learning processes means that its effort is, in fact, a collective one, spanning numerous individuals and technological advancements.

In the domain of art and in traditional human artistic creativity, however, effort is not viewed as collectively distributed, even though we acknowledge that every artist operates within the scope of their past experiences and cultural context. While we recognize, for instance, that scientists stand “on the shoulders of giants” drawing from a vast network of past influences and contributions, the effort attributed to an artist is primarily seen as their own, beginning from the point at which they engage with their heritage. It is the individual artist's effort from that moment onward that is recognized and valued in their work. We do not typically regard the effort involved in a work of art as encompassing the entire historical and cultural network that shaped the artist's perspective and technique, because these accumulated human efforts were not the result of an intentional, coordinated action aimed at producing that specific artwork. We attribute creative effort to the individual artist, recognizing their personal struggle, skill, and intention in the work they produce. This *romantic* notion is closely tied to the belief that creative work arises from an individual's unique subjectivity and agency.

The general question of the author, understood as an “individual subjectivity,” is therefore central to how we perceive and assign value to creative works. Unlike human artists, AI lacks individual subjectivity or authorship, and we are reluctant to attribute agency to it. The distributed

effort in AI-generated art lacks a singular, identifiable agent to whom we can credit the creative process, aside from the human operator who engages with the system through prompts and commands, often with what appears to be minimal effort.

To bridge the gap between human and machine creativity, it might therefore be necessary to challenge a rigid, anthropocentric conception of agency and rethink what effort means in the context of AI. One way to do this is by acknowledging the collective and technical effort behind AI systems, as said. If we were to accept the notion of distributed effort as a valid way to assess AI-generated content, then its apparent effortlessness could be seen as a form of *artificial sprezzatura*: a well-concealed effortful endeavor that only superficially appears as effortless. From this perspective, AI would just *seem* to produce its creations with agility and ease, leaving in the background the complex computational processes, the significant energy consumption, the extensive mathematical processing of data, and the vast cultural knowledge embedded in the AI's training. The implications of this issue also extend to a topic that cannot be explored in this contribution: the legal recognition of human works in the training of AI systems and the ethical considerations of using human effort as a component of artificial effort.

Just as the effortless grace of a skilled artist conceals years of training and refinement, the apparent ease with which AI generates content conceals the intensive computational processes and collective human labor involved in its development. Acknowledging this hidden effort allows us to value both human and AI-generated art, recognizing the deep and often unseen labor behind works that seem effortless. Beyond the actual quality of AI-generated content (after all, the AI-produced "Nick Cave" song might turn out to "suck", as the songwriter said), this kind of appreciation requires a fundamental shift in how we value effort and agency, moving beyond a purely subject-centered focus.

References

Algoe, S. B., & Haidt, J. (2009), "Witnessing excellence in action: The "other-praising" emotions of elevation, gratitude, and admiration," *Journal of Positive Psychology*, 4(2), pp. 105-127.

Bermúdez, J. P., & Massin, O. (2023), "Efforts and their feelings," *Philosophy Compass*, 18(1), e12894.

Bloom, P. (2010), *How pleasure works: The new science of why we like what we like*, London: Bodley Head.

Bradford, G. (2013), "The value of achievements," *Pacific Philosophical Quarterly*, *94*(2), pp. 204–224.

Bradford, G. (2015), *Achievement*, Oxford: Oxford Univ. Press.

Cavellini, G.A. (1961), 'Milionari in quattro secondi. Viaggio fra i successori di Picasso', in *L'Europeo*, April 16.

Castiglione, B. (1528/1975), *The Book of the Courtier*, Translated by George Bull, London: Penguin

Chamberlain, R., Mullin, C., Scheerlinck, B., & Wagemans, J. (2018), "Putting the art in artificial: Aesthetic responses to computer-generated art," *Psychology of Aesthetics, Creativity, and the Arts*, 12(2), 177–192.

D'Angelo, P. (2018), *Sprezzatura. Concealing the effort of art from Aristotle to Duchamp*, Cambridge: Cambridge Univ Press.

Dutton, D. (2009). *The art instinct: Beauty, pleasure and evolution*. New York, NY: Bloomsbury Press.

Gendolla, G. H. E., & Wright, R. A. (2009), "Effort," in: D. Sander & K. R. Scherer (Eds.), *The Oxford companion to emotion and the affective sciences*, Oxford University Press, pp. 134–135.

James, W. (1880), *The feeling of effort*, The Society of Natural History.

Kant, I. (1790/2007), *Critique of Judgment*, rev. ed. Translated by James Creed Meredith, Oxford: Oxford University Press.

Kruger, J., Wirtz, D., Van Boven, L., & Altermatt, T. W. (2004), "The effort heuristic," *Journal of Experimental Social Psychology*, 40(1), pp. 91-98.

Liu, S., Ullman, T. D., Tenenbaum, J. B., & Spelke, E. S. (2017), "What's worth the effort: Ten-month- old infants infer the value of goals from the costs of actions," *Science*, 358(6366), pp. 1038– 1041.

Massin, O. (2017), “Towards a definition of efforts,” *Motivation Science*, *3*(3), pp. 230–259.

Russell, P. A. (2003). “Effort after meaning and the hedonic value of paintings,” *British Journal of Psychology*, 94, pp. 99-110.

Smith, R. K., & Newman, G. E. (2014, May 19), “When Multiple Creators Are Worse Than One: The Bias Toward Single Authors in the Evaluation of Art,” *Psychology of Aesthetics, Creativity, and the Arts*, Advance online publication. http://dx.doi.org/10.1037/a0036928

Steinberg, L. (1955), “Month in review: Fifteen years of Jackson Pollock,” *Arts*, 30(3), pp. 43-46.