



Article

# The Common Ground of Open Access and Interdisciplinarity

# Patrick Gamsby

Memorial University Libraries, Memorial University of Newfoundland, St. John's, NL A1B 3Y1, Canada; pgamsby@mun.ca

Received: 25 October 2019; Accepted: 17 December 2019; Published: 19 December 2019



**Abstract:** In recent years, Open Access and interdisciplinarity have emerged as two prevalent trends in academia. Although seemingly separate pursuits with separate literature, goals, and advocates, there are significant interconnections between these two movements that have largely gone unnoticed. This paper provides a philosophical inquiry into the unexplored relationship between these two trends and makes the case that there is an intrinsic affinity between Open Access and interdisciplinarity and, as such, concludes that all interdisciplinary research, to remain true to the foundational tenets of interdisciplinarity, ought to be Open Access.

**Keywords:** open access; interdisciplinarity; scholarly publishing; research; scholarship; scholarly communication; information commons

## 1. Introduction

In early 2019, *The Chronicle of Higher Education* released its annual trends report, taking stock of the most significant movements currently shaping academia. Among other trends, such as the rise of the "mega-university" and the withering away of "remedial courses", an article titled "A Turning Point for Scholarly Publishing" put forth the argument that Open Access is "going mainstream" [1]. This ought not be a grand surprise to folks in the library world, considering a week has been devoted to celebrating Open Access every October since 2009 [2] and a movie furthering its movement contra paywalls was released in 2018 [3]. Nevertheless, it is notable as being acknowledged as a major trend throughout all of academia, one that extends well beyond the collective consciousness of the library world. The *Chronicle* article notes that the conversation pushing Open Access towards the mainstream is an upward trend, but the world of closed access in the form of publisher paywalls is still the "dominant system".

Although its intricate elements are perhaps not as well known as Open Access, at least in the library world, interdisciplinarity has also been a hot topic of discussion in recent years both inside and outside of academia. For example, in late 2017, an op-ed appeared on the Universities Canada website with the prophetic title "The Future is Interdisciplinary". Its author, Daniel Woolf, refers to interdisciplinarity as developing over the years from something that is "nice to have' to something that is a 'need to have'" for academic institutions [4]. A few months after this op-ed was published, in early 2018, an echo of Woolf's sentiment appeared in *The Guardian* in the form of an opinion article with the title "The University of the Future Will Be Interdisciplinary". Here, its author, Zahir Irani, argues that the "open, flexible boundaries" of interdisciplinarity "are likely to become increasingly important for academics and students" and will free higher education from the closed off "departmental traditions" of academic disciplines [5]. Yet again, an opinion piece appeared in *Inside Higher Ed* in May 2019 titled "The Case for Vibrant Interdisciplinary Mentoring". In this last piece, three students make the case for the importance of interdisciplinary mentorship, because "[e]ducating individuals, social structures and organizations to maximize talent requires the cultivation of interdisciplinary habits of

Publications **2020**, 8, 1 2 of 11

mind" [6]. Taken together, all three of these pieces form what could be viewed as a clarion call for interdisciplinarity, one that goes beyond simple support for a passing fad, but instead supports the belief that interdisciplinarity is here to stay.

Trends provide the benefit of widespread circulation and awareness, while also potentially providing the groundwork for glossing over their finer details. It is clear that Open Access and interdisciplinarity are both trendy topics at the moment, although ostensibly unrelated. The central argument being put forth here is that the two movements of interdisciplinarity and Open Access, seemingly running parallel in the academy as trends, actually share considerable common ground. It will therefore be important to illustrate the contours of these two trends in order to show their commonalities. Indeed, as I will argue, along with being current trends, having longstanding historical antecedents, present-day struggles against their opposites (disciplinarity and closed access), and an emphasis on crossing boundaries are common foundational features of both Open Access scholarship and interdisciplinary scholarship. Accordingly, this article will provide a philosophical inquiry into the unacknowledged interrelationship between Open Access and interdisciplinarity. Even though Open Access and interdisciplinarity are not often spoken of with the same breath, I will argue that they are kindred spirits and, in order to remain true to the core tenets of interdisciplinarity, all interdisciplinary research ought to be Open Access.

### 2. Interdisciplinarity

Interdisciplinarity is a term that is applied to many different activities in the academy. There are interdisciplinary teams, centers, programs, studies, journals, scholars, and so on. It is a buzzword, which ensures that when it is uttered it is not always clear if what is said is actually accurate or a reference to a cognate area. For example, multidisciplinarity is one such cognate area, which entails the juxtaposition of unrelated disciplines [7]. Simply stated, juxtaposition is not what interdisciplinarity is about. At its core, interdisciplinarity involves the integration of at least two disciplines in some fashion—methods, subject matter, and literature are all possibilities for interdisciplinary combinations. The integration occurs in order to establish or build on a common ground. It is, in effect, a "dialogue or interaction between two or more disciplines" [8]. There are numerous avenues available for interdisciplinary inquiry and numerous possibilities for integrating disciplines. Interdisciplinarity can be contrasted with disciplinarity, which, briefly, is a stance that does not seek to integrate with other disciplines and is content with defending disciplinary territory, along with furthering the pre-established goals of a discipline. This is not to say that those who identify with a discipline necessarily uphold disciplinarity at every turn, but this is clearly something that takes place in established disciplines.

According to Julie Thompson Klein, disciplinarity "constitutes a first principle" [9]. This idea of a "first principle" refers to disciplines as the default for the division of knowledge in academia, one that stretches as far back as Aristotle, who is often attributed with delineating academic specialties [10]. Plato, Aristotle's teacher, is, conversely, often attributed with focusing on the whole instead of discrete parts [11]. Simplifying considerably, Plato's approach can be seen as being akin to what would eventually become interdisciplinarity. Seen this way, interdisciplinarity somewhat paradoxically precedes disciplinarity. While academic divisions could be viewed as the default today, thanks to Aristotle, the spirit of disregarding a perceived need for academic boundaries could be seen as stretching back even further to Plato. Therefore, although interdisciplinarity is a current hot topic and practice, it is something that has been at work, overtly or otherwise, in scholarly pursuits for centuries.

In his book *Interdisciplinary Research*, Allen Repko uses the parable of the six blind men and the elephant to differentiate between disciplinarity and interdisciplinarity [11]. In this parable, six blind men are touching different parts of the elephant, assuming that the part they hold (the tail, for example) is the entirety of the thing before them. They are unable to see that they are touching a part of the elephant, not the whole elephant. The opportunity to collaborate and communicate is there, of course, but the men make no such effort. This focus on a part is what Repko describes as the basis for disciplinarity. Conversely, interdisciplinarity is an attempt to look at the whole or the connections

Publications 2020, 8, 1 3 of 11

between the parts. In the case of this parable, interdisciplinarity would look at the elephant as a whole, as opposed to solely focusing on the tail. It is a hybrid-space that is both/and rather than either/or. In a similar vein, Giles Gunn notes that the assumption of interdisciplinary practitioners "is that important dimensions of human experience and understanding lie unexplored in the spaces between those boundaries or the places where they cross, overlap, divide, or dissolve" [12]. To Gunn, being an interdisciplinarian is a matter of having a "certain predisposition" [12] for working beyond academic disciplinary boundaries. It is possible, then, to have a predisposition for interidisciplinarity even if someone is located in a department for a standard academic discipline.

Although cohesiveness is a shared characteristic of disciplines, they are by no means without drama or development. Disciplines are not static in their methods or objects/subjects of inquiry. They expand and contract and need constant evaluation and re-evaluation. They continue to evolve and morph. In their book *Outside the Lines*, Liora Salter and Alison Hearn acknowledge that there are "fierce conflicts within disciplines and the great divergences in approach and topics that characterize their subfields" [13]. Furthermore, disciplines are not simply shaped within their own walls; conflicts also arise from outside their borders. Salter and Hearn address this when they write: "disciplines are always subject to challenge both from within and from without" [13]. Such challenges can emerge from other disciplines as well as interdisciplinary practices, and such evolution brings to light new subdisciplines (specializations within disciplines) as well as the opportunity for new forms of interdisciplinary pursuits.

It is important to note the level at which interdisciplinarity occurs. Julie Thompson Klein argues that "[m]ost boundary crossing occurs at the level of specialties, not entire disciplines" [14]. That is, common ground is found between disciplines at the subdisciplinary level. Whole disciplines do not overlap in this instance, only subfields do. According to Salter and Hearn, within each discipline "there is a wide range of subfields" [13]. A university, however, is able to house a discipline without representing all of the subfields, and the same can be said for a university's library holdings. This suggests that a discipline cannot simply be defined by its subfields. However, it is also possible that it can be defined by its subfields. That is, if all the subfields are gone, the discipline is gone. But, if a department of sociology does not have someone who specializes in, say, social stratification, will it fail to be a discipline for the institution that houses it? This would most likely not be the case. Specific subfields do not seem to be a prerequisite for a discipline, but subfields that are recognized by others in the field as part of the discipline is necessary.

A key facet of disciplines is the ability to communicate with other researchers in the same field. Stephen Turner argues that "being able to read the literature in one's research specialty is essentially what a disciplinary degree program certifies a person to do" [15]. In order to be considered a subject specialist, one needs to have the requisite expertise regarding the literature. One also has to have an understanding of the terminology used in the field. In order to successfully integrate disciplines, then, an interdisciplinarian has to be able to speak the language of the disciplines one is using, which is to say the subdisciplines, and/or work alongside an interdisciplinary team member who can translate the scholarly language to the rest of the team. This becomes difficult if such a team's institution(s) do(es) not have library holdings that reflect what the interdisciplinary project they are working on is calling for. The team will need to look elsewhere, if they know what they're looking for (document delivery and interlibrary loans, for example), or they may be oblivious to such literature because they will not have access to it.

When thinking about interdisciplinarity, I am often reminded of a passage I found at the back of 20th-century German philosopher Theodor Adorno's unfinished final opus *Aesthetic Theory*. According to an editor's note, the passage was intended to be the opening epigraph, serving as the overarching motto for the entire book, but because of Adorno's premature death, it never came to fruition. The passage in question was not Adorno's own, but was actually going to be borrowed from fellow German philosopher Friedrich Schlegel who once wrote of a problem for any aesthetic theory, which is: "What is called the philosophy of art usually lacks one of two things: either the philosophy

Publications 2020, 8, 1 4 of 11

or the art" [16]. It would seem that the crux of the problem is ultimately a lack of integration between two different disciplines. The idea is that one of the two disciplines is privileged and the key component of interdisciplinarity, integration, is ultimately not adhered to. It is either a philosopher failing to adequately look at art, or an artist failing to be sufficiently philosophical. Depending on one's academic background, then, either philosophical or artistic, one will likely take a side between the two parts. Seen another way, this is not simply a problem of training and study, but also one of access. To make a very superficial and not entirely accurate distinction: If philosophy can be found in the books of a library, art can be found on the walls of museums; the two disciplines are in different spaces. For the purpose of this paper, it is instructive as a thought experiment of different disciplines being separated by access. If one only has access to the library, and the texts inside are the only texts with which one can establish one's background, chances are that they will have a philosophical perspective, and vice versa if one only has access to the museum. The ultimate problem is that an interdisciplinary common ground cannot be found or established if the appropriate access to the background materials is not available. An interdisciplinary common background of access is required in order to establish an interdisciplinary common ground.

It is worth recalling the title of Stanley Fish's article "Being Interdisciplinary Is So Very Hard To Do" [17]. I argue that it is not only hard, but it is actually impossible to do when one does not have access to the relevant scholarship. Simply put, one cannot integrate what one does not have access to. This is where the proposed epigraph for Adorno's book comes back into play. I was able to stumble upon this passage because I own the book; I have continuous access to it. I randomly picked up the book one day, flipped through the pages and, as serendipity would have it, the passage stood out. If I did not own it, and, say, my home institution did not have it in its library, I would be hard pressed to stumble across this passage without someone pointing it out to me. But why would they do that when I am not currently doing work on aesthetic theory? It was chance that led me to this passage. It is in a similar vein to Isaac Newton's apple hitting him on the head as it fell from a branch above, which could be seen as a metaphor for chance discovery. Without the material conditions in place to allow for their possibilities, chance discoveries cannot take place. In order to integrate insights from various disciplines or subdisciplines, interdisciplinarians need access to the scholarship wherever it is. They need to have chance encounters, ones that can only happen with access.

Clues to lack of access can be found through access. That is to say, the bibliographies, footnotes, and endnotes of journal articles and books tell the tale of the boundaries of access. The authors of these books and journal articles had access to these works in order to construct their own scholarship. We know that Adorno had access to Schlegel's text. Through this access, Adorno was, as the famous Newton saying goes, "standing on the shoulders of giants." Seeing an interesting reference often spurs scholars to look it up themselves. If this is attempted and, say, the scholar's institutional discovery layer does not yield any results, and a quick Google search provides links to other things, the scholar has to pursue another avenue, such as purchasing the book or article, or going through interlibrary loans, if their institution has such a service. It would be much simpler and easier if the material were simply out in the open.

Occasionally, access problems can be circumvented through certain websites, such as the sneak peak option on amazon.com where consumers are invited to click on the cover of a book in order to 'Look inside' at its contents. This is the online shopping equivalent to picking up a magazine in a convenience store, it would seem. There is limited access to certain pages, but the majority are not available. Google Books is another option where there is also a finite amount of access offered for free. But, in the particular case of Adorno's *Aesthetic Theory*, the book has no preview on amazon.com and page 366, the page where I found the aforementioned passage, is not available on Google Books. The only way to see this passage in the way that I did is to have a copy of the book at one's fingertips, so to speak. That is to say, one must have access.

Publications **2020**, 8, 1 5 of 11

#### 3. Open Access

Open Access is being introduced into the fabric of higher education bit-by-bit at various levels of engagement with respect to policy and plans. Most recently, at the international level, Plan S has been getting considerable press (for example, the aforementioned article in The Chronicle of Higher Education) since it was introduced in the Fall of 2018 [1]. Plan S proposes 10 principles for making scientific publications funded by public grants from national and European research councils Open Access, beginning in the year 2021 (pushed back a year from the original 2020 deadline) [18]. In Canada, the Tri-Agency Policy on Open Access Publications is one example of a national level policy where, as of May 2015, all grant recipients are expected to make their funded work openly available within 12 months of publication [19]. As well, in the past several years, a number of North American institutions have adopted Open Access policies and have formed what is called the Coalition of Open Access Policy Institutions [20]. The overarching goal of the institutional bodies in implementing Open Access policies is to expose their researchers' work on a broader scale, as well as to pursue alternate avenues to the traditional publishing model where the institution pays twice for the research; once to the researcher to produce the work and another to the publishers in order to buy the research back with restrictions attached. Or, seen alternatively, for publicly funded institutions this would entail using public funds to pay for the research and using public funds to buy back the same research.

It is important to note that not all publishers are on the side of paywalls. There are publishers that make a difference in implementing policies to enable Open Access, as do individual researchers who take it upon themselves to make their work, especially articles, openly available, either through repositories or journals. Nevertheless, as was noted in the aforementioned trends piece in *The Chronicle of Higher Education*, "[o]ne major challenge will be incorporating open-access principles into the existing work culture of faculty members and researchers" [1]. Each of the above-mentioned levels (international, national, institutional, publisher, scholar) are contributing in their own way with the shared goal of having Open Access become the norm in scholarly publishing, in addition to the advocacy efforts of librarians and scholarly societies. As with any movement, there are supporters and there are detractors, there is progress and regression, and there is uneven development.

So what exactly is Open Access? To library professionals, such a question may be mundane, even trivial. Nevertheless, it should be said that while Open Access is a familiar term, it is largely unknown, much the same as interdisciplinarity. Like interdisciplinarity's distinction from its opposite—disciplinarity—Open Access can be distinguished from its opposite—closed access. Open Access could theoretically be applied to several types of entities accessible via the Internet, but Open Access typically refers to text-based scholarship in digital form available online through journals and/or repositories. There are many variations of Open Access on offer, all with varying degrees of allowance for author rights, reader rights, search engine readability, and immediacy of availability, etc. The basic features of Open Access consist of online, freely available scholarship that could otherwise be gated. The scholarship is usually, but certainly not limited to, journal articles in the form of PDFs, and the keepers of closed access are predominantly commercial publishing companies.

One of the leading advocates of Open Access, Peter Suber, offers the following succinct definition: "Open access (OA) literature is digital, online free of charge, and free of most copyright and licensing restrictions" [21]. Basically, if you have access to the Internet, you have access to Open Access literature. Suber also notes that Open Access could actually be called "barrier-free" access, although its emphasis on the negative makes the positive connotation of Open Access the preferable term. This is important to note, as the acknowledgement of barriers and the need to transcend these barriers as a focal point brings Open Access in line with interdisciplinarity. Julie Thompson Klein makes this clear when she writes how "the rhetoric of interdisciplinarity calls for lowering disciplinary walls" [14]. Is this not essentially what the Open Access movement is calling for with respect to paywalls? Both of these trends are rooted in efforts to go beyond barriers, to go beyond artificial erected walls. This is a key connection between interdisciplinarity and Open Access.

Publications **2020**, 8, 1 6 of 11

Another link between Open Access and interdisciplinarity lies with their respective connections to historical antecedents. It can be said that the material conditions for Open Access as we know it today were born alongside the Internet, albeit avant la lettre. Certainly, Open Access was codified in three public statement from the early 2000s: Budapest Open Access Initiative [22], Bethesda Statement on Open Access Publishing [23], and the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities [24]; however, the spirit of Open Access, the push to have free access for readers, predates these events and can be found in the ethos of public libraries in the pre-digital era of print. For example, inscribed in stone on the exterior of the Boston Public Library's McKim Building (built in 1895), just below the roof, are the words: "The Public Library of the City of Boston built by the people and dedicated to the advancement of learning." Further down the façade of the building, just above the arched doorway in the middle, are the words "Free to All." This, of course, does not mean that there were no costs. Clearly, the information inside had costs, and this public funding is alluded to with the words "built by the people", but "Free to All" means that there are no boundaries for access. This is another key point. Open Access, essentially, has the same inscription in its movement and practices, albeit metaphorically for the digital age. In order to truly advance learning, access has to be granted freely to all.

For those who prefer the feel and reading experience of a physical text, the screen-based experience of Open Access monographs and journal articles may not hold a great deal of appeal. Printing out a journal article may suffice, but printing out a whole book or parts of a book (if copyright permits) may not be an adequate reading experience for certain scholars. Nevertheless, it is always possible to see the digital and physical as complementary. As Rick Anderson rightly points out, e-books can be "used effectively as a database" [25]. Being able to search a text with optical character recognition can illuminate patterns that may not be evident in a cover-to-cover reading of a physical text. Even a book's table of contents, footnotes/endnotes, or index, while handy reference tools, do not offer the same possibilities as a fully searchable text. Furthermore, hyperlinks embedded in a digital text allow the user to navigate from, say, a chapter listed in a table of contents to the chapter itself, or from a reference in a footnote to the actual source material. E-books offer tools for a different reading experience, one that can both substitute and complement a physical text. Making these texts openly available allows for this intertextual reading experience to be available to everyone online.

Openly accessible texts would be beneficial to digital scholarship practitioners, who may wish to mine a large amount of texts en masse in order to detect patterns. The ContentMine project of Peter Murray-Rust et al. developed open source tools specifically for such text mining [26], in reaction to the many limitations of publisher application programmer interfaces (APIs) [27]. Murray-Rust refers to these ContentMine tools as "liberation software" specifically designed to "liberate knowledge" and make it "widely available" [28]. Murray-Rust even utilizes these tools in his own research, such as his co-authored article "Extracting data from vector figures in scholarly articles." In order to produce this article, Murray-Rust and his co-author C. H. J. Hartgerink restricted their search scope to Open Access materials in "order to legally redistribute those reports," because, as the authors point out, this "facilitates reproducibility of our procedures" [29]. To advance their scholarship, then, they needed to have materials with copyright that permitted redistribution. This is an important facet of digital scholarship more generally, but, in the case of text mining, it not only depends on utilizing appropriate software, it also depends on copyright allowing it. As Perry Willett astutely notes, "[c]opyright is the hidden force behind most electronic text collections" [30].

A key element for making a work openly available is author retention of copyright. It is important for scholars to acknowledge that copyright is theirs unless they give it away. As Martin Paul Eve puts it in his book *Open Access and the Humanities*, "copyright is automatically conferred on eligible works; simply by creating a work, the author invokes the legal protections" [31]. So, unless a publisher agreement is signed to transfer copyright, it remains with the scholar who creates the scholarship. For Open Access publications, Creative Commons Licenses have become the standard for authors to choose the contours of their copyright. As stated on the Creative Commons website, these licenses

Publications 2020, 8, 1 7 of 11

"give every person and organization in the world a free, simple, and standardized way to grant copyright permissions for creative and academic works; ensure proper attribution; and allow others to copy, distribute, and make use of those works" [32]. Without retaining copyright via a Creative Commons License, one may be constrained by publisher agreements for sharing and distributing one's work.

Imagine publishing ground breaking work on, say, the elusive philosophy of art sought by Adorno and Schlegel, in a journal that cannot be shared with one's colleague in the office next door. Sending a PDF of this article via email to your departmental neighbor is a violation of copyright. This could be the very same colleague that proofread early drafts. So, while sending the original Microsoft Word document is not a violation of copyright, sending the published PDF would be. The wall between the offices acts as both a separation of space and a separation of scholarship. Not to oversimplify the extraordinarily complex world of copyright, but it is worth simply asking: Does it make sense to have boundaries erected by someone else around one's own work? Expanding further, as far as dissemination is concerned, what exactly is the purpose of producing scholarship? Why do scholars do what they do? They do it, as the McKim building shows, because they, too, are "dedicated to the advancement of learning."

#### 4. Common Ground

The example of Theodor Adorno's philosophy of art, presented above, serves as an example for interdisciplinary interpenetration, or lack thereof, but it will be instructive to here use a further example of the importance of interdisciplinary issues and Open Access—climate change. Climate change is a common ground, so to speak, for everyone and everything on the planet, and it is an issue that cannot be confined to a single branch of knowledge. For example, marine biology (science), political economy (social science), and environmental ethics (humanities) are only three examples of subdisciplines that wrestle with the issue of climate change. As Allen Repko notes, in reference to global warming, "[o]n too many issues of public importance, the disciplines tend to talk past each other" [11]. Furthermore, Joe Moran argues that interdisciplinarity "tends to be centered around problems and issues that cannot be addressed or solved within the existing disciplines" [8]. Climate change is but one example of such an issue.

Even though there are areas of inquiry that clearly cut across disciplinary boundaries, there is still the potential for certain scholars to actively avoid engaging in such dialogue. During his Rede Lecture at the University of Cambridge in May of 1959, C. P. Snow argued that there were essentially two dominant intellectual cultures in academia. Snow famously lamented that the predominant "two cultures" of academia at the time—scientists on the one side and literary intellectuals on the other—had no common ground to meet and would actually go out of their way to avoid meeting [33]. Though sharing the same umbrella of academia, these two cultures rarely interacted with one another, at least not in a meaningful way that would advance knowledge. This, it seems, was no accident, but it was firmly ingrained in their cultures. Neither side was willing or able to "find much common ground" [33]. If this still largely holds true, and such factions of scholars are uninterested in anything outside their own disciplines, then it makes studying interdisciplinary issues like climate change much more difficult.

Martin Paul Eve makes a single mention of the "two cultures" in his book *Open Access and the Humanities*, but it is nevertheless a salient point that, despite the differences between the sciences and humanities, the "uses of preceding work through citation in both the humanities and the sciences remain broadly the same" [31]. This gives a baseline connection between the two cultures that ought to resonate with practitioners on both sides. After all, avoiding other disciplines in toto is not so easy, especially if one looks for research via the Internet, specifically with search engines. Interdisciplinary work blurs rigid distinction, so stumbling upon a work in the open online that is of common interest, such as a piece on climate change, is difficult to avoid and, if it were to happen, could perhaps lead to a shift in attitudes. Snow argued that avoiding other disciplines is a matter of stubbornly speaking past

Publications 2020, 8, 1 8 of 11

one another and, as far as the lack of common ground, "[m]uch of it rests on misinterpretations which are dangerous" [33]. According to Snow, "[t]he clashing point of two subjects, two disciplines, two cultures—of two galaxies, so far as that goes—ought to produce creative chances. In the history of mental activity, that has been where some of the breakthroughs came. The chances are there now. But they are there, as it were, in a vacuum, because those in the two cultures cannot talk to each other" [33]. With this unwillingness to speak to one another, they are "struggling to hear messages, obviously of great importance" [33]. It would seem that even if one wanted to remain in one's discipline, in order to truly advance learning, being open to the possibilities of interdisciplinarity is still necessary. Snow offered the following advice for alleviating the lack of common ground between scholars: "There is only one way out of all this: it is, of course, by rethinking our education" [33]. This latter sentiment can be slightly tweaked to read: "rethinking our publications". Rethinking both education and publications would go a long way towards the advancement of learning.

In addition to placing their work in Open Access venues, one practical step that could be taken would be for interdisciplinary journals, organizations, institutes, scholars, and so on, to formalize Open Access as the default for scholarly publishing. This could be accomplished via the codification of such a default with something as simple as a statement. Such a statement could be constructed by one organization and adopted by others, or by one scholar and adopted by others. A great example of this is the Association of College & Research Libraries (ACRL) Policy Statement on Open Access to Scholarship by Academic Librarians. This statement stipulates that ACRL "recommends as standard practice that academic librarians publish in open access venues" [34]. To use a phrase from Christine L. Borgman, constructing a statement similar to ACRL would effectively "make the invisible assumptions visible" [35]. Put another way, it would help make visible the invisible connection between Open Access and interdisciplinarity.

In his book *The Access Principle*, John Willinsky makes the case that "Open Access models of scholarly publishing hold out some promise for broadening the circulation and exchange of knowledge while more generally expanding research's presence in the world" [36]. Among the benefits of Open Access, increased citations and increased visibility are two important benefits [21]. More people will see and cite someone's work if they have access to it. If one's research is out in the open, there is a greater chance of it being seen than if it is behind a paywall. When scholarship is out in the open, it is also rather difficult to predict what its readers will do with it. A fair assumption would be that those who work in similar fields as the author would most likely have an interest in a particular work; however, the rest of the readers cannot be accounted for. We cannot really predict who will read a work or what their purpose in doing so will be. These readers have been referred to as "unexpected readers" [37]. Unexpected readers cannot, by definition, be accounted for, so you never know whose eyes will see your work. Furthermore, there is also a greater chance of finding someone else's work. It is a mutually beneficial endeavor for both the authors and the readers. After all, when it comes to scholars, authors are readers and readers are authors.

The opportunities for collaboration are elevated when work is openly available. There is the potential for any/all readers to provide a new angle to something presented in a text. A reader could bring to light something in a work that the author left unintentionally underdeveloped, or was perhaps not even aware of the potential of, along with the loose threads the author intended to have others pick up, correct, or expand upon. Having scholarship available via Open Access helps reveal whether or not there is a fit between the works of various scholars. In a very practical way, graduate students looking for a supervisor at other institutions, for example, will be able to get to know the work of a potential supervisor much more easily.

The public should also not be forgotten here. As John Willinsky notes, "[w]hile much of the discussion around this alternative publishing model known as Open Access has been directed toward increasing access to research for researchers, Open Access is also, for me, about turning this knowledge into a greater vehicle of *public education*, in its broadest sense" [36]. This is especially resonant for work that has been publicly funded. There is the possibility for interdisciplinary integration with

Publications **2020**, 8, 1 9 of 11

non-academic pursuits that would benefit from research available out in the open. Again, one never knows who will read Open Access scholarship or what they will do with it. The innovative possibilities are only there if the inspirational research is there to be found.

#### 5. Conclusions

All academic disciplines would benefit from the advancement of Open Access; however, there is an intrinsic affinity between Open Access and interdisciplinarity, and not simply because they are two widely acknowledged trends in present-day academia. Historically, the common ground of crossing boundaries shared by Open Access and interdisciplinarity have existed in libraries and academia, respectively, for quite a long time. In fact, this boundary crossing is foundational to these two institutions, as opposed to the closed access and disciplinarity that eventually became the norm.

The basic thrust of what has been presented here is that there is a great deal of importance regarding Open Access scholarship for interdisciplinary pursuits. To remain consistent with the core tenets of interdisciplinarity, that of crossing boundaries and creating common grounds through integration, interdisciplinary practitioners ought to have Open Access as the default for their scholarly work. Open Access and interdisciplinarity have an intrinsic affinity with one another that ought to be recognized by interdisciplinary practitioners everywhere. Interdisciplinary common grounds of all stripes will be much more fertile and will yield much more interesting results when the prerequisite interdisciplinary common backgrounds are available. As well, the materials made openly available would greatly increase if those with an interdisciplinary predisposition made Open Access the default for their scholarship.

To conclude, it is worthwhile to return to an example that has been used throughout this paper—the quote of Schlegel's I stumbled upon in Adorno's *Aesthetic Theory*—which is as follows: "What is called the philosophy of art usually lacks one of two things: either the philosophy or the art." With Open Access, we are able to get one step closer to attaining one of the ever-elusive nexus points of interdisciplinarity that have eluded so many—a philosophy of art. As well, there is even the possibility of advancing the study of climate change if the scholarship put forth by the numerous subdisciplines that study it are made openly available. These are only two of countless examples outlining the importance of interdisciplinarity and Open Access. Scholarship that is or is not part of one's immediate research project can provide a catalytic point of departure, and the only way to utilize this research in order to further the advancement of learning is by having access to it.

Funding: This research received no external funding.

**Acknowledgments:** The author would like to thank his colleagues at Memorial University of Newfoundland, especially Heather Pretty and Beth Maddigan, for their encouragement and support. I would also like to thank the reviewers for their thoughtful comments regarding this paper. Finally, I would like to thank Norah and Molly Gamsby for inspiring me every day.

Conflicts of Interest: The author declares no conflict of interest.

#### References

- 1. Ellis, L. A Turning Point for Scholarly Publishing. Available online: https://www.chronicle.com/interactives/ Trend19-OpenAccess-Main (accessed on 10 October 2019).
- 2. About Open Access Week. Available online: http://www.openaccessweek.org/page/about (accessed on 17 November 2019).
- 3. Paywall: The Business of Scholarship. Available online: https://paywallthemovie.com (accessed on 21 November 2019).
- 4. Woolf, D. The Future is Interdisciplinary. Available online: https://www.univcan.ca/media-room/media-releases/the-future-is-interdisciplinary/ (accessed on 27 August 2019).
- Irani, Z. The University of the Future will be Interdisciplinary. Available online: https://www.theguardian. com/higher-education-network/2018/jan/24/the-university-of-the-future-will-be-interdisciplinary (accessed on 27 August 2019).

Publications **2020**, 8, 1 10 of 11

6. Newton, C.R.; Fins, J.J.; Gorivitz, S. The Case for Vibrant Interdisciplinary Mentoring. Available online: https://www.insidehighered.com/advice/2019/05/07/importance-interdisciplinary-scholarly-mentoring-opinion (accessed on 27 August 2019).

- 7. Klein, J.T. Interdisciplinarity: History, Theory, & Practice; Wayne State University Press: Detroit, MI, USA, 1990.
- 8. Moran, J. *Interdisciplinarity*; Routledge: New York, NY, USA, 2001.
- 9. Klein, J.T. Blurring, Cracking, and Crossing: Permeation and the Fracturing of Discipline. In *Interdisciplinarity: Essays from the Literature*; Newell, W.H., Ed.; The College Board: New York, NY, USA, 1998; pp. 273–295.
- 10. Klein, J.T. *Humanities, Culture, and Interdisciplinarity: The Changing American Academy;* State University of New York Press: Albany, NY, USA, 2005.
- 11. Repko, A.F. Interdisciplinary Research: Process and Theory; Sage: Los Angeles, CA, USA, 2008.
- 12. Gunn, G. Interdisciplinary Studies. In *Interdisciplinarity: Essays from the Literature*; Newell, W.H., Ed.; The College Board: New York, NY, USA, 1998; pp. 251–271.
- 13. Salter, L.; Hearn, A. *Outside the Lines: Issues in Interdisciplinary Research*; McGill-Queen's University Press: Montreal, QC, Canada, 1997.
- 14. Klein, J.T. *Crossing Boundaries: Knowledge, Disciplinarities, and Interdisciplinarities*; University of Virginia Press: Charlottesville, VA, USA, 1996.
- 15. Turner, S. What are disciplines? And how are interdisciplinarity different? In *Practicing Interdisciplinarity*; Weingart, P., Stehr, N., Eds.; University of Toronto Press: Toronto, ON, Canada, 2000; pp. 46–65.
- 16. Adorno, T.W. Aesthetic Theory; University of Minnesota Press: Minneapolis, MN, USA, 1997.
- 17. Fish, S. Being interdisciplinary is so very hard to do. In *Interdisciplinarity: Essays from the Literature*; Newell, W.H., Ed.; The College Board: New York, NY, USA, 1998; pp. 239–249.
- 18. cOAlition, S.; Plan, S. Available online: https://www.coalition-s.org (accessed on 15 September 2019).
- Canadian Institutes of Health, Natural Sciences and Engineering Council of Canada, & Social Sciences and Humanities Research Council of Canada. Tri-Agency Open Access Policy on Publications. Available online: <a href="http://www.science.gc.ca/eic/site/063.nsf/eng/h\_F6765465.html?OpenDocument">http://www.science.gc.ca/eic/site/063.nsf/eng/h\_F6765465.html?OpenDocument</a> (accessed on 16 September 2019).
- 20. SPARC. Coalition of Open Access Policy Institutions. Available online: https://sparcopen.org/coapi/(accessed on 15 October 2019).
- 21. Suber, P. *Open Access*; The MIT Press: Cambridge, MA, USA, 2012; Available online: https://dash.harvard.edu/handle/1/10752204 (accessed on 2 October 2019).
- 22. Chan, L.; Cuplinskas, D.; Eisen, M.; Friend, F.; Genova, Y.; Guédon, J.C.; Hagemann, M.; Harnad, S.; Johnson, R.; Kupryte, R.; et al. Read the Budapest open access initiative. *ARL Bimon.* **2002**, *14*, 48.
- 23. Brown, P.O.; Cabell, D.; Chakravarti, A.; Cohen, B.; Delamothe, T.; Eisen, M.; Grivell, L.; Guédon, J.C.; Hawley, R.S.; Johnson, R.K.; et al. Bethesda Statement on Open Access Publishing. Available online: https://legacy.earlham.edu/~{}peters/fos/bethesda.htm (accessed on 2 October 2019).
- 24. Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities. Available online: <a href="https://openaccess.mpg.de/Berlin-Declaration">https://openaccess.mpg.de/Berlin-Declaration</a> (accessed on 2 October 2019).
- 25. Anderson, R. Scholarly Communication: What Everyone Needs to Know; Oxford University Press: New York, NY, USA, 2018; p. 253.
- 26. The ContentMine. Available online: https://github.com/ContentMine (accessed on 27 November 2019).
- 27. Smith-Unna, R.; Murray-Rust, P. 11/12 November/December 2014. The ContentMine Scraping Stack: Literature-scale Content Mining with Community-maintained Collections of Declarative Scrapers. *D-Lib Magazine*. Available online: http://www.dlib.org/dlib/november14/smith-unna/11smith-unna.html (accessed on 27 November 2019). [CrossRef]
- 28. Sarah Benson. Peter Murray-Rust Explains ContentMine and the Open Access Universe. Available online: https://www.library.illinois.edu/scp/podcast/peter-murray-rust-explains-contentmine-and-the-open-access-universe/ (accessed on 27 November 2019).
- 29. Hartgerink, C.H.J.; Murray-Rust, P. Extracting Data from Vector Figures in Scholarly Articles. Available online: https://arxiv.org/html/1709.02261 (accessed on 27 November 2019).
- 30. Perry Willett. *Electronic Texts: Audiences and Purposes*; Schreibman, S., Siemens, R., Unsworth, J., Eds.; Blackwell: Oxford, UK, 2004; Available online: http://www.digitalhumanities.org/companion/ (accessed on 27 November 2019).

Publications 2020, 8, 1 11 of 11

31. Eve, M.P. *Open Access and the Humanities: Contexts, Controversies and the Futur*; Cambridge University Press: New York, NY, USA, 2014.

- 32. Creative Commons: What We Do. Available online: https://creativecommons.org/about/ (accessed on 20 November 2019).
- 33. Snow, C.P. The Two Cultures: and a Second Look; Cambridge University Press: New York, NY, USA, 1963.
- 34. ACRL Policy Statement on Open Access to Scholarship by Academic Librarians. Available online: http://www.ala.org/acrl/standards/openaccess (accessed on 18 November 2019).
- 35. Borgman, C.L. Scholarship in the Digital Age: Information, Infrastructure, and the Internet; The MIT Press: Cambridge, MA, USA, 2010.
- 36. Willinsky, J. *The Access Principle: The Case for Open Access to Research and Scholarship*; The MIT Press: Cambridge, MA, USA, 2006.
- 37. Smith, K. The Unexpected Reader. Available online: https://blogs.library.duke.edu/scholcomm/2011/11/15/the-unexpected-reader/ (accessed on 2 October 2019).



© 2019 by the author. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (http://creativecommons.org/licenses/by/4.0/).