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Revisiting Academic Library Design: A Response to William T. Caniano's "Academic Library Design: A Commons or an Athenaeum"

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Introduction

William T. Caniano's recent interesting article in *Library Philosophy and Practice* appears to make the following assertions: 1) The key defining element of the Commons model is the desktop workstation, and the aggregation of these causes a "labization" of the library. 2) The most valid assessment benchmark for the success of the Commons model is gate count. High Commons gate count, plus the allowance for user-defined space, creates noise problems inimical to the traditional scholarly ideal of the library. 3) Increased use of laptops and mobile devices in the future will drive down demand for desktops, thus drastically reducing gate count and causing our Commons to become deserted. We should start preparing now to abandon the Commons model and replace it with what Caniano calls the "Athenaeum" model (Caniano 2010). I will collegially argue here that Caniano describes the Commons model in the narrowest possible context, creating a rhetorical straw man which he then criticizes and metaphorically knocks down. Caniano glosses over important sections of the literature and real-world counter-examples that support a broader and deeper description of the Commons than he provides, and a richer context for its implementation and assessment than his article acknowledges. I will describe a number of those sections of the literature not mentioned by him, and examine several counter-examples that point to this richer context.

1) Caniano appears to argue that the key defining element of the Commons model is the public access desktop workstation, the aggregation of which results in "labization" of the library. To quote Caniano: "A Commons design does not fit user expectations of what a library looks like. It does however fit the description of a computer lab."... "The second problem with the adoption of the model is the reliance on the computer to draw the users into the library."

Many academic libraries had public access workstations, and even in-house computer labs, well before they developed and adopted the Commons model. Atkins Library at the University of North Carolina-Charlotte (UNCC) had a bank of public access workstations years before its Information Commons opened in 1999. In other words, Atkins Library, like numerous other libraries, had already gone through "labization." This is apparent from the study by Shill and Tonner which surveyed 354 library facility improvement projects carried out between 1995 and 2002 Their first article makes clear that over 50% of the libraries they surveyed already had more than 10 public access workstations even before their improvement projects began (2003, p. 448). Keep in mind that their study covered a period starting six years before the appearance of Carlson's "Deserted Library" article (Carlson 2001). These data thus do

not support a blanket assertion that deployment of workstations per se was sufficient to prevent or stem the "downward spiral" in library usage noted by Caniano during the mid to late 1990's. The same data may instead support the conjecture that there were underlying shortcomings with the manner in which those early workstations and labs were deployed in libraries, and that their use by students may not have been adequately supported by library or IT personnel. I will return to this question shortly.

In the study by Shill and Tonner. the great majority of library improvement projects did substantially increase the number of available workstations. The same table shows that only 12.1% of the libraries had more than 60 workstations before their projects, while 40.1% of them did after project completion. The number of these adopting the Commons model is not explored in the survey, but it must have been a relatively small minority. Shill and Tonner counted 354 projects completed by 2002, while even by 2010, a PhD candidate preparing a Commons survey reports assembling a list of 152 (J. Whitman, personal communication, March 17, 2010). An earlier posting by Murray to the INFOCOMMONS-L listserv had estimated 98. (Murray 2010) Of the Commons case studies in the ALA Editions book by Bailey and Tierney, over 50% reported opening dates in 2003 or later, thus postdating the Shill and Tonner study (2008, pp. 99-129). If libraries *without* the Commons model had public access workstations, and libraries *with* the Commons model also had them, then it is difficult to justify a claim that public access workstations per se constitute the defining element of the Commons model. If nearly all 354 library projects surveyed by Shill and Tonner increased the number of workstations during a period when the total number of Commons facilities clearly numbered well less than a third of those 354, then it seems equally difficult to justify a claim that the distinguishing feature of Commons implementation rests in a simple increase in the number of workstations.

The more accurate generalization, I submit, is that by the mid-1990's pre-Commons workstations and labs had already created new problems with student demands upon public service units that the traditional library reference model was not well-positioned to solve. Reference librarians were trained to help students identify and retrieve the electronic (and print) resources they need. But at UNCC, students who requested further assistance with manipulation and processing of online resources were typically referred to other learning support units outside the library, such as the IT help desk, because manipulation involves productivity software. And when students moved on to composing their own analyses and presentations of original work, they again typically found little help within the library, and were instead referred to units such as media services, because presentation often involves multimedia tools.

One early article anticipating this problem was authored by Molholt, who predicted that library public services staff would face new difficulties supporting researchers using "…the growing array of software available to handle information in the online environment." (1985, p. 285) Molholt described a sequence of activities such a researcher might need to follow while working in the library. But instead of promoting the simple placement of a computer lab in the library, Molholt questioned whether and how we could "draw a line between the library and the laboratory," and concluded that librarians must "take the best from two existing systems—libraries and computing—and move toward the *integrated* information support system of the future."(emphasis added) (Molholt, p. 288) One example of a study in the literature that uncovered some of the problems predicted by Molholt was the 2001 focus group study by Young and Von Seggern, who found student dissatisfaction with the early model of the generic computer lab in the reference room. Their focus groups revealed that the key source of this student dissatisfaction lay precisely in the fact that library staff were unprepared to deal with the broader range of questions about manipulation, processing, and presentation of information that inevitably required the use of productivity software. As their study stated: "…the library staff is assumed to know how to help…with questions about software programs. This confusion is [a] source of frustration for users…Adoption of the information commons model, …could be an effective step in reducing frustration..."(2001, p. 165) Lurking problems with the generic library-based computer lab may also have surfaced in the very study by Shill and Tonner that Caniano has emphasized. In their follow-up analysis article "Does the building still matter?" Shill and Tonner conclude: "Somewhat surprisingly, fewer facilities with general computer labs (38.2%) experienced 50 percent post-occupancy usage growth than facilities without general computer labs (45.5%)" (2004, p. 143). In other words, it is not at all clear that generic (or "general") computer labs have reliably facilitated major usage growth in newly-built or renovated libraries, even though such labs clearly offer students access to desktop workstations. These results "surprised" Shill and Tonner, but would not surprise a Commons planner familiar with Molholt's predictions and Young and Von Seggern's study.

These results precisely paralleled the student dissatisfaction with pre-Commons library workstations and labs I found at UNCC upon my arrival there in 1997. The Commons model was a response to these problems, as it was designed to supplement the reference model with a new model of service delivery.

The first element, as specified in my 1999 article, was called a "continuum of service," or integrated services (to echo Molholt), or one-stop shopping (Beagle 1999). The goal was to minimize blind referrals to units beyond the library, either by having those units a) train library student workers in IT and media support, or b) station some of their own support staff within the Commons, or c) ultimately co-locate their own operations within the Commons, and in so doing, move from the Information Commons model to the Learning Commons model. Placing such IT and media support staff *at the same desk* as reference librarians was never a defining aspect of the model, however. In my recent article summarizing the past decade of Commons developments, I give examples of single desk and multiple desk facilities, as well as an example where reference librarians work almost exclusively from their offices while the central help desk is staffed by IT and media support personnel (Beagle 2010).

At this juncture, it is fair to ask what is wrong with referrals to units beyond the library if IT support and media services exist beyond the purview of normal library services? At UNCC, we found that blind referrals correlated with measurable student dissatisfaction with the library, echoing the findings of Young and Von Seggern. More broadly, the practice of blind referrals collides with the objection that our own ACRL competency standards for information literacy go beyond information access and retrieval to the full range of activities entailed by those very student demands, including the manipulation, processing, and interpretation of digital information retrieved from our own databases, and on to the description and presentation activities inherent in the creation of new knowledge. If we, as a profession, are to teach (and sometimes preach) the importance of all six ACRL competency standards, are we really in a position to insist that most of them cannot or should not be supported for students by our library's own internal service model? Consider a relatively basic real-world example: a botany student wants to assemble dozens of jpeg images of plant species into a single annotated pdf file for a) comparison with images from a botanical database, b) original descriptive annotation, and c) presentation. All three activities clearly fall by definition within the rubric of the ACRL competency standards. It would be fascinating to learn what percentage of reference librarians, even today, could effectively assist this student beyond database retrieval. It is not clear whether Caniano's Athenaeum would include a wholesale abandonment of integrated services, but if it does, I would argue that it would also signal a critical retreat from the library's support of the ACRL competency standards.

The centrality of the continuum of service to the Commons model is amply described in the literature. It appears, for example, in overview articles by Bennett (2009) and Spencer (2006), and receives an entire chapter in *The Information Commons Handbook*, including tables that relate the service model to the ACRL competencies, the ETS I-Skills, and the eight dimensions of information literacy famously proposed by Shapiro and Hughes (Beagle 2006, pp. 29-54). Bailey and Tierney go on to amplify this relationship: "It may be helpful to conceive of information literacy as the curriculum information professionals teach within the IC framework. Information literacy and the information commons are complementary organizing principles . . . reminiscent of Benjamin Bloom's 1956 taxonomy of educational objectives."(2008, p.6)

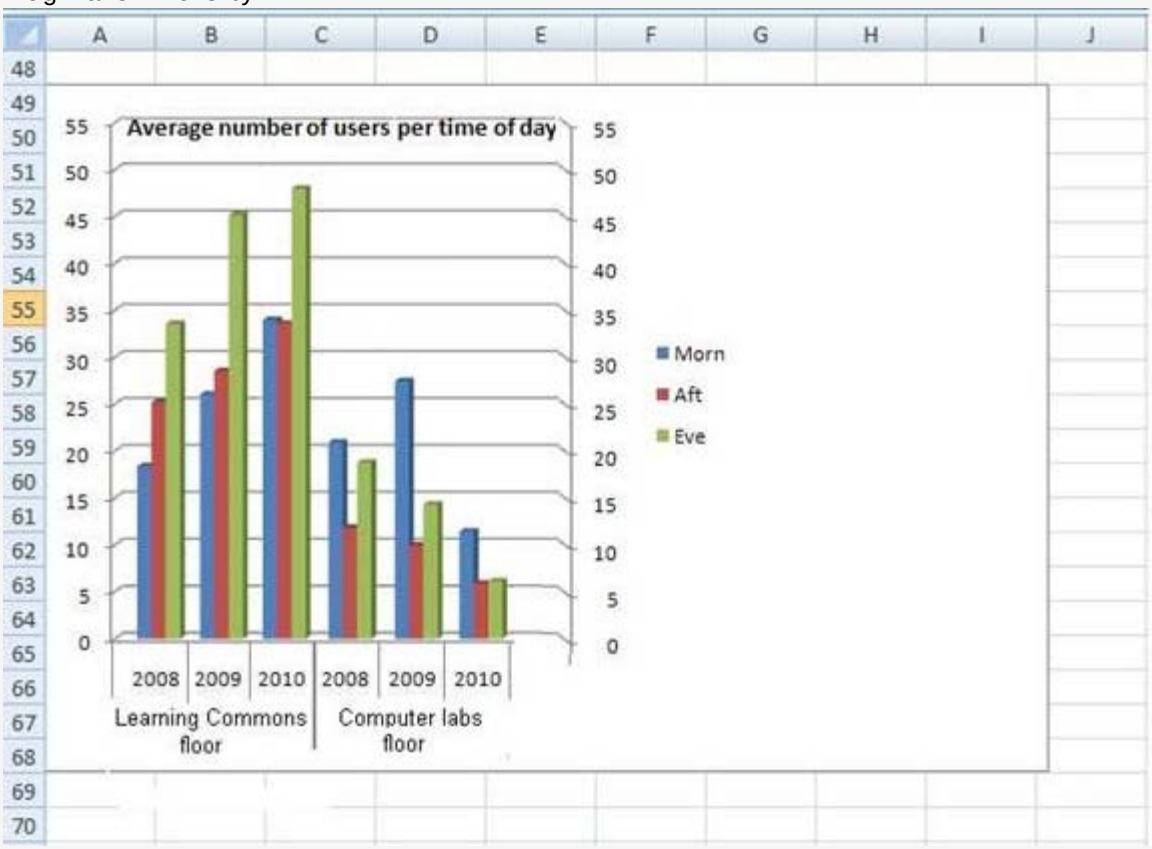
Caniano glosses over this basic relationship, giving himself license to casually conflate development of the Commons model with a "labization" of libraries on the most superficial level. Yet, it is not even clear from existing data that adoption of the Commons model typically increases the number of new workstations beyond what would have been added anyway, although one might speculate that this could be the case. A stronger case can be made (although still a speculative one) that the Commons model spurs the inclusion of higher quality workstations than otherwise, due to the incorporation of productivity and multimedia software encouraged by integrated services. In the new Learning Commons at Belmont Abbey College, for example, the inclusion of the Adobe Creative Suite prompted adoption of workstations with faster processors and larger monitors than the college's baseline computer-lab model. Ongoing usage studies for this new Commons are already showing a student preference for the upgraded workstations. I will return to this question later in a discussion of data compiled by Shill and Tonner that also showed favorable student reactions to a factor they termed "quality of workstations."

Caniano correctly points out that the data produced by Shill and Tonner also support the very positive impact of features like natural lighting on student usage of library buildings. When Commons development takes place as part of an overall renovation or construction project, it can at first seem difficult to differentiate between usage impacts of those features specific to the Commons model and those features of general facility improvement. This problem makes the example of Salve Regina University (SRU) in Newport, Rhode Island, especially interesting. Salve Regina already enjoyed a modern library facility built in the early 1990's. SRU's McKillop Library features beautiful natural lighting, splendid internal ambience, and a logical and effective layout for traditional service delivery. Significantly, it also encloses not one but two legacy computer labs. Yet, by 2004-2005, use of these labs was declining and Library Director

Kathleen Boyd was exploring the Learning Commons model. I was invited to Salve Regina twice to make presentations and lead staff discussions. Over my two visits to campus, I made repeated randomly-timed stops at both labs, noting that lab usage then hovered around 35-40% of workstation seating.

McKillop Library opened its new Learning Commons in 2008, but significantly, the legacy computer labs were left open and operating, allowing subsequent usage comparisons. Figure One shows the graph tracking usage of the floor with the new Learning Commons compared to usage of the floor with the legacy computer labs over the three years of Commons operation. Usage of the labs has further declined to the point that one is being converted to an instructional classroom. The key point to be emphasized here is that in McKillop Library those complicating factors like natural lighting and building ambience remained unchanged over the course of Commons development. McKillop Library is an example where the Learning Commons is in fact bringing about the "de-labization" of the library.

Figure One. Graph courtesy of Kathleen Boyd, Director of McKillop Library; Salve Regina University



It must be acknowledged here that those of us who develop Commons and who write about the model are not in a position to act as "terminology police." There is nothing to stop library managers from setting up generic computer labs lacking integrated services and then slapping the "Commons" label on such labs. If this is happening with sufficient frequency, then the community of practice will redefine the Commons model in *de facto* fashion by vitiating a central underlying premise, and Caniano's complaint about Commons "labization" will become valid at least in practical, if not theoretical, terms. Is such a *de facto* redefinition taking place or has it already taken place? No extensive survey of the roughly 150 self-identified Canadian and U.S. Commons facilities has been completed as of this writing. Of the case studies presented by Bailey and Tierney, for example, it is notable that 100% specify that they offer integrated services to some degree (2008, pp. 99-129). Among these facilities, at least, there appears to have been a deliberate effort to move beyond the old blind-referral service model more characteristic of the mid-1990's. In this very limited data set, one sees no indication of a simple re-labeling of legacy computer labs.

2) The most valid assessment benchmark for the success of the Commons model is gate count. This high gate count, plus the allowance for user-defined space, creates noise problems inimical to the traditional scholarly ideal of the library.

Caniano cites and quotes what appears to have been a verbal statement by Bailey in response to a

question following a presentation, to wit: "The success of the Information Commons is the gate count. Students vote with their feet" (cited to: SENYLRC 7 May 2009). But there is ample evidence that Bailey himself views Commons assessment in broader terms, and that Caniano places far too much relative weight on this single quoted remark. Bailey contributed an entire chapter on IC assessment for *The Information Commons Handbook*, only a small part of which deals with gate count (2006, pp. 193-212). The section on assessment in his own book (co-authored with Tierney) devotes one brief paragraph (12 lines) to quantitative measures including gate count, while the following two and a half pages are devoted to qualitative measures ranging from focus groups to surveys (2008, pp. 19-23). None of the qualitative assessment measures clearly emphasized by Bailey in his writings are mentioned by Caniano. It is true that the Commons literature includes anecdotal descriptions and site-specific tabulations of dramatic gate count increases, such as the example from Trinity University I included in *The Information Commons Handbook* (2006, p. 23), or for that matter, the usage data from Salve Regina University offered above. But one is hard-pressed to find assertions that the Commons model represents the only way or even necessarily the easiest way to achieve simple numerical increases in library usage.

The emphasis on qualitative measures clearly evidenced by Bailey's writings is also apparent in a number of recently-released Commons assessments, none of which are mentioned by Caniano. I will briefly focus here on the study of the Learning Commons at North Carolina State University by Sherman and at the University of Connecticut by Fuller. The first signal of the model's impact in both studies emerges in what Sherlock Holmes called "the dog that did not bark in the night." Neither study uncovered any evidence of the student dissatisfaction with software support and service delivery found by Young and Von Seggern in their study of the pre-Commons library computer lab. In Sherman's study, the query *What do you like most about the Learning Commons?* prompted high (and nearly equal) responses favoring "computing facilities" and "atmosphere or environment" (2008, pp. 39-40). In the UConn study, Fuller comments: "Information technology services in the Learning Commons are well-used and liked by patrons. Respondents overwhelmingly indicated that computer, photocopying, printing, scanning, and laptop facilities (e.g., desks and power) meet their needs."(2009, p. 5)

Both the NCSU and UConn studies do support increased gate count generalizations. To quote Sherman, "By far, the main result of implementation of the Learning Commons as perceived by students was increased use of the library"(2008, p. 46) On a lower tier, but still statistically significant, were qualitative responses that support the anticipated impact of integrated services, such as "…individuals reporting that the Learning Commons (as opposed to other parts of the library) was now their primary destination for research or computing," and "…respondents reporting improved study skills"(2008, p. 47). Given the weight that Caniano places on the negative impact of the Commons model on students seeking traditional quiet space, it seems notable that Sherman recorded an equal number of students reporting that the Commons made the library a "more relaxed/enjoyable" place to work (13) to the total number of students reporting that the Commons caused them to either move to a different location in the library (8) or decrease their use of the library (5). Overall, the NCSU students reporting that the Commons caused them to increase their use of the library (57) outnumbered the students reporting that it caused decreased use (5) by a factor of *ten to one*. (2008, p. 47) The one area of Caniano's concern that is reflected in Sherman's study is noise, with 18% (31 of 170) supplemental comments suggesting noise reduction as a future recommended improvement.(2008, p. 43)

Fuller's 2009 study of the Learning Commons at the University of Connecticut offers even greater support to the view that qualitative assessments will reveal the benefits of integrated services and other Commons features. Fuller's most striking findings are that "…84.3% of undergraduates feel the Learning Commons has helped them successfully complete academic assignments," and "Most are visiting several times a week (45.7%) or daily (12.9%)."(2009, p.2) Differences in the question sets and methodologies between Fuller and Sherman make comparisons inexact, but some key similarities emerge. Both studies produced overall group user profiles that matched university enrollment profiles quite closely with both showing slight tilts toward use by undergraduates. Both reveal similar sets of usage patterns clustered around four primary tasks, with individual study topping both lists by significant margins, and library research, computing, and group study gathered on a lower tier in close proximity and in slightly different order . A lower percentage of students (11%) made negative supplemental comments about noise in the UConn results than in NCSU's (2009, p.9).

Returning to the broader question of usage and assessment, Caniano's interpretive remarks make it unclear whether he views the Shill and Tonner study as supporting or not supporting a claim that simply increasing deployment of workstations will lead to increased use. In one place he states: "…we can see that the only aspect of the Commons that leads to increased gate counts is number of public access

computers …" while seven paragraphs later he states: "…it can be seen that the Commons has stumbled upon success not by …deploying banks of computers but by renovating and modernizing." What Shill and Tonner actually report validates neither extreme end of Caniano's interpretation. Instead, they state: "Table 15 suggests the existence of a mild, positive relationship between the number of public workstations in a facility and increases in postproject usage, but it is not statistically significant."(2004, pp. 137-8)

A careful examination of other factors found to be of greater statistical significance in library improvement projects reveals an important pattern. In Table 20 column 3 (third column from left of table), Shill and Tonner list the percentages of libraries experiencing more than 50% growth in usage when they incorporated what is termed a "non-library facility," and then in column 4, they list equivalent percentages of libraries without those same facilities that still experienced more than 50% usage growth.(2004, p. 142) In theory, non-library facilities showing the largest spread between a high percentage in column 3 and a low percentage in column 4 would have the greatest positive impact on library gate count. Of the 12 types of facilities listed, only 7 had higher figures in col. 3 than in col. 4. But 5 of these 7 having statistically significant positive impacts are frequently associated with the Commons model in the literature (ranked here by order of positive impact): writing center, multimedia production center, classroom, seminar room, and educational technology center. And a 6th, the auditorium, is at least occasionally associated with the Commons model. Only 1 of the 7, the gallery, is not typically associated with the Commons model. Interestingly, both the snack bar/café and the general computer lab have *lower* figures in col. 3 than in col. 4, and thus neither makes it over the threshold of statistical significance.

Why are these 5 non-library facilities frequently associated with the Commons model? Is this just a happy coincidence or sheer dumb luck? No, it is the result of a deliberate strategy on the part of Commons developers to support not only the ACRL competencies by way of integrated service, but to further support emerging constructivist pedagogies that have prompted increased faculty interest in group process learning, often in proximity to technologies (Beagle 1999; 2010). Such pedagogies work most effectively in a facility that accommodates flexible use of multiple types of learning spaces including small group study rooms, seminar rooms, media studios, and classrooms. Some examples of such pedagogies in action can be found in the "Success stories" log maintained by the David C. Weigle Information Commons at the University of Pennsylvania. (Success Stories 2010) (In a discussion below on the topic of laptops I will return to one of these "Success stories" as an exemplar.) The adoption of such a pedagogical change by faculty is a developmental process that spans years, and the signature of its gradual growth may be partially hidden in the cumulative gate count totals where no isolated factor stands out. The gradual but steady growth in the adoption of the Commons model across campuses in Canada, the U.S, Australia, and now increasingly in Europe (Degkwitz 2006; Gläser 2008) and the Pacific Rim (Nagata 2009; Wong 2009) may rest in the fact that the model gathers several types of moderate-impact spaces, services, and technologies into the library in a coordinated way. This carefully orchestrated clustering of moderate-impact sub-units collectively results in a high-impact facility that becomes heavily used overall. This may also explain an odd contradiction Shill and Tonner found regarding group study rooms: "Unexpectedly, table 17 indicates that *there was no demonstrable relationship between the number of group study rooms and facility use*…. These findings were unexpected because many libraries reported—in the survey, via e-mail, and in follow-up site visits—that they had not provided an adequate number of group study rooms to meet student demand."[emphasis in original] (2004, p. 140) I would argue that this contradiction could be a statistical artifact resulting from the time-span of the study, from 1995 when fewer faculty were using constructivist methods to 2002 when the number of such faculty had increased. If you use a 1995 faculty survey to estimate space needs in your planned building, you will likely include fewer group study rooms than faculty will be requesting by 2002. And by 2003-2004, post-survey emails will reflect this need even more strongly. But the students who would have frequented those extra group study rooms that were never planned or built would not necessarily become non-users of the new library. Overall library gate count statistics may simply be too much of a blunt instrument to measure the use of internal group study spaces in support of constructivist pedagogies.

We also see a striking indication of the potential for Commons-related impact in another table by Shill and Tonner (Table 23) that ranks "Strength of Relationships between Specific Facility Features and Increases in Postproject Usage."(2004, p. 146) Of the top ten features ranked by strength of relationship to usage, 9 are qualitative, including quality of instruction lab, quality of layout, and quality of public access workstations. The only quantitative feature to crack the top 10 is "number of data ports." Caniano's comment: "…it can be seen that the Commons has stumbled upon success not by centralizing and importing non-library units or deploying banks of computers but by renovating and modernizing." That generalization is simply not supported by this data. Indeed, if one examines the numerous descriptions of

Commons planning in the literature, the data contradict Caniano's dismissive remark about the depth and range of planning that typically goes into Commons development and its consequent success in anticipating user needs. Consider "quality of layout," ranked 3rd, "quality of workstations," ranked 5th, "quality of user work space," ranked 7th, and "quality of telecommunications infrastructure," ranked 8th. In *The Information Commons Handbook*, *all* of these features are specified in a strategic planning discussion that spans two full chapters and that advocates aggregating user input through surveys, focus groups, and structured campus conversations (Beagle 2006, pp. 57-101). The integrated services and mix of flex-use spaces inherent in the Commons model in particular requires extraordinary emphasis upon quality of layout, as reflected in real-world examples from Queens University (Canada), where Larkspur Associates conducted an entire series of focus groups on that campus that generated no fewer than six proposed layouts as depicted in an extended series of flowcharts (Beagle 2006, pp. 91-97). Caniano does a disservice to such exhaustive strategic planning processes with his unsubstantiated claim that Commons developers have "stumbled upon" success in any way, shape, or fashion. Nor is this elaborate planning framework unusual. McMullen conducted a sabbatical study of some 18 Commons facilities across Canada and the U.S., and concluded in her final report: "Using much the same planning process described by Beagle, these IC/LC planning committees drafted charter documents that were instrumental in moving their projects forward" (2007, p. 3) To summarize, both Table 20 and 23 in the Shill-Tonner study identify features that were individually shown to positively impact library usage during a period before the opening of many modern Commons facilities. But the Commons model incorporates the majority of these features in a highly systematic and coordinated way in deliberate pursuit of learning outcomes related to both the ACRL competency standards and constructivist pedagogies. The success of the model is therefore hardly accidental or surprising.

3) Increased use of laptops and mobile devices in the future will drive down demand for desktops, thus reducing gate count and causing our Commons to become deserted. Caniano makes the sweeping statement that: "There is no doubt that laptops, netbooks and handheld Internet devices will increasingly become more potent options for users and as they do, the need for public access computers will decrease. It may well be the case that large computer labs, including the Commons, have already seen the zenith of their drawing power."

Caniano is not the only librarian to raise this question, but the conclusion he draws is by no means universal. In contemplating the proliferation of laptops and mobile devices, Bryan Alexander, co-director of the Center for Educational Technology at Middlebury College, expressed a contrasting view: "What does a campus look like when students are accustomed to reaching the Internet from wherever they stand, stroll, or lounge? We may be seeing…rising interest in new learning spaces such as information commons, where wireless mobile connectivity admits the full informatic range of the Internet into any niche or conversation" (Alexander 2005)

At the Belmont Abbey College, since the first phase of the Learning Commons implementation in late 2009 we have seen a very significant increase in library use and an even greater increase in computer use within the library. But within these totals we still are seeing peaks and valleys in use of desktop and laptop computers that parallel longstanding peaks and valleys of daily library usage. Laptop usage is showing only slightly greater variability than desktops. The following photographs show fairly typical workstation use levels (but were taken at times of unusually low use of study tables to avoid privacy concerns with depicting identifiable students). Figure Two and Three show the southwest corner of the Learning Commons, which features 3 reading tables (of 12 total in the LC), 3 desktop workstations at top left (of 30 total), and 5 laptop plug-in carrels at right (of 15 total). These photos were taken 2 hours apart on the same afternoon. Both show all 3 desktop workstations in use, which typifies the high percentage of desktop demand we consistently see across the peaks and valleys (one student had temporarily moved off-camera from a desktop workstation in Fig. Two). The laptop carrels show slightly greater variablility; about half were in use at 1pm; all were in use at 3pm. The building has total Wi Fi coverage, and while the laptop carrels also have both power and data ports, most laptop users use Wi Fi. (Students running laptops on battery power also often use study tables.) Figure Four, shot from another angle, shows 7 students using desktop workstations across the foreground and 6 using laptops across the background. We have not normally surveyed desktop users about laptop ownership, but a spot check on this day revealed that 6 of the 7 desktop users in this photograph are also laptop owners. In fact, the 4th student from the right in Figure Four is using his laptop and a desktop machine simultaneously. If I understand Caniano's argument correctly, we should expect to see the desktop demand drop drastically over the next few years (even though many of our current desktop users also already own laptops), and, for reasons that are not entirely clear to this reader, our current obvious demand from laptop users will also disappear,

and the spaces shown in Figures Two, Three, and Four will become deserted.

Figure Two: 1pm Oct 13. Learning Commons SW corner. Belmont Abbey.

Figure Three: 3pm Oct 13. Learning Commons SW corner. Belmont Abbey.

Figure Four: 3pm Oct. 18 Learning Commons NW corner. Belmont Abbey

Ultimately, decisions about the provision of desktop workstations or the Commons model itself must

depend not on sweeping assumptions by Caniano or myself, but upon careful analysis of current and trending student behaviors as well as that continuing conversation with faculty about pedagogical methods and desired learning outcomes. For one thing, constructivist pedagogy is not monolithic. Rather typically, it has subsidiary schools and practices. In a recent article, I examined the use of the Commons model to further the methods and goals of integrative learning (Beagle 2010). Integrative learning has connections to a number of other learning theories, among them, situated cognition and project-based learning, both of which are also discussed in *The Information Commons Handbook*. In examining faculty use of the Commons model in the U.S. and beyond, we are seeing clear indications that the linkage between the Commons and constructivism is gaining traction. The Weigle Information Commons "Success stories" mentioned above includes the following account by Dr. Valerie Ross, Director of the University of Pennsylvania's Critical Writing progam: "The Information Commons is a superb space for collaborative learning…Last year, many of my cinema studies students, working on collaborative film projects, relied on the multimedia staff for guidance on laying down sound and film editing. Some turned to the writing tutor for feedback on their screenplays and analyses ….my Narrative Studies class meets in the Info Commons seminar room, an amazing base for a collaboratively-driven research-writing seminar…. *Having laptops in the room*, we can move with ease from discussion to writing, revising, and researching; having booths right outside the room, students can break out and work on their collaborative projects and peer reviews…"[emphasis added](Ross 2010)

These laptops, far from being the threat to the viability of the Commons that Caniano and some others have predicted, have become instead a key linchpin between the Commons model and Ross' approach to constructivist pedagogy. Another Commons commentator archly dismissed Ross's statement by commenting: "As for Dr. Valerie Ross — I've found that most of the English faculty that I've encountered tend to love their libraries." (Mathews 2010) That comment clearly misses the entire intellectual import of Ross's use of laptops in the Commons. Ross can in no way be considered a traditional English teacher loving a traditional library for all the traditional reasons. In fact, she can best be considered the antithesis of that tradition-bound cliché. Consider the impact of integrated services. Not only are library databases are at hand for cinema research, but multimedia staff members help her students with film editing, a writing tutor assists them with narrative, and IT support can help resolve glitches with laptop functionality. Had these support services remained islands unto themselves beyond the library (as on many "traditional" campuses), Ross's class would not be a cohesive and well-functioning collaboration among her students, but a scattershot and tiresome exercise in multiple cross-campus referrals, and the traditional library itself would have remained largely peripheral to her students' success.

Ross's pedagogy and its demonstrated success presents just one of numerous exemplars that also refute other recent attacks upon modern libraries as innovative learning spaces. Johann Neem wrote in 2009: "Rather than make clear why we need academic libraries, the library's leaders are seeking instead to become vague learning environments which, when boiled down to their essence, are nothing more than computer labs with sofas and coffee." (Neem 2009) Setting aside for a moment Neem's bizarre and uninformed rhetoric (has anyone ever met a library leader who sought to personally *become an environment*?!) historian Neem shows an unfortunate ignorance of both the new learning environments he trivializes and the recent history of those traditional libraries he seeks to defend. "The classroom," asserts Neem, "is where students connect, collaborate, learn, and synthesize, under the guidance of faculty who are, at the end of the day, responsible for teaching." Neem's real quarrel here, however, is not with library leaders but with his own peers and colleagues, such as those non-librarian tenured teaching faculty who served with me on the Information Commons Task Force at UNCC in 1997-1999, and who unanimously predicted at that time the growing constructivist need for library learning spaces. In point of fact, I was the *only* librarian on that task force, and could hardly have railroaded nine opinionated and highly experienced professors from multiple disciplines into supporting some subversive effort by "library leaders" to claim any fraction of their professional turf. And it was not a committee of librarians, but two teaching faculty with backgrounds in learning theory (Shapiro & Hughes 1996) who proposed the most ambitious information literacy framework to date. Similarly, Dr. Valerie Ross clearly has a wealth of classrooms available at the University of Pennsylvania, and if they are so suitable for her pedagogical goals, one wonders why she has chosen not to use them for her narrative studies class. The answer, of course, is amply evident from a careful re-reading of her course methodology. Neem's claims are also refuted by an exemplar from Champlain College, where Library Director Janet Cottrell describes: "…the role of librarians as active collaborators has been strengthened by the incorporation of the campus faculty development center within Miller Information Commons. This co-location of librarians, faculty members, and the instructional designer in the Center for Instructional Practice made it easy for librarians to be much more closely involved with curriculum development than we might otherwise be. Although it would be easy to argue that the inclusion of non-library services within a library-based facility reduces the resources available for the library, our

experience has been just the opposite. Housing faculty services--and even faculty offices--within the Information Commons has extended our reach and facilitated our involvement during a crucial period of campus development." (J. Cottrell, personal communication, June 16, 2009)

Student-owned laptops and netbooks may in the end be less of a threat to the Commons model than if all students came to campus with their own powerful desktop computers equipped with a 24" monitors and suites of analytical and multimedia tools. At Belmont Abbey College, many students appreciate the option of leaving their laptops in dorms when desired, an option made feasible by the Commons' workstations as already shown in Figure Four. Another key factor not mentioned by Caniano is the continuing "arms race" between productivity software and processing power. Proliferation of student laptops across the marketplace exhibits a typical bell curve of moderate power related to moderate price point, but with power often falling short of the higher end demands of analytical software used by numerous disciplines. This will, in all likelihood, leave a significant niche at the high end for those "quality workstations" that have been a drawing card for the Commons model from day one. As an academic library director, I would personally welcome diminished demand for baseline workstations so that I could devote more Learning Commons resources to a smaller number of higher quality workstations and peripherals. In large-scale Commons facilities, any measurable decline in student demand for banks of desktop workstations will probably free more floor space for an increase in flex-use study and seminar areas equipped with laptop data ports to cope with ever-increasing faculty demand for constructivist learning support.

The high-end hardware niche may be even more telling with student adoption of handheld devices, and their likely extension as triggering and control mechanisms for virtualization and cloud computing. In the example mentioned earlier where a botany student wanted to assemble dozens of jpeg plant images into an annotated pdf file, I can add here that those images were taken with an HTC Evo 4G handheld using its onboard 8 megapixel camera. One could hardly imagine a better match of mobile hardware to the particular demands of disciplinary studies than carrying this handheld device equipped with a quality camera out on botanical field trips. And for class presentation, the HTC Evo sports an HDMI port and connector that allows direct display of images from the handheld to a wall-mounted classroom monitor. Yet, even in this seemingly ideal example, with every factor favoring the handheld device, the need for format conversion, image manipulation, systematic annotation, and basic research brought the student back into the Commons where she could download her images from the handheld and assemble them into a contiguous field study pdf report, and then compare her plant images side by side on an oversize monitor with images retrieved from an online botanical database, all with reference librarians, including a life-sciences subject specialist, and IT support staff close at hand. As for the "cloud" itself, a few commentators are treating it in almost phenomenological terms, as though it had grown independent of all hardware and human intervention, like the Van Allen belt. But for the user, it scarcely matters whether downloaded database images come via data cable from an originating server across campus or via the 'cloud" from an originating server across the planet. What matters are the integrated services and resources available to the student *at point of download*.

Regarding Caniano's Athenaeum model I can say little, since few specifics are provided beyond its role in "…the formation of academic clubs, working groups, roundtables to help engage students and faculty in scholarship. [and]… lectures, conferences, and presentation(s)" But I do pose this question: is the stated opposition between the Athenaeum model and the Commons model real or merely rhetorical? In my view, Caniano makes no persuasive case for our regarding this choice between models as an "either/or" proposition. His primary example, the Gould Library Athenaeum at Carlton College, "…hosts about 65 events, involving about 2,300 participants each year." That is doubtless a splendid and laudable result for Carlton College. But the Facebook page of Weigle Information Commons at Penn, for example, already lists a lengthy and growing series of staff presentations and workshops, and their first annual report (2008) listed 125 workshop sessions "for public registration *and by faculty requests*" [emphasis added] and the following average monthly usage totals for 2007: "6,000 people use the Weigle Information Commons [per month]; 900 reservations for group study rooms are received for groups of 2 to 6 people; 1,500 people use the 12 data diner booths; 400 people use the Vitale Digital Media Lab." (Vedantham 2008, p. 1). What is to prevent any library subject specialist at Penn from convening an Athenaeum-model student academic club or topical roundtable in a seminar room(s) like that used by the narrative studies students of Dr. Ross? In general, I would say "bravo" to any model that supports the work of library subject specialists and brings them into collaboration with faculty and with students. But there is simply no inherent contradiction between this admirable goal and the Commons model, just as recent research from the Du Bois Library Learning Commons at the University of Massachusetts has conclusively demonstrated that there is no inherent contradiction between the Commons model and the provision of quality reference and research skills support services (Fitzpatrick, Moore & Lang 2008).

The Commons model is by design an adaptive and rather fluid response mechanism. If academic libraries were to abandon or replace the Commons model they should do so as a data-driven response to real measurable needs of our students and faculty, and not as part of an ideological retreat from integrated services, technology support, and the ACRL competency standards of information literacy. If such a retreat were to happen, our students might well retreat from us, and cause a steep downward usage spiral reminiscent of the late 1990's. Library leaders could risk being viewed as harboring a rigid, stifling, and elitist archaism, even if subject specialists repackaged it as a lecture series / debating society. What would be left behind, of course, would then admittedly become a very, very, very quiet place for that minority of students who chose to remain.

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