Cooper Union HSS Review Report

CONTENTS

Introduction—Opportunities Framed	2
Review Team	3
Overview of HSS Program Review Process	4
Structure of the Report	6
Part I: Background	
Overview	6
Mission	9
Part II: Findings	
Findings on Faculty	10
Part-Timers and Full-Timers	10
Workload	12
Findings on Curriculum	13
Curriculum and Pedagogy	14
Subject Matter Depth, Breadth and Coordination	16
Findings on Diversity and Inclusion	18
Part III: Recommendations	
Structural, Process, and Faculty Matters	18
Implementing Innovation	24
Reaching Beyond Cooper	25
Curriculum and Teaching	26

Introduction—Opportunities Framed

U.S. higher education currently faces a myriad of unprecedented challenges. Some of these have been on the radar for some time. Declining student enrollment and a shrinking high school graduate pool is constraining many schools' budgets. Meanwhile, the coronavirus pandemic has magnified operational and financial difficulties for many schools. Students are also arriving with changing expectations about how they are to be taught, treated, and supported as members of campus communities, creating escalating costs for colleges and universities and tuition for students. Consequently, colleges and universities face an escalating array of significant challenges, including: curating more effective online learning; leveraging AI to personalize student support services; boosting mental health resources; increasing competency-based education and experiential learning; fostering inclusive and diverse learning environments that embrace social justice; creating greater college access through unique pricing strategies; and adopting digital transformation strategies to improve institutional efficiencies. These elements and more are all part of the equation as institutions look to thrive, serve their campuses, and help create the just society of the future.

Institutions are wrangling with these entangled problems under the pressure of red-hot external critiques. Research by the Association of American Universities (AAU) has consistently shown that many Americans do not think the cost of education is worth it. The American Academy of Arts and Sciences (AAAS) Humanities Indicators Project reveals that such negative portrayals have been (unjustifiably) accentuated in the humanities fields. Both organizations advocate educating the American public about how our institutions innovate, inspire, create discovery, initiate research for the common good, and serve as national assets that "change lives" and develop the "whole person." In the swirl of issues that now define the landscape of modern colleges and universities, these recognizable, perennial hallmarks of higher education's inherent value are being lost.

Yet these challenges present an opportunity for Cooper Union, an institution sitting at the crosshairs of many higher-education debates—including affordability, access, and balancing professional education, STEM training, and deep humanistic and social science inquiry.

Cooper Union plays a pivotal role in the social mobility of its students, primarily in the New York area. While not yet having returned to free tuition, Cooper is an affordable school that attracts strong, talented, and creative students. With the impending reintroduction of free-tuition, Cooper will become even more competitive in the higher education marketplace. Meanwhile, its endeavors to strengthen its humanities and social sciences curriculum—alongside its renowned and robust programs in art, architecture, design, and engineering—will be essential to developing the innovative architects, artists, engineers and designers of the future and incubating socially responsible and beneficial products and technologies. Furthermore, contemporary society demands human-centered and client-centered design that is culturally sensitive. Students who are keenly aware of how to approach and critique their work from the standpoint of the humanities and social sciences will compete for the best jobs and do the most effective work in these fields. In short, higher education must now make the case for its continued social relevance and importance. The ability to affordably educate well-rounded,

technically literate, and culturally astute students for professional careers, citizenship responsibilities, and life journeys, will undoubtedly give Cooper a winning edge.

There is work to do; hurdles to surmount. However, as a committee, we firmly believe that what Cooper Union does now not only sets the stage for its own success in these troubled times but will chart a course for colleges and universities across the nation. We are bullishly optimistic that meaningful change can occur. It must. Cooper's size offers advantages and a particular nimbleness. Its mission positions it to confront the challenges we collectively face. Its student body is strong. There is talent across the ranks of the faculty. And it is clear that Cooper is committed to boldly reinventing itself for the future. Cooper Union has placed significant focus over the last five years on addressing its financial crisis, committing to a return to full-tuition scholarships for all undergraduate students, and making significant progress on this commitment, which has been a passionate stated priority of faculty, staff, students, and alumni. With the progress Cooper Union has made on its scholarship plan and the academic programs of the three degree-granting schools, it is now well-positioned in this next chapter of its work to lead the way in reimagining the role that the humanities and social sciences can play in a professional education.

Considering this, our report is designed to encourage some important cultural and organizational adjustments, curricular refinements, and human capital investments and to build on unique opportunities—internal and external—that can make the institution stronger. As you read this report, it is important to keep the external, national context in mind. The story of Humanities and Social Sciences (HSS) and Cooper Union over the past several decades was not produced in isolation; it was not created by activities and conversations within Cooper alone. Rather, the broader national tides and travails of higher education have played a sculpting role, one that we fully recognized during our review, but whose impact and influence have not been as readily apparent to those within the institution. Hence, our observations and recommendations ultimately lean in two, interwoven directions: evaluating Cooper's activities, current state, and potential fu ture in light of itself, but also in light of the larger, national currents of higher education.

Review Team

Committee Chair

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Committee Members

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Special Advisor to the Committee

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Overview of HSS Program Review Process

In October 2021, President Laura Sparks commissioned the review committee. She charged the review committee with assessing and, where needed, reimagining the structure, curriculum, and pedagogical approaches of the Humanities and Social Sciences program at The Cooper Union.

During November and December, the review team held multiple virtual meetings and a two-day, in-person site visit at Cooper Union. During the course of the visits, the committee was able to interview all HSS full-time faculty, full-time faculty from each of the three degree-granting schools, as well as several part-time faculty, university administrators, and students. The purpose of the convenings was to:

- Understand the program's institutional history
- Assess the program's contribution to the vision, mission, and values of Cooper Union, while identifying opportunities to elevate HSS
- Assess the quality of the HSS curriculum and faculty while looking for opportunities to support and expand both
- Review the program's resources and identify improvement opportunities
- Review the quality of the program's implementation and administration

As part of the committee's work, the review team evaluated numerous institutional documents, including:

- 1. Cooper Union's Strategic Goals and Institutional Priorities
- 2. Peter Cooper's Founding Letter to Trustees
- 3. 10-Year Plan to Return to Full Tuition Scholarships
- 4. 2018 Middle States Reaccreditation Self Study Report
- 5. 2020-2021 Cooper Union Course Catalog
- 6. College Organizational Chart
- 7. Overall Student Enrollment Statistics
- 8. HSS-specific materials including:
 - a. Mission
 - b. Core Curriculum
 - c. Learning Objectives
 - d. Credit Distribution Structure
 - e. Information on the Minor

- f. Department Organization
- g. Center for Writing Summary and Objectives
- h. Faculty governance documents
- i. Full-Time Faculty CVs
- j. Part-Time Faculty Lists (2016 present)
- k. Course Listings (2016 present)
- I. Sample Course Syllabi
- m. Materials from the 2018 Student Protest to Decolonize the Curriculum
- n. 2020 Grant Application to Teagle Foundation for Curriculum Revision Planning
- o. Council on Shared Learning Report

In addition, individual members of the Cooper community confidentially provided the committee multiple documents, articles, and reports for the team's enlightenment and review. These materials, while not listed above to preserve confidentiality, have been carefully considered in the preparation of this final report.

Over the course of the review process, it became clear that HSS seeks:

- To develop critical, analytical and interpretive thinking skills among its students, equipping them to proactively engage as responsible citizens to address the fundamental obligations to the society in which they live along with the pressing questions of human affairs and the social contract.
- To build diverse and global perspectives among its students, and to help them understand the lived experiences of others. HSS strives to help students gain deeper awareness of the world in which they must live and act.
- To encourage rich opportunities for students to learn from multiple disciplines (and to traverse the boundaries of disciplines).
- To provide the ethical, social and humane framework crucial to personal development, professional excellence, and engaged citizenship.
- To develop students' abilities to think, write, and speak clearly and effectively.
- To offer students the opportunity to become attentive to the social and humanistic implications of their professional work and to acquire the tools for a satisfying cultural and intellectual life.
- To strengthen the existing distinctive and integrated curriculum, which emphasizes coordinated core skills (communication, critical inquiry, cultural literacy) across disciplines and departments.

- To fortify and design a unique knowledge system and mode of inquiry, drawing across humanistic and social science disciplines, to enhance and complement Cooper's distinctive pre-professional programs.
- To strengthen the integration of academic preparation with experiential learning and career preparation.
- To facilitate student success through active, inclusive, inquiry-based learning, with ongoing careful attention to student learning, and curricular and pedagogical innovation.

Structure of the Report

With the goals listed above in mind, our report evaluates several key areas of the HSS Program—its **mission**, **faculty**, **and curriculum**. We begin by first presenting our findings, including background and overview reflections, as well as thoughts on student advising and learning. In a separate section, we present our formal recommendations.

Part I: Background

Background, Overview and Mission

Cooper Union's HSS Program reaches back to the 1980s. Faculty teaching humanities and social science courses, but who were embedded across Cooper Union's three schools (Engineering, Art, and Architecture), were brought together into one program to create the existing HSS program. By size and organization, the program would constitute a department in many other institutions. At the time, over thirty years ago, there appear to have been as many as twelve full-time faculty and a more robust operational budget. HSS faculty recall that these initial years constituted a lively, fertile, and generative period, and that there was a rich exchange of ideas and knowledge within HSS, as well as between the schools—including book clubs, seminars, etc. It should be noted that this was also a period of structural financial deficits for Cooper Union.

It is worth noting that engineering, design and technology institutions across the nation often developed HSS programs with relatively little engagement between those faculties and the engineering and technical programs they supported. The idea at the time (which still comprises an important basis of the current HSS curriculum at Cooper) was that exposure to history surveys, and a few additional humanities courses, with dedicated attention to writing, were sufficient to engage, "round-out," and complement a technical curriculum, as required for Bachelors in Science and related technical degree programs by the State of New York, and accrediting agencies.

These programs emphasized European and American culture; however, today, a broader spectrum of cultural competencies is required from higher education. While many alumni did find the older curricular approach valuable, we learned in our review that some current students

feel they are enrolling in "random" classes; that their coursework is rarely connected to conversations outside the classroom; and that the HSS curriculum does not meld with their interests and career goals. When they do find classes that match their interests, some students find few opportunities to probe that subject matter through additional courses. Because the faculty has not engaged in comprehensive curriculum review due to irregular curricular oversight over a period of decades, there has been curricular instability, an extensive reliance on part-time faculty and inadequate support for and attention to academic planning.

At the same time, throughout our interviews with deans and faculty, we heard a strong, widely shared consensus that engineers, artists, and architects cannot succeed without understanding the historical, cultural, economic, and social impact of their work. Therefore, we are led to believe that the mission of HSS at a school such as Cooper Union should spotlight teaching students to use the methods of humanities and social science disciplines, including multimedia communication, to engage with and improve their work as engineers, artists, and architects. HSS should provide students with a capacious and diverse set of tools with which to actively and critically engage in substantive, continual, and iterative learning, regardless of discipline. An approach that substantively engages the technical disciplines, particularly architecture, art, and engineering, will prove beneficial to HSS, helping it better achieve its mission, while also providing a direction for moving the curriculum beyond the vision set forth in the 1980s. More will be said on these points below in the section on curriculum.

Greater integration between HSS and Engineering, Art, and Architecture is essential. Since the early days of the program, each of the three schools and HSS have gradually (and unintentionally) become siloed (though the degree-granting programs have increased their multi-disciplinary collaboration over the last few years). Some of this is the result of Cooper's decentralized model. Other factors include the strict accreditation standards of the professional schools, and even the sense among students and faculty in the three schools that they should prioritize work in the professional programs at the expense of HSS. While these sentiments are not universal, we found them to be quite palpable in our interviews. Students and faculty alike made such statements, which constitute a notable and vocal part of the current culture at Cooper. Students confessed that some faculty outside of HSS have even been wont to say: "Save your humanities for last, that's not really relevant."

This needs to change. HSS is the site for establishing a new, common, integrated academic culture, one that can serve as a model for other institutions. There is ample room at Cooper for articulating clear and crisp justifications as to why the humanities and social sciences matter. Borrowing from the American Academy of Arts and Sciences' Humanities Indicators Project can help, and given Cooper's size, there may be room for a special partnership to be forged with the Academy in order to showcase the value of a robust humanities education in professional training.

Not only can the current, historic reexamination of the Humanities and Social Science curriculum help make meaningful change happen but the ongoing re-evaluation of curricula in

the degree-granting schools can accelerate this process. The moment is ripe, as the School of Art is scheduled to embark on its first strategic planning process in recent memory; Architecture is in the process of hiring a new dean, which offers an opportunity to examine the curriculum with the faculty; and Engineering (Cooper's largest school) is currently undergoing its first significant curricular revision in more than forty years. In short, there is an historic opportunity for greater curricular integration at Cooper; the moment must be immediately seized in order to improve Cooper's institutional culture. Our interviews reveal that the deans and president are ready and eager to embark upon a path towards a more coordinated and integrated future, for the mutual benefit of the schools, their students, and the faculties.

To begin with, as part of its branding, we believe HSS should continue emphasizing the mathematical concept of "integration," per its tagline on the Cooper Union brochure: "The Vision to Integrate." If Cooper's other schools' visions are to "build" (Architecture), to "create" (Art), and to "innovate" (Engineering), then it seems logical that HSS should require that courses throughout its curriculum include components that integrate all three visions.

Through synergy, we also think that there is an opportunity to think about how the core curriculum might help unify the three schools and strengthen each program. We believe that students from Cooper's three related degree programs—Art, Architecture, and Engineering—can be successfully engaged in disciplinary areas at which the three programs meet. HSS can steward this process with courses that bridge the disciplines, with associations across the humanities and social sciences, engineering, architecture, and art and design. These courses will add unique humanistic and social science value to the three schools. In order to create a more collaborative culture, Cooper might design a core curriculum in addition to the current 4 course HSS sequence that reaches into and across the three schools, with each school responsible for some part of it, and an inter-school committee responsible for the whole. To unify the schools and integrate their curricula, we recommend unifying governance through institution-wide curriculum committees, along with regular monthly meetings of the entire faculty, as is common at other institutions of higher education.

At the moment, depending on where you sit at the university, HSS means different things to different people. For instance, some electives are highly regarded, while others are not. The four-semester sequence (HSS1 to HSS4)—which is the cornerstone of HSS, and arguably, the university—is not seen as fulfilling its true potential in the eyes of many faculty, students and deans. Two areas that do seem to be effective are: 1) Art History, which gets good reviews from students and faculty in the Art and Architecture programs, and 2) the Center for Writing, which gets positive reviews but seems significantly under-resourced, especially as it is expected to give support to both student writing and faculty teaching.

Notwithstanding one's individual perspective on the program, HSS is currently the primary instructional vehicle at Cooper that brings all schools together. We believe that, in some ways, its limited assets impede HSS from fulfilling its greater instructional role. We believe that new faculty hires, a sharper curricular focus, greater authority and accountability, and increased pedagogical innovation will fortify HSS. These changes must be intentionally integrated with the

other schools for Cooper itself to be positively transformed. HSS was never envisioned as a free-standing liberal arts college within Cooper. It does not have the assets for such a vision or (in our opinion) the prospect for acquiring such assets in the near future. But HSS does play a tremendously vital role in leveraging institutional assets, and the best investments in HSS will ultimately strengthen and enhance the unit's capacity for the benefit of itself and of the university.

Mission

Our committee was struck by the words of one faculty member, which succinctly and clearly encapsulate the mission of HSS: "HSS is a crucial space for the development of interdisciplinary methodologies, pedagogies, and, more broadly, ways of thinking, without forgetting the rigor and deep knowledge that come from each discipline" ("Three Questions With Raffaele Bedarida," Cooper Union, 2 November 2021).

Given what we have observed about the evolution of HSS–and given our collective thinking about its need to emerge as a more central, integrative unit—we feel that HSS should align with Cooper's stated institutional goals and strategic priorities, as follows:

- Institutional Goals- Create an institution of excellence that will:
 - Engage students in an academic program that is rigorous, supportive, and dynamic
 - o Foster a culture of curiosity, agency, compassion, and engagement
 - Prepare students to question and lead in a complex world
 - Develop leading-edge models for higher education that consider the ethical, cultural, and environmental contexts and consequences of technical and creative disciplines
 - Lead by example to promote civil discourse and engagement on important civic issues
 - Foster intersections of study and practice among the fields of Architecture, Art, and Engineering
- Strategic Priorities
 - Fortify Cooper's rigorous professional schools
 - Create opportunities for experimentation at the intersections of disciplines
 - o Increase diversity of thought, background, and experiences
 - o Balance budget, build reserves, instill financial discipline
 - Develop programs, activities, and physical space to increase student engagement and improve student life
 - Set a leading-edge standard for the integration of professional, practice-based education with a humanistic and socio-political education
 - Integrate public-service orientation into academics and actively contribute to the betterment of NY
 - Re-establish the Great Hall as a premier forum for debating the critical issues of our time

Part II: Findings

Findings on Faculty

We found that HSS faculty have had a long history of engagement with Cooper students and are experienced at teaching the university's emerging architects, artists and engineers. Cooper's location in New York City gives the department access to high-quality faculty. Indeed, the city has helped Cooper attract many distinguished scholars to HSS for all or large parts of their careers. As there is a terrific and diverse pool of potential faculty to help rebuild the program, there is the potential for transformative hiring.

We discovered that, unfortunately, there is a perceived lack of transparency and communication between and among leadership and faculty within and beyond HSS, particularly in relation to hiring and accountability. Many faculty members question to what degree they should weigh in on tensions. As one faculty member put it: "It's hard not to think conspiratorially." Many faculty members feel stuck in structural problems, which have had negative impacts across a broad spectrum, including hiring criteria, review procedures. Some question to what degree they should weigh in on tensions, given the circulating narrative that faculty members are resistant to change.

In general, we sense that HSS faculty do not feel heard or validated. Thus, we wish to report the points of view communicated to our committee. HSS faculty expressed an urgent need for:

- "An academic dean, appointed via the procedure in our college governance. HSS has been without a permanent dean for several years."
- "Full-time, tenure-line faculty appointments--teaching scholars with a commitment to undergraduate non-majors pursuing technical and preprofessional degrees."
- "A clear and effective approach to immigration so that we can keep our existing faculty and know that we can hire new faculty from beyond the US if we choose."
- "Resources, both in terms of funding and flexibility, to explore new forms of collaboration, including with the college's three schools."
- "Funding and flexibility to support faculty research in order to recruit and retain excellent diverse faculty, to develop intellectual community and professional development within our faculty, and to keep our teaching fresh and challenging."
- "Support beyond basic administrative staff. Furthermore, at present we have only a single administrative staff person, working two time zones away, for the entire (full- and part-time) HSS faculty."

Part-Timers and Full-Timers

Our committee was struck by the large number of part-time faculty at Cooper Union (63-84%) and, more specifically, by the high concentration of part-time faculty in HSS (70-80%) compared

to the national average (51.4%). The current composition of the HSS faculty makes power asymmetries stark: 7 full-time, 30 part-time faculty.

Typically, in university settings, both the stability of the curriculum and quality leadership in individual academic units is contingent upon having a critical mass of faculty in the tenure-track ranks. At Cooper, students have expressed concern over this pattern of hiring and turnover, which creates unpredictability in course planning (especially for electives). Moreover, students are unable to reliably recommend the courses that they enjoyed—and that their classmates might want to take—because their instructors may have left the faculty or because the subject itself may have been discontinued.

Of course, we realize that certain professional programs at colleges and universities rely heavily on "professors of practice," who bring considerable expertise from their industries to the benefit of their classrooms. However, the nature of humanities and social science instruction typically favors elevated numbers of full-time and tenure-track faculty, with active research and teaching portfolios. Much of the "practice" component associated with these fields derives from active research, teaching, and publishing. We would have expected a greater representation of full-time faculty in HSS.

Undoubtedly, there are real advantages to utilizing part-time faculty. They allow for a healthy rotation of topical areas in the curriculum and provide the ability to re-fresh the faculty more frequently, keeping an institution's courses in-sync with the times. But there is also value in faculty longevity. At Cooper, there are three "tiers" of part-time faculty that represent different levels of time spent at the university. Below is information we have obtained about the state of the part-time faculty as of Fall 2021. From our interviews, we learned that Tier 2 numbers are likely the best indicator of whether schools are consistently retaining adjuncts, since the Tier 3 level can include instructors who have been part of the institution for decades.

Tier Structure:

- Tier 1: Faculty that have taught for 1 to 6 semesters
- Tier 2: Faculty that have taught for 7 to 12 semesters
- Tier 3: Faculty that have taught for more than 12 semesters

HSS

- o Tier 1: 17
- Tier 2: 7
- o Tier 3: 4

ART

- o Tier 1: 29
- o Tier 2: 11
- o Tier 3: 17

ARCH

- o Tier 1: 27
- o Tier 2: 2
- Tier 3: 7

ENG

Tier 1: 18Tier 2: 2Tier 3: 16

A final observation that we gleaned from our part-time faculty review was the relatively low minimum pay levels for adjunct faculty. The compensation, \$4,500 per 3-credit course, is quite low for the area. (It should be noted that Cooper Union can pay higher than these union-scale minimums and does not currently have any courses paid at the minimum levels.) Literally across the street at New York University, adjuncts are paid a union-scale minimum of \$7,104 for the same number of credits. While Cooper Union offers significantly more competitive tuition levels given its current and future scholarship plan, for Cooper to be competitive in attracting the region's top talent, the institution will need to improve compensation. At the same time, Cooper may want to significantly reduce the number of adjunct faculty, replacing them with longer-serving, better paid, full-time instructors.

Workload

Beyond the imbalance among the tiers of adjunct faculty, the high ratio of part-time to full-time faculty in HSS produces notably deleterious effects on faculty workload and effectiveness. These, in turn, create issues for the long-term professional development of HSS faculty who work at Cooper, as well as institutional churn on morale and negative effects on students.

There are simply not enough full-time faculty to do observations, vet teaching evaluations, or ensure the quality of courses that are being taught by part-time faculty. Moreover, there is no institution-wide faculty curriculum oversight. Here, we do not mean close surveillance or significant censorship but merely a relatively minimal assessment of standard course-syllabi requirements and institutional objectives. Over time, HSS has shrunk to the point that there are not enough full-time faculty to hire and supervise adjuncts—functions that have now been assumed elsewhere. Part-time faculty are not well-integrated into service tasks. Improving the ratio of full-time to part-time instructors in HSS would improve governance, rankings, curricular continuity, and the evaluation of both full and part-time faculty.

With few full-time faculty, HSS depends on part-time faculty to do unusually high levels of service work. Students who are interested in HSS therefore find few opportunities to engage with scholars in these disciplines.

Career mentorship in HSS is ailing. This is true for students as well as for faculty. HSS full-time and part-time faculty find it hard to identify the career advice and advocacy that can improve their experiences and elevate their performances. They often have to rely on each other or on informal networks and professional connections available across the city. These webs of support are decidedly external to Cooper. More robust internal mentoring would develop stronger institutional attachments and improve Cooper's culture. With more full-time faculty and tier-three adjuncts, HSS at Cooper would not be seen, as one faculty member bluntly put it, as

"the place where scholarly careers come to die." However, such mentoring can only come with a greater critical mass of full-time faculty leaders in the unit.

For the full-time faculty, the workload of 3-3 is too high to support faculty research. While Cooper is primarily an undergraduate institution with a lauded and recognized teaching mission, we know that research and publication are necessary to keep HSS faculty active (if not at the forefront) in their fields. Our collective expertise has shown that active scholarship translates into better classroom insights, and vice-versa. Research and teaching constitute a cycle of excellence.

Unfortunately, these faculty issues negatively impact student learning. As we have repeatedly indicated, we find Cooper students to be strong, conscientious, and dedicated. Cooper's high retention and completion rate (>90%) reinforces that impression. But students sense that HSS is the weak link in their academic experiences. With some exceptions, advising is generally lacking. Transfer students likely struggle the most. By and large, advising seems to have been ad hoc, with minimal planning and assigned to one full-time faculty advisor for all students. We heard complaints from students about being unable to reach HSS faculty advisors. At the same time, some faculty complained that an initiative to hire a professional advisor, driven by central administration, was construed as an effort to inflate the number of administrative personnel at a time when HSS was constrained from hiring teaching faculty. We learned through our review process that there has been a recent change in advising, putting in place a new advisor recommended by full-time, tenured faculty and a cross-school group of advisors and staff. We feel that better communication around this initiative and greater faculty input in the process could have alleviated faculty concerns—importantly, a professional advisor can work to ease faculty workloads, while greatly benefiting Cooper students and HSS on the whole. If Cooper indeed proceeds to move towards hiring more professional advisors in HSS (PhDs would be desirable), then we feel that aligning the initiative with HSS's core needs will require frank discussions about the comparative advantages of such staff additions.

Findings on Curriculum

As we signaled in our previous section on HSS's background mission, we feel that one of the major shortcomings of the current curriculum is the vagueness of its goals. The problem is not Cooper's alone. For decades, HSS programs housed within the professional schools saw themselves as small liberal arts colleges seeking to "broaden" professional programs like engineering by exposing students to a history survey and a smattering of courses on culture that were defined primarily by the specific interests of the faculty hired for these courses. Such a haphazard approach can no longer serve as a legitimate mission for HSS and the university at large. Cooper needs a curriculum that equips its professional students to use the analytical methods and the cumulative knowledge of HSS disciplines that will cast their professional work in diverse and critical perspectives. There is an urgent need to abandon the attempt to cover many fields; instead, HSS should be tailored to the needs of students in Engineering, Arts, and Architecture in order to help them make social and moral sense of their work. The pursuit of comprehensive "coverage" eclipses Cooper's primary educational mission at hand and is not aligned to the resource base and potential of the institution.

When the HSS curriculum is described at its best, faculty members expressed that it can (and consistently should): "build courage" in students that encourages them to try new avenues of thought; help students "get over the sense of their own brilliance" and unlearn "the impulse to solve for x" in order to unleash their multidimensional and non-linear thinking skills. Students should learn, in some sense, to be practitioners of their fields, as well as ethnographers of their professions. In reaching such goals, the area of anthropology, for instance, constitutes only one intellectual route to learning critical interpretation; there are other humanistic and social science areas whose methods can equally help achieve similar analytical and critical methods.

Currently, the Engineering degree requires 135 credits, divided into 40 courses—more than any other school's requirements, including those of West Point (which has to include additional courses for training military officers). Many leading engineering schools, such as Carnegie Mellon, require only 24 or 25. There are seven required math courses in the Cooper Engineering curriculum (compared to two at MIT), with minimal evidence that the math taken is actually well-calibrated to the math needed for the engineering course sequence. We feel that the current curriculum severely limits the ability of Engineering students to gain a perspective on the field outside of the professional engineering culture. Indeed, the combination of student course loads exceeding 18 credits (which we uncovered), alongside the lack of flexibility in the engineering curriculum, is one reason for the poor performance of some engineering students in HSS courses. Framed in another light, the success of the HSS program is inextricably linked to the flexibility afforded to Engineering students to create more interdisciplinary programs of study within their field, as is the case at most R1 engineering schools. The good news is that Cooper's Dean of Engineering is aware of the situation. We certainly believe that more breathing room in this curriculum will enable an inflow of meaningful HSS courses for Engineering students. Although we have been primarily discussing Engineering here, the situation is not unique to that school. Other schools should evaluate their curricula in order to create academic space within which their students can both broaden and deepen their educations. HSS Faculty regularly hear from students in the Schools of Art and Architecture that they feel they need to sacrifice their HSS courses in order to fulfill their studio course requirements.

Curriculum and Pedagogy

We encourage HSS to deploy new pedagogical strategies and tactics. While curricular changes can be introduced, they won't be fully effective without a corresponding increase in attention to pedagogy. That being said, there are some excellent classes being offered by HSS, with significant innovations in pedagogy. Among the innovative classes cited by students, many of which are taught by part-time faculty, are Philosophy, the Sociology of War, and Fairytales for instance. We also learned that, in the very seating arrangements of HSS classrooms, Cooper students tend to replicate the existing silos characteristic of their respective schools. We found this to be the case even in pair-share activities. What is interesting about this phenomenon is that students nevertheless expressed a strong desire for more dialogue, noting that it is in their HSS courses where they find the greatest opportunity to air their opinions and shape their ideas. Ideally being the hub where all schools come together, the HSS in-class experience should work to minimize redounding along school lines and motivate learners to intermingle more

broadly rather than congregate with students they know from their own programs. Pedagogical techniques might include, for example, arranging tables in a "U-shape" to encourage and stimulate conversation; in-class debates and other approaches can also be effective.

Overall, we found that, with some notable exceptions, pedagogy in HSS is characterized as more traditional and lecture-based. In our meetings with students, they commented that some courses use an "old pedagogy," an observation they juxtaposed against their desire to have a more "modern pedagogy." Even with current, laudable efforts to "decolonize the curriculum," filaments of top-down pedagogical styles have encumbered some students and their learning. While we fully realize that certain courses will necessarily always be lecture-based, a small program needs to actively support and experiment with new approaches, including flipped-classroom and project-based learning in HSS, as well as in other disciplines, such as engineering and its studio-based programs. Cooper does not have a Center for Teaching and Learning, although the overtaxed Writing Center has made some heroic efforts in this regard, and we learned that there are efforts in motion to explore developing a Center for Teaching and Learning. It might therefore be helpful to bring in consultants for faculty seminars on new pedagogies.

Our site visit also revealed that, given the varied ways in which the admissions process is handled at Cooper, there is greater unevenness in the preparedness of students for an HSS curriculum than at comparable colleges and universities. Each of Cooper's schools intake students who fit their particular areas, with minimal regard to HSS. This practice is certainly understandable, but nonetheless demands specific remedial attention. As is, by the time students convene in HSS classrooms, Cooper's recruitment practices will have inadvertently created some glaring skill gaps when it comes to writing, empirical reasoning, data interpretation, etc. Tremendous responsibility is then placed upon HSS to "even the playing field" for all students.

Such disparities in preparation, combined with the students' differing attitudes towards elements of the HSS curriculum, produce a veritable challenge in the program's attempt to raise all students up to where they need to be. While some pedagogical refinements within HSS can help here, policies in the three schools must also support these needs. At present, the policies appear to work at cross purposes.

In terms of assignments, HSS faculty may want to offer more opportunities for students to write in multimodal formats beyond the traditional essay and research paper—i.e., ekphrasis, playwriting, data storytelling, etc. Students expressed that professors should acknowledge and tap into student talent, as well as into the work they are already doing in other schools and disciplines. This encouragement could take the form of projects that motivate students to import concepts learned in coursework outside of HSS and that engage them with resources throughout New York City.

Indeed, we find that further elevating its urban environment as a potential learning lab is among Cooper's greatest latent strengths—New York City is Cooper's "5th school." As visually

suggested by Cooper's brochure layout, HSS can serve as the "gateway" to experiential learning in New York City. Although some courses include exploration of the city, HSS does appear to be pondering more ways to maximize this resource in its wider curriculum. Miguel Luciano's *Mapping Resistance: The Young Lords in El Barrio*—a public-art project that involved photography, history, storytelling, community engagement, and urban studies, etc.—offers an example of how HSS can not only effectively engage students with the city through project-based learning but also tap into the city's incredible diversity, talent, and pipeline. As Dominican-American artist Lucia Hierro describes in a 2019 interview with *Contemporary And América Latina (C&AL)*: "[I]n my last year of high school my art teacher encouraged me to apply to the Cooper Union Saturday Program. And that program taught me everything...Cooper was my window into thinking, oh I can actually do this. We visited artist studios, and one was Miguel Luciano's studio, Puerto Rican artist...So from there I realized that I wanted to do that but I didn't know how, and I knew that somehow applying to college was going to be the way."

Subject Matter Depth, Breadth and Coordination

We observed that the HSS curriculum is too broad at the moment. Additionally, we heard many critiques of unclear and varied curricular planning, which can be improved to address and better accommodate student needs. A good deal of HSS courses, for instance, currently seem to derive from a professor's interests, rather than on those of their students. Students tend to appreciate and favor the potential for courses which are jointly determined by students and professors, such as an internally grant-funded pilot of an HSS4 section that students and the instructor jointly designed. In order to address both curricular planning shortcomings and breadth concerns, new faculty hiring will undoubtedly initiate positive change. However, such changes need to: 1) better balance course depth and breadth as a clear priority for incoming faculty; 2) create approaches and structures that limit undue course breadth—essential for an institution in which studies in the humanities and social sciences should be responsibly oriented to the professional needs of the other schools; 3) launch mechanisms for acquiring student feedback and evaluations; 4) pay close attention to student needs and desires in systematic curricular planning.

Some curricular and course planning issues can be addressed immediately. Students have conveyed that many of their classes are simply announced too late for them to effectively plan their own courses of study, particularly as they try to organize their schedules in tandem with coursework outside of HSS. Partly, this is a consequence of the high turnover in part-time faculty. Furthermore, given that numerous HSS course offerings are not neatly aligned thematically (again, due to shortcomings in the current planning process), carving a long-term roadmap of classes that center around a set of core topics or questions is challenging—especially for students who crave more focused study. Effective ways of addressing these concerns might include increased faculty coordination and design-work aimed at establishing unified, topical themes within the HSS course suite—even themes/topics that can be explored for a year or two (such as an exploration of "Time" in 2026-2027). In the same vein, student and faculty course planning could be facilitated by centralized scheduling procedures across the three schools and HSS.

We learned that students would like to see more oscillation between "past and present thinking," taught within a decolonized curriculum that offers, for instance, East Asian and Native American Studies. Continual oscillation yields the potential to make classroom learning more praxis-oriented—a characteristic we found deeply to be appealing to Cooper students. At the same time, some faculty expressed that, while students may want to study more contemporary and presentist material, there also remains an ongoing need for historical anchoring in the curriculum. Any proposed oscillation (which is certainly a valuable form of interrogating both historical and modern times) must not overly sacrifice the value of "perspective"—students should retain foundational depth as they work with the faculty to curate forms of knowledge that address contemporary issues, in contemporary times. We agree with this proposition.

Some offerings caught our eye as potentially serving as cornerstones for the integrative and interdisciplinary curricular approaches we endorse. One such course was New York City: A 5000 Year History (CU102), taught in the fall of 2020 by adjunct professor David Gersten (Cooper alum; former Acting Dean of Architecture and Director of Interdisciplinary Learning; founder of Arts, Letters & Numbers, a nonprofit that fosters interdisciplinary interactions to address global crises). Conceived as a "living laboratory" in response to issues like climate change and immigration, the course encouraged civic engagement through "a semester-long research project focused on the linkages between New York City and the United Nations Sustainable Developments Goals (SDGs) and the students' personal experiences and interests." The course's deep look at New York, its connection to the UN Sustainable Development Goals, its interdisciplinary allure, and its engagement with (and response to) the immigration debates of our day provide a flavor of social relevance that students crave. In fact, we learned that the course was met with widespread applause by students. While the course also found favor among faculty conceptually, however, a mixture of politics, navigating silos, scheduling and credit-table issues, and incomplete buy-in from stakeholders hampered its success.

Based on the students' expressed curricular desires, particularly around single-themed courses like CU102, we as a committee can also envision teaching and learning around other themes that transect the disciplines and schools through topics such as Water, Light, Air, Earth, Color, Eye, Space, Land, Home, Borders, Food Bridge, Doors/Portals, Roads, Time, Love, Numbers, Letters, Citizenship, etc. Books in the Essential Knowledge series by MIT Press or in the Bloomsbury Object Lessons series (including Cooper professor William Germano's *Eye Chart*), for instance, can also serve as models for introducing interdisciplinary themes across schools. The student body might select a school-wide theme for each year, during which students choose an object and then model the process of researching and writing the draft of such a book or of an extended essay.

As we have tried to indicate in various sections of this report, any changes in the HSS curriculum must be accompanied by involvement, accommodations and input from other schools. In order to be successful, such efforts must be conceived as synergistic—a requirement we know that the deans also acknowledge. As noted above, the moment is ripe for this kind of institutional change across all four academic programs. With significant opportunities for change

in each of the degree granting programs all occurring in the same general timeframe, this is a natural moment to explore synergies among the programs and, specifically, with HSS.

Findings on Diversity and Inclusion

"The Cooper Union for the Advancement of Science and Art is dedicated to Peter Cooper's radical commitment to diversity and his founding vision that fair access to an inspiring free education and forums for courageous public discourse foster a just and thriving world." –2018 Self-Study Report

Although it is not a regional school, Cooper Union's location in New York City emphasizes the gap between the institution's stated aims and its actual achievements. U.S. Department of Education statistics, for instance, indicate that Cooper Union had a Black and Hispanic combined enrollment in Fall 2020 of 18% (12% Hispanic, 4% Black, 2% Underrepresented Multi-racial). These numbers are especially grim, given Cooper's founding vision, combined with New York City's actual population in 2020: 28.3% Hispanic and 20.2% Black, according to the U.S. Census. While the institutional focus on this work and incremental improvements since this IPEDS data was released are positive developments, there is significantly more work to be done.

Through combined, strategic recruitment efforts of both students and faculty, and an innovative, project-based curriculum, HSS has the potential to increase student and faculty diversity not only throughout Cooper's three schools but also in their respective disciplines. In architecture, for one, Hispanics (18.7% of the U.S. population) make up 8.5% of students in Architecture programs nationally, with 8.7% serving as faculty and 8.5% of professionals in the workforce (Association of Collegiate Schools of Architecture, 2017); African Americans (12.4% of the U.S. population) make up 5% of students enrolled in NAAB-accredited programs, with 1.9% graduates in architecture (National Architectural Accrediting Board, 2019); 2.8% of the adjunct architecture faculty at ACSA member schools; and 6.3% of architects in the workforce (Bureau of Labor Statistics, 2017).

Lack of diversity is also evident in the curriculum (see Findings on Curriculum), as the 2018 student protests made clear. Issues raised included: "most students failing HSS are students of color;" the "curriculum that is being taught to us is INCOMPLETE;" "[we are] asking for professors of color."

Part III: Recommendations

Structural, Process, and Faculty Matters

• Senior Administrator. We recommend an immediate search and hire of a Vice-President of Academic Affairs (VPAA) who would serve as the chief academic leader of Cooper. We also recommend hiring a dean or director of HSS. Furthermore, we recommend that HSS remain a program rather than be converted into a distinct school. By remaining a program dedicated to serving all units at Cooper, HSS's role to integrate the university is maintained. Meanwhile, we believe that HSS's profile within the institution will be correspondingly elevated with the appointment of a VPAA at its helm. We further believe that, by keeping HSS as a program, as opposed to a school, Cooper can avoid any unforeseen and unnecessary inter-school competition. The VPAA will occupy an academic coordination and supervisory position at the university, with duties that include seeing (and acting upon) inter-school opportunities, while helping to build bridges between units. The disciplinary home of the VPAA will be a matter of interest in the search. Someone comfortable with STEM and the Humanities/Social Sciences would be an ideal candidate. The potential hire could be someone who is currently serving as a Dean of Arts and Sciences at another institution.

- At many institutions, the VPAA (analogous to a Provost) is the Chief Academic Officer, with wide responsibilities over all faculty affairs, schools, and academic programs, but with a niche in fostering coordination of academic programs among multiple units. Why a VPAA as opposed to a provost? The distinction between these roles largely depends upon institutional culture. In the end, Cooper may prefer the title of Provost. However, what the VPAA accentuates in this context are academic affairs per se, whereas provost duties can entail broadly supervising other university domains (IT, Student Affairs, Enrollment Management, Athletics, etc.). Cooper can choose exactly where the portfolio's boundaries will rest. But to ignite a conversation, we present the VPAA model at Davidson College as illustrative. The VPAA there is:
 - Responsible for the overall coordination and administration of the academic program—with oversight over the Library, Center for Teaching and Technology, Study Abroad, the Registrar, and the Research Office, Accreditation, Grants and Contracts. These areas comprise direct reports to the VPAA.
 - Supports faculty program and curriculum development, administers programs; and supervises/allocates resources in the form of school budgets, library materials, office and teaching space, computing, travel and research funding, international study programs, grants and contract assistance, and equipment.
- Given that the deans have oversight in their respective units for areas such as travel and research funding, grants, equipment, faculty salaries, etc., Cooper's VPAA would have oversight functions in these areas. It is possible that some additional centralization would first need to take place before creating the VPAA role, accompanied by expanded budget authority and an operational budget allocation. The VPAA would need a deputy who can be assigned the role of Associate Dean. The VPAA could regularly convene the faculty for meetings

(monthly, or perhaps quarterly) and designate inter-school task forces and committees.

• Diversity and Inclusion. "The Cooper Union for the Advancement of Science and Art is dedicated to Peter Cooper's radical commitment to diversity and his founding vision that fair access to an inspiring free education and forums for courageous public discourse foster a just and thriving world." (2018 Self-Study Report). The president and her proposed VPAA must maintain a sense of urgency and a culture of accountability for Cooper Union to realize this vision. They must push to improve the recruitment and retention of faculty of color, while avoiding the too common practice of having scholars of color disproportionately in positions that are not tenure eligible.

Recommendations:

- The curricular review for HSS and reviews of the curricula of the three schools will provide opportunities to define new teaching and research areas, opening opportunities to build a more diverse faculty.
- These reviews should expand HSS course offerings (to the extent enrollment levels support expansion) and more fully integrate HSS courses with the curricula of the three schools, increase undergraduate research opportunities with HSS faculty, and better address the academic and professional aspirations of undergraduate students.
- We acknowledge and respect student efforts to voice their educational expectations and critique their academic experiences. "Decolonizing the Curriculum" is not a slogan. It is a call to action. More than a decade of student uprisings across the nation have revealed new faultlines in higher education and highlighted generational concerns about negotiating an increasingly diverse, interdependent, and competitive global community that faces existential crises. Hyper-professionalization will not answer those challenges; nor will they disappear if we retreat into tradition or uncritically defend the status quo.
- The committee strongly endorses the K-12 initiatives that have allowed Cooper Union faculty and students to mentor New York City high school students and introduce these young scholars to a range of professions. In 1968 undergraduates in the School of Art began the "Saturday Program," which offers free instruction to high schoolers (grades 10-12) and has enrolled more than 10,000 city students. Now in its fourth decade, the School of Engineering's "STEM Days" program brings New York high school students (and now includes elementary students) to the campus for brief immersion experiences. In 2015 Architecture, which participates in the "Saturday Program," added a four-week summer session for eleventh and twelfth graders.

We encourage the officers and the deans of the schools to continue to see these programs as opportunities to train and recruit future generations of Cooper Union undergraduates.

Added Faculty Hires. After the appointment of a VPAA, we recommend the authorization of at least 6 additional full-time faculty hires over the next two years to bring a total of 13-15 HSS full-time, tenure-line faculty. Although we recommend six new full-time positions to begin, a gradual expansion might be considered to replace part-time positions with full-time faculty able to provide curricular leadership and student advising and mentorship.

- The search for new faculty should proceed in coordination with curricular reform; a synergistic development of curriculum and faculty to achieve what we deem to be realistic excellence—that is, levels of feasible institutional excellence that fall within the means of faculty expertise and capabilities. We find that thinking about both institutional resources and faculty capacity alongside curricular change helps better anticipate gaps and shortcomings, ultimately enabling Cooper and HSS to quickly devise strategies and find resources for remedying them.
- With a new Vice President for Academic Affairs in place, and until the HSS faculty is enhanced with new hires, we recommend the appointment of a visiting committee to help coordinate the hiring of new faculty. This committee should work with existing faculty to advertise, sort, interview, and appoint 6 new full-time, tenure-line HSS faculty. The conversion of part-time to full-time positions should be undertaken with the realization that the ratio between tenure-line and non-tenure-line faculty in HSS has likely more influence on the quality of instruction and effectiveness of faculty governance than in the three degree-granting schools. The size and status of HSS make it more sensitive to this distribution.
- We are concerned about hiring all new faculty at the assistant professor level and suggest that some of the positions be associate or full-professor in order to develop strong internal leadership for transforming the curriculum and minimize unhealthy competition among junior faculty. This will help develop empowered voices and mentors working with a strong central Academic officer who can build the vision for HSS.
- With regard to the expertise of the new faculty, we recommend that at least two positions be in Art History and that the other four be open to a variety of disciplines and interdisciplinary fields in which the scholarship addresses the intersection of science, technology, art, design, ethics, and social relations across time (historically) and geography (cross-culturally). These are popular topics of research in all the social sciences. By advertising broadly, we increase the probability of enhancing diversity in the faculty and of creating a good distribution of humanists and social

scientists who address architecture, art and engineering issues among the HSS faculty. Cooper might also consider hiring some faculty in clusters, with shared expertise or focus across distinct disciplines or epistemologies.

• We recommend (see curriculum section below) that HSS courses should not be focused on coverage of a discipline's body of knowledge but on the relevance and desired learning outcomes for Cooper's professional programs. Given Cooper's size of less than 1000 students; it is unlikely that the institution could ever sustain multiple faculty in each of the relevant disciplines. Faculty should be hired for their excellence in teaching the core, and for developing more advanced electives that develop out from the core. A school that focuses on the human, historical, and material consequences of technology and design will meet students' needs and Cooper's unique mission.

Part-time Faculty and Post-doctoral Positions

- We are also recommending (see the 1859 Society discussion below) the appointment of up to four, three-year, post-doctoral positions, which will likely attract excellent candidates who are beginning their careers. Post-docs will provide innovation from the most recent scholarship, personnel to collaborate with students, and additional teaching staff. The particular distribution of responsibilities should be carefully monitored to ensure that the position is beneficial to both the individual's career and to Cooper's teaching and advising needs.
- We recommend that Cooper set a goal of keeping part-time faculty hiring to between 15-20% of HSS courses taught. (See appendix for a modeling exercise.) We also recommend increasing the salaries and administrative support in order to incentivize commitment and willingness to continue at Cooper, reducing turn-over and increasing both mentoring and curricular stability.

Hiring Processes and Considerations

- As new hires are made, we urge that Cooper continue a relationship with a top-level immigration law firm and retain them when needed to support new hires who are not US citizens or permanent residents.
- Cooper should institute clear and strong policies that support diversity in hiring and be cautious about often disabling competitions among subject matter and citizenship tradeoffs that undermine diversity commitments.
- We recommend the appointment of a visiting committee to work with a new chief academic officer (VPAA) and dean or director of HSS to oversee the hiring of new fulltime faculty. To fully achieve Cooper's goals of developing a coherent new core vision

for HSS and the personnel to achieve this vision, some continuity between the existing external visiting committee and the hiring committee might be helpful. The external review committee will work with current permanent faculty, some part-time faculty (with appropriate compensation), development officers, students and staff to articulate the core vision and identify subject matter needs to enact this vision. The committee should remain in place only so long as the HSS faculty have developed strong internal leadership, collegiality and accountability processes. Once the new faculty are hired and working with the dean or director and VPAA, the external committee's work will be complete.

- Establish 1859 Society, Cooper Union Post-doctoral Fellows. We urge Cooper to consider creating a Cooper Society of 1859 Postdoctoral Fellows; potentially an endowed postdoctoral fellow program. These fellows would be specifically recruited to teach in ways that intersect across disciplines, in the various schools and HSS. Bringing in 4 per year, for two year stints—these fellows could constitute a form of community, with regular meetings, workshops, etc. to develop a sense of cohort. Drawing from a rich national talent pool, the program could help make Cooper distinctive. A national postdoctoral fellowship program would be more expensive than the current adjunct model—annual stipends are higher that current adjunct pay, and living/moving costs would need to be factored into the program design.
- Establish an Inter-School Committee. To accomplish the type of integrative vision
 called for in this report, in addition to a VPAA, an inter-school committee should be
 formed to help with curricular matters and inter-school coordination. The committee
 could be directly appointed by the deans and VPAA, it could be an elected body, or it
 might be formed by some combination of the two. The committee would be a valuable
 asset for a potential VPAA.
- Course Scheduling. We recommend that efforts be immediately undertaken to begin
 determining how course schedules can be better aligned across Cooper's schools so
 that students have the maximum ability to sample the full curriculum, and enroll in HSS
 courses. The Registrar's Office should take on the responsibility of scheduling courses
 and space allocation.
- Improve Advising. We recommend hiring professional advisors who can greatly help better steward students through the curriculum. While we recommend 5-7 advisors, to be supervised under the HSS Associate Dean; depending on internal conversations and analyses, a smaller number may be incorporated.
- Greater HSS Involvement in College-Wide Admissions Processes. We recommend
 that HSS faculty, and certainly a potential VPAA, should be more involved in admissions
 and recruitment processes. HSS faculty are seemingly in a good position to evaluate the
 writing samples of applicants, for instance. Obviously, each school needs to ensure that
 they are admitting the best applicants for their programs, but overall, student success at
 Cooper entails early exposure and success in HSS (as we have discussed elsewhere in

this report). Students mentioned to us that they would like to have known more about HSS before they arrived. The Middle States Higher Education Commission agrees, and mentioned in a recent review that HSS should be discussed more in the institution's recruitment practices. Finally, HSS may want to consider launching its own version of the School of Art's Open Studio program, which is taught by students and is a huge part of their recruitment success.

- Regular Faculty Review. We recommend immediately seeking ways to create mechanisms for regular faculty review, assessment, and feedback in HSS. Regular reviews of HSS syllabi should also be enacted. A VPAA could broaden these efforts for greater Cooper (as appropriate) in consultation with the deans. The Writing Center (with its emphasis on programs that advance teaching and learning), as well as the Curriculum Committee, can potentially provide support for syllabi design and review. We feel that forums and discussions about syllabi constitute a collegial exchange of ideas for the curriculum that can be healthy over the long-term for Cooper Union.
- Revisiting the Past. We urge that Cooper communicate internal and external reports
 produced over the last 5 years and some of the top 5 actions taken and
 recommendations issued by: the HSS Curriculum Committee; Diversity & Inclusion Task
 Force; Council on Shared Learning.

Implementing Innovation

- "Folding" Research Chairs. To promote and support a broader research culture in HSS, we urge extending the opportunity for faculty to be eligible for release from 2-3 courses on a competitive basis. Akin to the benefits of an endowed chair, these "folding chairs" (essentially an "expiring chair") would be available for a 1-2 year period, enabling the successful recipient to apply the course relief for on-going projects during their tenure as a chair holder. We would encourage philanthropy to help underwrite the costs of the chairship, which would include adjunct replacement costs, and perhaps a modest research stipend (approx. \$15,000-\$20,000 per chair) that could also incorporate undergraduate research assistants. If HSS had one chair to offer each year, this could be quite beneficial to the faculty. The chair holder would be responsible for producing a research report/update at the end of the stipendary period, noting progress and deliverables on their research projects. The VPAA, or equivalent, would manage the selection process, perhaps constituting a selection committee. A version of this program might be attractive to units outside of HSS.
- Faculty/Student Research Catalyst Fund. We recommend finding ways to support
 faculty research such that it can help create opportunities for student research. We
 would recommend approaching a donor to see if annually, between \$50,000 to \$100,000
 can be reserved for funding research proposals from faculty, joint faculty/student
 projects, and individual student research projects. We recognize that these proposals

- can be beneficial for faculty and students throughout Cooper, not just in HSS. Such a fund could be managed by a VPAA.
- Teaching Catalyst Initiative. As with the Research Catalyst Fund, we would urge Cooper to consider establishing mechanisms to support innovative teaching, and team teaching. This could come in the form of course relief and/or modest stipends (\$1,000-\$2,000) to seed course development support. While the initiative is primarily targeted at boosting innovative teaching in HSS, other schools may want their faculty to participate; funds could be made available to them as well. Through an application process, the VPAA could manage this program, and naming opportunities are possible for potential donors. We could imagine a steady state version of the program being resourced with \$10,000-\$20,000 per year, Cooper-wide.

Reaching Beyond Cooper

- HSS Brand Refresh. An art-centered school like Cooper can advantageously utilize its in-house expertise to conjure new branding for HSS. A leading goal of the task is to promote HSS as a more central entity in the university. We would recommend that a brand refresh take place after other recommendations in this report are potentially adopted.
 - As we have discussed elsewhere in this report, there is an opportunity to leverage the mathematical concept of integration, per its tagline on the CU brochure: "The Vision to Integrate."
 - HSS logo could make clever use of integration symbols–double or triple, for each school: H∭ or H∭
 - HSS, in toying with the concept of "integration," could creatively make use of prefixes rooted in inter--: integral, integration, integrity
 - Other taglines might use: "integration station," "the place where we build, create, and innovate;" "the place where change happens;" "making good citizens;" "We are in the question business" (Bill Germano)
 - Visual theme: HSS as foundational "LEGO" piece
- Strategic Academic Partnerships Beyond Cooper. We urge the exploration of new, strategic partnerships with institutions like the New School and NYU, to see if these linkages could create teaching consortia arrangements for augmenting the curriculum. The advent of widespread online teaching may present an additional opportunity for creating academic partnerships that would extend well-outside of the NYC region. Focused, topical areas might constitute the best domain for partnerships—for instance, connecting HSS with Anthropology at the New School.

Great Hall "Educating for the Future" Series. We suggest a series of public
discussions—including roundtables, interviews, and debates—with President Sparks and
other thought leaders in higher education. These events should begin with the
implementation process for this report's recommendations, and they should initially
address the general themes of the recommendations. We should engage the community
and continue educating ourselves during this process.

For example, the conflict that followed Cooper Union's 2013 decision to impose tuition and the subsequent struggle to return to the founding tuition-free commitment makes Cooper a logical site for hosting a national discussion of higher education financing, affordability, and accessibility. Similarly, Cooper Union has an obligation to define what it means to be an "abolitionist institution" in the twenty-first century, a discussion that will allow it to address its successes and failures in achieving diversity and inclusion, and one with broad relevance for other higher education institutions. The 2018 student protests over Cooper Union's curricula raised concerns and exposed tensions with parallels at many private and public colleges and universities. Cooper has a perfect forum for calling together student leaders from across the nation to discuss their generational challenge to higher education. In short, we believe that some of the Union's internal crises, conflicts, and tensions will be resolved and demystified as Cooper embraces the opportunity to lead, and as it calls upon its unique history and assets to reaffirm its position as a center of social debate and innovation.

These programs should continue after the implementation process is complete, and bring together faculty across schools around a common set of readings, topics, or talks. While some of these would take place in the Great Hall itself, the hall might equally serve as a metaphor for related convenings in cyberspace, or other parts of campus. Many of these discussions could be productively opened to the public and a roadshow version of this might animate alumni, who could be meaningfully brought into conversation and dialogue. We feel that "Educating for the Future" is capacious enough to incorporate a wide range of generative conversations that will build campus culture, and lead to important and actionable ideas.

Curriculum and Teaching

Any re-invention of the curriculum would have to happen in stages. First, there should probably be an immediate re-examination of HSS's existing core to create courses that are more engaged with students' majors. This should be quickly accompanied by fortifying offerings featuring humanistic and social science <u>methods</u> for learning, understanding, and critique.

Second, any existing or newly proposed sequence could retain emphasis on the full-time faculty's core teaching and research interests, recognizing that expanded hiring will provide opportunities to rethink those foci. Our experience also suggests that language and concepts from the field of philosophy, such as ethics or aesthetics, register differently according to subject matter disciplines. For potential hires in the social sciences, for instance, Cooper may find that

some job candidates working in these areas may be more engaged with topics addressing contemporary technology ethics than might philosophers per se, for example with studies of racial or gender bias in algorithms for hiring, political participations, marketing etc. Cooper may find that research/teaching orientation may differ from the work of potential candidates studying continental philosophy. Of course, there are notable exceptions. Nonetheless, we find it important here to signal these differentiations, because the nature of Cooper's future hiring will necessarily impact the direction and inflection in which core topics like these will be taught.

We also recommend that as Cooper re-imagines the HSS four course sequence, it should minimize notions of trying to achieve maximum "coverage" of fields and topics. Instead, achieving greater depth, and accentuating student in-class and out-of-class experiences, combined with offering practice-oriented, curricular and co-curricular educational opportunities, presents Cooper with an advantage to revitalize liberal arts pedagogy in avant-garde ways.

Finally, we strongly urge Cooper to think of ways in which the degree requirements in the three schools can be reconceived to create space in the curriculum, and possibly even require a common freshman year for all Cooper union students.

- New Core Curriculum. We believe that embarking upon the task of creating a new core
 curriculum can be central to establishing Cooper's reputation for excellence in the
 professional schools. Our interviews with students confirmed this. There are various
 routes to such transformation, which can be pursued as individual initiatives or in
 combinations.
 - A single, fundamental course self-consciously and purposively organized to identify the relationships between writing and thinking, concepts (abstractions) and phenomenal examples/ illustrations, by making the epistemologies more explicit so that the HSS courses could be fundamental across the three schools. Questions concerning evidence and knowledge claims across the disciplines in science as well as the arts. What kinds of claims are being made? Students do not know what evidence looks like—and varies—in social science, in the humanities, and the sciences. How do they vary? How to address and coordinate the three cultures within the HSS classroom?
- A series of courses improving the four course currently required core: Perhaps create an HSS core curriculum embracing Technology Ethics (inclusive of technology in art and architecture), or Science and Technology Studies as a possible examples. And there is no reason that the core should be limited to HSS courses alone. Introductory courses sponsored by each (or some) of Cooper's four academic programs could form part of a newly conceived, common freshman year. The offerings would supplement courses already in the HSS core. An example might include: "An Introduction to Design Theory," created collaboratively with faculty from HSS, Art, Architecture, and Engineering. Similarly, an "Introduction to Engineering" might involve comparable collaborations between the schools. Cooper uniquely boasts an opportunity to accomplish this because each of its schools (Art, Architecture, and Engineering)

possess considerable "bodies of knowledge" and expertise that mutually reinforce the best work done in all three fields. Hence, such an approach might correspondingly help better integrate, and cross-pollinate the schools themselves, while enhancing a sense of common identity among Cooper's students.

A proposed revised sequence of courses might include:

Year 1, Semester 1: **Writing as Practice**. Emphasizes writing mastery through constant drafts and revisions, gradually elevating a student's standard of work over the course of the semester (Important groundwork already being laid in HSS by the Writing Center and Bill Germano) Also emphasizes the relationship between writing and thinking.

Year 1, Semester 2: **Technology**, **Ethics**, **and Aesthetics**. Emphasizes the interrelationships between the arts and sciences; the consequences of innovations, actions, and projects; creates a framework for assessing consequences of technology; connects artistic production (and "form") to technology.

Year 2, Semester 1: Interdisciplinary methods-based instruction. For example, there might be a sequence writing in discipline, and across disciplines, and introductions to Design, sponsored by the Art and Architecture schools, and a maker-oriented introduction to engineering, along with a humanities sequence focused on decolonizing Design, Technology ethics, and STS methods. These courses might be calibrated to provide a balance of lecture courses, and more experiential, project-centered, and service-learning courses that could also channel the activist energy of students and faculty into the community.

Year 2, Semester 2: A History of Science and Technology Curriculum Pathway. We recommend that HSS explore ways to carve and fortify a History of Science and Technology sequence in its course offerings. Such an approach could make use of the "Teaching Triads" proposed above. If Cooper were to adopt our suggested core curriculum, the Year 1, 2nd semester class could serve as a gateway course to this pathway.

Or,

Designing an Ethics and Philosophy Curriculum Pathway. We recommend that HSS explore ways to carve and fortify an Ethics and Philosophy sequence in its course offerings. Such an approach could make use of the "Teaching Triads" proposed above. If Cooper were to adopt our suggested core curriculum, the Year 1, 2nd semester class could serve as a gateway course to this pathway.

Or,

Data Visualization. An example of integrative core curriculum. HSS would be wise to invest in designing a core data-visualization course that integrates mathematics, art, writing, storytelling, history, and other disciplines. During the recruitment process, better featuring Cooper's HSS program and its expectations can also help prospective students get mentally ready, as well as level-set their outlook towards HSS. Considering a summer-bridge writing program could equally be helpful to more incoming students at Cooper. And while each of the schools appear to be doing an excellent job in their units of promoting student success (1st to 2nd year retention rates are around 92%, and 6-year graduation rates are around 90%), a holistic and centralized student success initiative might serve as a useful complement to ensure that students are getting the most out of the full institution and city, beyond their specialized programs.

- Cooper Lab & Studio Commons Initiative. We recommend creating opportunities in
 the short term for students across the schools to use labs, studios, and other design and
 maker spaces. Again, a VPAA, in concert with the deans, can help facilitate this. We feel
 that more cross-training, and cross-styled utilization of ideation/maker spaces can foster
 a better environment for the type of interdisciplinary work that will advance Cooper.
- Fortifying Writing Instruction. Solidifying writing intensive courses in the disciplines is crucial. However, it is important to underscore that writing intensive courses in the disciplines likely work best if there is a continual opportunity for students to make revisions over the course of a semester, i.e. a 15-20 page writing project should feature multiple drafts and iterations. Moreover, it is imperative to support instructors who teach writing in their disciplines by having workshops and clear standards for strong writing pedagogy. The Writing Center and HSS can play a crucial role here. But importantly, through this model of emphasizing writing in the disciplines, some of the responsibility for writing excellence will be increasingly shouldered by the schools, albeit in close coordination with the Writing Center and HSS.
- Expanded Freshman Summer Writing Program. To improve and bolster student writing skills prior to their first Fall classes at Cooper, we suggest building on existing pre-Freshman summer writing camps to capture broader portions of Cooper's incoming students. With careful planning, the program can be developed in such a way as to avoid any stigma for its participants. Perhaps billed as an honorific opportunity for all Cooper students, the program can be seen as trying to develop language and reading skills at all levels.
- Designing Interdisciplinary Course Credits. We recommend that a standing
 committee, eventually under the purview of the VPAA, be created to determine ways in
 which interdisciplinary courses can be created across the three schools and linked to
 HSS offerings. With this initiative, credits could count as both HSS and either
 Engineering, Architecture, or Art credit. Other synergies might be identified between
 Architecture and Engineering; or Architecture and Art, etc. The "Team Teaching" (see

below) and "Teaching Catalyst" (see above) initiatives may help with this endeavor, better enabling new interdisciplinary courses to be designed.

- Thematic Learning. Adapted from the model at Georgia Tech, we recommend that a series of thematic threads be conceived for students to explore in their coursework across the university, in all schools. These themes can transect all four years of their careers as students as Cooper, being explored through projects, discussions, coursework, lectures, etc. A VPAA would be instrumental in helping coordinate the identification of themes and enacting their implementation across the schools and HSS. A committee could get the process started by identifying potential opportunities and barriers within the institution to establishing these thematic, curricular threads, and devising pathways to surmount any hurdles. A selection of what might be dubbed "Great Themes," might also be taken up in discussion in the "Great Hall" and comprise an element of the series we proposed in our earlier recommendations above.
- Experiential Learning in NYC. We recommend taking greater advantage of NYC as a resource for classroom learning.
- Improved Coordination of Assignments Between HSS and the Schools. We urge Cooper to explore ways to better enable students to formally coordinate assignments across classes/disciplines; for instance, a semester ending project in Architecture might be coordinated with a semester ending project in HSS.
- Team Teaching Initiative. We recommend the immediate, or near-term (after a senior administrator is in place) expansion of opportunities for team-teaching across the schools. Incentives need to be worked out with the deans so that there would eventually be a minimum of 4 team-teaching opportunities devised per semester at Cooper Union. Team teaching can take place between and among full-time and part-time faculty. Incentives could take the form of teaching relief, alongside a special course development fund (see below) to inspire the design of high-quality courses. More team-teaching opportunities would ideally be accompanied by student projects/assignments that would also be multi-method, and multi-disciplinary. A student in an Architecture course, for instance, might re-imagine their work in an HSS course as well, enabling the assignment to count in both classes (albeit work that will be modified and refined in the context of both courses). Projects done in courses that are team taught might also be encouraged to submit work of multi-disciplinary nature.
- Teaching Triads. We recommend that for generating greater synergy with the other schools, and to infuse greater depth in the curriculum, a cluster of "teaching triads" (at least 6) be created. A teaching triad centers around a full-time faculty member and his/her area of disciplinary expertise. Full-time faculty members would then be intentionally paired with a strategic, part-time hire in HSS that would complement and expand their areas of strength/expertise. Additionally, we recommend a part-time hire, or a 2-yr. postdoctoral fellow be placed in one of the schools that would further complement

the teaching of the HSS dyad. Hence, the result would be an instructional "triad" (3 faculty assets) that would be both anchored (through the full-time hire), yet flexible (through the part-time hires). The dean or director and VPAA could help coordinate the inculcation of the triad in schools outside of HSS. Versions of the triad idea exist in Cooper, but they are not deliberately designed. Developed as a more intentional strategy, this triadic approach has benefits, and can help with curricular planning, interschool alignment, and institutional complementarity.

APPENDIX: A Model of Faculty Transformation

In a sample recent semester (Spring '21) HSS taught in aggregate 57 sections, of which 20 were taught by FT faculty. These break down as follows:

Core courses 27 secs., 8, or 30% taught by FT faculty

HSS Electives 16 secs. 9 or 56% are taught by FT faculty

HSS (non-Art history) in aggregate (core + electives): 43 sections 17 or 40%

taught by FT faculty

Art History 14 secs. (core 4 plus 10 electives). 3/14 or 21% taught by FT faculty.

With three additional hires in Art History, the balance will change. Assuming a 3-3 teaching load, will add 9 sections in Art History--let's discount that to 7 with research leaves. That would bring the total number of HTA history courses taught by FT faculty up from 3 to 10 or more out of 14, improving the full-time ratio in Art History from 21% to 71%, and even more critically, creating a group of three faculty who can formulate curriculum and create a coherent program. Were there 2 hires in Art History, the numbers would be 5 new courses, full-time faculty from 3 to 8 out of 14, improving the ratio to 57%.

The numbers are similar for the three new core curriculum/HSS elective faculty proposed. 9 additional FT sections would bring the FT percentage for HSS core and electives up to 26 FT sections out of 43, or 60%.

If, on top of the six lines that we are recommending that Cooper hire immediately, two more lines are hired within three to five years, the proportion of courses taught by FT faculty would move up to a healthy 75%, including room for the research leaves that we recommend.