

COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

OFFICE OF THE PROVOST

To: President Lee C. Bollinger
From: Interim Provost Ira Katznelson
Re: Fourth Purpose Task Force Report: On Directed Action
Date: December 15, 2020

As the 2019-20 academic year began, President Bollinger announced the intention to create two university task forces: the first to ask what the University should be doing regarding climate change, the second to consider how Columbia might advance the aspiration designated as a “Fourth Purpose.” The primary question put to the latter task force was this: “What might be done to magnify our opportunities—and, indeed, our responsibilities, especially at this moment in history—to help bring deep knowledge to the world we serve, and, in so doing, enhance the vectors of university research, teaching, service and impact?” The premise was the sense that the “deep knowledge” of the University is not deployed as fully as it might to affect the human condition.

Orientation

The group commenced its efforts in February 2020, only to have been interrupted by the pandemic. The enlistment of many colleagues and research shops, working with partners in government, civil society, and the private sector to understand, mitigate, and grapple with the effects of COVID has underscored the central place universities occupy in light of their distinctive capabilities. At Columbia and other leading research universities, an extraordinary base of intelligence and learning across many disciplines, proceeding in collaboration with actors beyond the academy, is addressing the pandemic’s sources and character, remediation and wide effects.

Columbia’s COVID-19 Hub (<https://covid19hub.cuit.columbia.edu/vivo/>) of research activities records 279 current projects at the University. The great majority direct scientific and clinical research toward potentially effective forms of mitigation. Strikingly, this impressive compilation also designates, among other subjects, work on child abuse prevention, qualities of loneliness, ordeals for migrant families, food insecurity, and the role the internet and social media can play to build fact-based public awareness, themes that have mobilized faculty in the Arts and Sciences and across our professional schools.

This cross-University effort reminds us that a keen determination to tackle demanding predicaments is deeply embedded within our intellectual and organizational culture. This disposition is widely shared across the arc of the humanities and social sciences, artistic expression, and the natural and biological sciences in the University's great variety of intellectual and practical domains. It is grounded in propositions that emphasize the importance of theory for practice and of practice for theory; indeed for the importance of scholar-practitioner ties in research and teaching.

More broadly, robust ties connecting scholarship, research, and thinking to practices and actions are widely dispersed at Columbia, certainly, in the arenas of health and engineering, social work and business, climate science and public policy, but also in studies of place and culture in the liberal arts, with attention to historical antecedents. At the core of this purposeful orientation is the conviction that directed action is at its best when integrated with the bedrock purposes of the University, the cultivation of basic research and its dissemination through imaginative instruction.

The University, in short, has many reasons to be proud of the contributions its faculty, students, and staff have been making to the Fourth Purpose well before the current activation of collective resolve. As a key example, think about the role ICAP, at the Mailman School of Public Health, has been playing since 2003. Working with partners in ministries of health, large multilateral organizations, and health care providers, as well as with patients, ICAP is principally identified with its family-focused HIV services, especially in Africa, as it works to connect top-tier scholarship to action that broadly addresses urgent health threats.

Among the many other instances of scholarly activities that have important policy and practice significance, also consider the wide range of efforts at CUIMC to speed up discoveries to ameliorate or even cure intractable disease, the Columbia Nano Initiative in Engineering and the Arts and Sciences, the Center on Global Energy Policy at SIPA, the cross-school and cross-disciplinary Eric H. Holder Jr. Initiative for Civil and Political Rights, the Institute for Research on African American Studies (IRAAS), and, of course, the Earth Institute (EI). Think, too, of the Atlantic Fellows for Racial Equity and the Obama Scholars programs that bring to Columbia rising leaders from around the world who have demonstrated a commitment to find solutions to challenges in their communities, countries, and regions, and who yearn to deepen their knowledge and skill during their time at the University. Each of these formative programs connects sustained research, collaboration, education, public service, and aspirations for societal impact.

The work of these units exemplifies why Columbia is widely admired for the ways colleagues lead across numerous fields—in a wide array of medical interventions, in leadership training, in infrastructure innovation, in policy development, in urban design, in studies of language and culture, in work on racial justice, and in a host of collaborations with NGOs, business firms, and providers of legal, architectural, and

social services. Further, the University is proud of its deepening involvement with our local communities in Morningside Heights, Harlem, and Washington Heights.

Stirred by these and other sites for the realization of University commitments, including the Columbia Global Centers (CGC), the Data Science Institute (DSI), and Columbia World Projects (CWP), the task force also has been motivated by unseized opportunities, insufficient visibility, and unrealized chances. The range of relevant experience with, and energetic support for, directed action can propel our newly articulated core University Fourth Purpose if, indeed only if, we attend to the contours of organizational design and the arrangement of incentives and disincentives regarding coordination, talent, partnerships, and ethics, which are the central subjects of this report.

Our working hypothesis is that institutional mechanisms, creatively developed and thoughtfully positioned, can help overcome existing barriers to collaboration and successful accomplishment, build new collaborations, and more broadly galvanize and guide ties between scholarship and meaningful activity that addresses significant human problems. This aspiration requires assiduous attention to two vectors of connection: within Columbia among disciplines, schools, centers, and institutes, and between the University and the world outside.

We call, in short, for remediation, aspiration, and institutional creativity. The decision by the University to embrace directed action as a core purpose is neither simple nor casual. The key word is “purpose,” signifying more than an objective or high resolve, though it includes intentions and determination. The expression connotes principles and values, sensibilities and standards. Its power is the result of that combination.

This document reports on the work of the Fourth Purpose Task Force. We believe this to be a propitious moment to become explicit about directed action, a good time to identify principled and practical ways to build collaborative connections for researchers and practitioners who wish to address tenacious and complex challenges in ways that make a tangible difference without being single-minded or hopelessly over-ambitious. Bold realism is our watchword.

The time is right. Some three decades ago, the political scientist John Kingdon identified moments when possibilities open to make significant change. He was thinking about public policy, but his identification of three “streams” is relevant to our work. Kingdon identified (1) a problem stream— by which he meant the process that leads to recognition of a difficulty that needs debate and resolution; (2) a political stream of facilitating conditions; and (3) a stream of ideas based on learning produced by a process aiming to discover what successful change would require. When these three join, he argued, uncommon opportunities emerge.

The premise of this report is that a felicitous moment exists at Columbia for directed action as a practical and cultural commitment. After all, the problem stream is overwhelming and pressing. The University backs directed action strongly. We also possess “a stream of ideas” from long-standing Fourth Purpose sites. Sustained and self-conscious work of this character is not only timely in terms of need and opportunity, but has been enhanced by recent scholarly developments, especially in data science, in the social sciences, and in a growing wish in the humanities to engage with public affairs.

The University is poised to show how Fourth Purpose activity needs not compete in zero-sum fashion with our oft-stated purposes of research, teaching, and public service. To the contrary, directed action can strengthen these embedded purposes. Our work also can demonstrate how leading universities develop and deploy public goods that both market and governmental institutions make available only inadequately.

The moment is right as well because the powerful model of the Zuckerman Institute (ZMBBI), as well as the emerging Columbia Climate School (CCS), each drawing on human resources from across the University, plainly wish to identify interventions based on pioneering knowledge. ZMBBI believes “that understanding how the brain works — and gives rise to mind and behavior — is the most urgent and exciting challenge of our time.” The *raison d’être* for CCS is human apprehension about a crisis so large and so fundamental that urgent action based on profound and multilayered knowledge is indispensable.

Further, the directed action impulse hardly is restricted to Columbia, or to universities. Among a constellation of organizational types, domestic and international agencies, think tanks, firms grounded in research, and innovation hubs seek to connect thought and action. Nonetheless, universities like ours are distinctive sites, for they contain an unmatched depth of scholarship premised on extraordinary faculty and student talent. Not just Columbia, but other higher education institutions have turned to Fourth Purpose activity. A recent survey at CWP found more than forty such announced organizational initiatives presently underway across American higher education.

The task force has examined elements in our institutional life and behavior with the ambition to enhance Columbia’s capacity to help lead and direct this wider trend. The deliberations by the committee as a whole, including the president and interim provost of the University (who has served as convener), have been guided by four committees:

Issues and Implementation

1. Terry McGovern (Chair), Harriet and Robert H. Heilbrunn Professor; Chair of the Heilbrunn Department of Population and Family Health; Director, Program on Global Health Justice and Governance in the Mailman Faculty of Public Health
2. Heidi Allen, Associate Professor of Social Work
3. Avril Haines, Deputy Director, Columbia World Projects; Senior Research Scholar; Lecturer in Law
4. Trevor Harris, Arthur J. Samberg Professor Emeritus of Professional Practice in the Faculty of Business
5. David Hwang, Associate Professor of Theatre Arts in the Faculty of the Arts

Personnel and Governance

1. Miguel Urquiola (Chair), Professor and Chair of the Department of Economics
2. Jason Bordoff, Director, Center on Global Energy Policy; Professor of Professional Practice in the Faculty of International and Public Affairs
3. Nicholas Lemann, Director, Columbia World Projects; Director, Columbia Global Reports; Joseph Pulitzer II and Edith Pulitzer Moore Professor of Journalism; Dean Emeritus of the Faculty of Journalism
4. Maya Tolstoy, Professor of Earth and Environmental Sciences
5. Jeannette Wing, Avanesians Director, Data Science Institute; Professor of Computer Science

Teaching and Learning

1. Samuel Sia (Chair), Professor of Biomedical Engineering
2. Marianne Hirsch, William Peterfield Trent Professor of English and Comparative Literature
3. Laura Kurgan, Professor of Architecture; Director, Center for Spatial Research
4. James McKiernan, John K. Lattimer Professor of Urology; Chair, Department of Urology; Director, Urologic Oncology in the Faculty of Medicine; Urologist-in-Chief, NewYork-Presbyterian

Ethics and Partnerships

1. Kenneth Prewitt (Chair), Carnegie Professor of Public Affairs; Special Advisor to the President
2. Jelani Cobb, Ira A. Lipman Professor of Journalism
3. Elizabeth Corwin, Anna C. Maxwell Professor of Nursing Research; Vice Dean of Strategic & Innovative Research
4. Alexander Halliday, Professor of Earth and Environmental Sciences; Director, The Earth Institute; Dean-Designate, the Columbia Climate School
5. Elora Mukherjee, Jerome L. Greene Clinical Professor of Law; Director, Immigrants' Rights Clinic

Our goals are simultaneously modest and ambitious. The aim is not to create a radically new orientation to knowledge and its uses, but to more emphatically, and more effectively, anchor directed action as a collective commitment and institutional orientation.

There is no simple recipe, however, and no shortage of tensions and difficult decisions. The task force has considered how to identify and design organizational forms that enhance the likelihood of initiative and creativity to take advantage of the intellectual resources and administrative imagination that are hallmarks of the University.

Situating the Inquiry

Depending on the timeframe we use, conscious university efforts to employ scholarship to affect the world are both long-standing and relatively recent. Long-standing because ever since the creation of universities in medieval Oxford, Cambridge, and Paris, higher education has influenced persons with authority in state and church. From their start, these institutions have helped define critical choices, and have shaped understanding and terms of debate among attentive publics. Universities also have had a huge impact through systematic thought on such immense matters as the shift from divine right to popular sovereignty, the character of trade and production, global patterns including colonialism and warfare, normative standards for justice, toleration, and decision-making, and, notably, the modern scientific revolution that emplaced reason, observation, and systematic assessment at the heart of enlightened inquiry.

Directly relevant for the Fourth Purpose is how in the late 19th and mid-20th centuries higher education altered in fundamental ways. Before the 1880s, with the notable exception of some American public universities oriented to agriculture and a range of schools that taught medicine, post-secondary education—almost exclusively Protestant, white, and male—was collegiate, primarily teaching classics, literature, and theology to well-off young men. That orientation characterized our own university for roughly the first century and a half of its existence. Only near the close of the 19th century did we, together with a handful of other North American institutions, begin to advance systematic research in the physical and biological sciences and the social sciences while enlarging the scope of the humanities. Only then were departments, disciplines, journals, associations, and the process of peer review founded, thus creating the very arrangements that continue to underpin every modern university.

In these respects, little has changed, and with good reason. As the sociologist Robert K. Merton observed during World War II, the quest for knowledge with open, transparent, and meritocratic settings and rules enjoys a family resemblance to democratic norms and sustains open reason, free debate, and intellectual progress. We stand on these shoulders.

During and after the 1940s, higher education took an intentional turn. Research became more instrumental, with growing assistance from the federal government, especially in areas of science associated with defense and national security, and with the development and growth of large-scale foundation philanthropy. This is the public/private world celebrated for its remarkable achievements by Jonathan Cole's book of 2010, *The Great American University*. Much of our present academic world is inconceivable without the knowledge base created at that time.

More recent still are great transformations associated with technology, immense data sets, new tools for causal inference, the growth of evidence-based institutions outside as well as inside universities, and the rise, especially in the social sciences, of more collective research efforts that complement the work of independent inquisitive individuals. Universities also have experienced enlarged research and development partnerships in engineering and the life sciences, affiliations with business to enlarge and accelerate innovation, and shifts in professional and liberal arts education and scholarship to focus more intensively on 'real world' problems.

The core institutions of scholarly life risk rigidity and complacency. In light of mid-20th century, then early 21st century developments, universities presently confront external and not always friendly pressure to become ever more instrumental, more driven by short-term demonstrations of impact. One consequence is a growing dependence on funding sources that are rather too impatient with the sheltered conditions and rules of assessment that underpin creative and formative scholarly work.

Accompanied by watchfulness, our passion for thoughtful directed action requires accomplished scholarship and offers no substitute for fundamental human understanding. Utility, moreover, often is not predictable. Knowledge cannot simply be willed into impact; and impact, as with the results of the wide dissemination of social science ideas like moral hazard, stereotype, and social capital, may not be properly attributed to the originating academic sources of invention and learning.

A university is not a think tank, a business, a political party, or an interest group. With our peers, Columbia seeks to gain knowledge about nature and the human condition with authority and legitimacy based on manifest standards of transparent inquiry and truth claims connected to systematic patterns of accountability. These orientations are buttressed by norms of organized skepticism and the sense that learning constitutes a common human heritage, not a closely guarded secret for elites.

University scholars and teachers are insatiably curious. We want to know, comprehend, and instruct independently of external pressures. Combining responsibility and opportunity, and mindful of the particular circumstances of higher education today, we believe the ultimate test of underscoring, augmenting, and advancing directed action as a core purpose of the University must not be one of addition but of mutual effect as we connect impactful activity to the life forces of higher education.

Further, we reject the idea that university studies should be dominated by working back from practical applications or by proof of wider societal value. The desire “to direct scholarly knowledge outside the university in the hope of making a difference in the here and now,” which is how Nicholas Lemann, the founding director of Columbia World Projects, designated the Fourth Purpose, will fail if it elides our commitments to the production, assessment, and transmission of knowledge as goods in themselves.

Here lies a central conviction, an emphatically positive claim: Directed action joined to self-conscious implementation presents means to enhance and secure knowledge, pedagogy, and public service. Such activity puts understanding to the test and returns the results of projects and problem-oriented engagement—whether cultural or economic, political or scientific—to enriched scholarship and teaching. Done thoughtfully, there is no contradiction between strong, independent, and reflective scholarly values, tracking inquisitiveness where it takes us, and directing intellectual energy to world issues. It is possible, indeed highly desirable, to pursue Fourth Purpose motivations and objectives in a manner that builds on and enhances academic moorings, fundamental inquiry, rich education, and ethical practices.

Settings: A Spectrum

Directed action is situated at different institutional levels. We take note of three overlapping sites: large institutions created by central design as galvanizing University priorities; scores of highly specialized centers, institutes, working groups and research programs within the University’s highly decentralized array; and a middle zone constituted by our sixteen existing schools and a series of young institutions, including Columbia World Projects, the Data Science Institute, and the Global Centers.

This range of activity, characterized by a combination of assertive planning and bottom-up imagination, is fundamental to the future of directed action at Columbia. The first category encompasses the audacious creation of ZMBBI to focus on the human mind and of CCS to focus on the future of the globe’s climate, each fashioned at a daring edge of possibility, each galvanizing existing campus talent. When ZMBBI was formed, its leadership, including two Nobel laureates, possessed the ability to draw on immense relevant talent located in our Washington Heights and Morningside Heights campuses. Similarly, the existence of the Lamont-Doherty Earth Observatory, arguably the globe’s strongest constellation of climate scientists, as well as the experiences of personnel at the Earth Institute who blend “research in the physical and social sciences, education and practical solutions to help guide the world onto a path toward sustainability,” have made the Climate School possible. These institutions, moreover, receive various forms of subvention, including substantial fundraising support, without being inhibited by any entrenched *status quo*. Necessarily, initiatives of this type are limited in number. The Fourth Purpose cannot expand simply by adding organizational efforts at this scale, though there is much to learn from them, especially how to build on existing scholarly expertise.

At the spectrum's other end, a system of creative anarchy exists, often working with great power, intense focus, and intellectual depth to produce effective practical results. In part because this sector at Columbia has evolved piecemeal—center by center, institute by institute—we know too little about the scope and content of its landscape. Nor, as we best can tell, does this sprawling segment benefit from sufficient centralized leadership or coordination. An initial step would be to map this topography of directed action in tandem with efforts to relax or eliminate perceived barriers and administrative obstacles, and bring together knowledge and resources.

During the winter and spring of 2019, Trish Culligan (then Carlton Professor of Civil Engineering and presently Dean of Engineering at Notre Dame) and Kenneth Prewitt (Carnegie Professor of Public Affairs and Special Advisor to the President) conducted an examination of this decentralized arena. Their study reviewed “Fourth Purpose” units at Columbia that deal with a wide range of subjects—including aging, gang violence, disaster preparedness, social enterprise, resilient cities, population research, energy policy, gender, the health of vulnerable populations, and global migration. Each considers questions of policy and behavior with devoted research faculty drawn from Arts & Sciences, Lamont and EI, Social Work, SEAS, Public Health, GSAPP, Business, SIPA and Law.

The Culligan-Prewitt review revealed much frustration with a lack of uniformity in process and in decisions about which initiatives to fast track. Other concerns included bureaucracy associated with international travel, delays in purchasing equipment, IRB reviews, and moving ahead with appointments to key positions. Tensions between thorough care and the quest for speed and flexibility, often grounded in well-intentioned rules, can be rife. Our excellent Sponsored Projects Administration, as an example, tenders fine administrative support to investigators, yet there are a good many instances where agreements with partners take more than the targeted 25 days to negotiate; on occasion, much longer.

Most of the centers and institutes surveyed reported what they construed to be mismatches between appointment structures and the type of personnel they require. Widely noted was difficulty in recruiting persons who do not fit neatly into the categories of “research,” “teaching,” or “administration,” and the wish to bring on board persons with experience at the border of knowledge and action.

These units also described having received insufficient guidance in forging external partnerships, no easy matter. They noted that building such relationships requires efforts that are insufficiently recognized by current reward systems, and can miscarry if partnerships are fragile, the partner is not properly resourced, or the partner's priorities change. While these connections need to be both strong and stable, the interlocutors also found concern about external partners wanting to set agendas based on their own priorities.

Collaborating with governments, NGOs, think tanks, firms, and interested communities, of course, is a major operational feature of the Fourth Purpose design. CWP, for example, values early collaboration, sharing responsibility for problem definition, not just problem solution. No doubt, there are other models of good practice in selecting and working with external partners, a subject to which we return in the section on collaborations.

The future of the Fourth Purpose at Columbia will depend considerably on how the University comes to enhance the dimensions of directed action admirably and energetically underway at the University's widely diffused sites. Not just the elimination of barriers, but finding means to build networks, share information, deepen ties with students, and help define and guide ethical challenges will help determine whether the chance to create new kinds of knowledge, innovate in teaching, and connect both to practical activity will be robustly achieved.

The Middle Zone

Success in directed action, we wish to underscore, will depend not only on the grand commitments at ZMBBI and the Climate School or on the multiplicity of bottom-up arrangements. Accomplishment for the Fourth Purpose also will depend on what happens at our schools and at a small number of young interstitial settings that, together, compose an institutional middle zone.

There is keen interest in the Fourth Purpose among our deans and each of the schools, with much experience, as noted, not just in clinical locations and public health but also at the very core of SIPA, SEAS, GSAPP, indeed all our professional schools, and with many efforts in Arts and Sciences. Most directed action takes place in these settings. Of course, given the diversity of fields and foci in the University, it is likely that many activities in this mode will be idiosyncratic to a given school. What is important is that we develop norms and procedures that will be applicable across these diverse sites, especially as they concern recruiting talent, building partnerships and collaborations, advancing teaching and learning, and grappling with difficult ethical questions.

To that end, the Data Science Institute, Columbia Global Centers, and especially Columbia World Projects might perform key Fourth Purpose roles within and across school boundaries. These supple, modest-sized institutions, we believe, could take on enhanced constitutive and coordinating responsibilities, crossing boundaries inside and outside Columbia, not as substitutes for work done across our campuses, but as catalysts. Yet they are too particular in orientation to take on a central university function of managing, directing, and, where appropriate, harmonizing on their own, separately or together.

For this reason, a central proposal, arguably the most fundamental, that we elaborate in the recommendations section urges that the University's Fourth Purpose commitments should acquire a presence within the Office of the Provost with the appointment of an administrative team led by a Vice Provost for Directed Action. A principal task would be to strengthen and deploy the interstitial, middle zone as represented by the Global Centers, the Data Science Institute, and Columbia World Projects, as well as the Earth Institute as it integrates with the Climate School. In close collaboration with the new Vice Provost, these organizations could provide intellectual and practical assistance to schools across our campuses to help shape opportunities for faculty to develop projects, build partnerships, and generate ideas that would better connect Columbia to environments both physically close and distant.

The Global Centers in Amman, Beijing, Istanbul, Mumbai, Nairobi, Paris, Rio de Janeiro, Santiago, and Tunis seek "to expand the University's ability to contribute positively to the world by advancing research and producing new knowledge on the most important issues confronting our planet" by "connecting the local with the global, to create opportunities for shared learning and to deepen the nature of global dialogue." One effect of the COVID pandemic has been to draw these Centers closer to our schools by way of a University-wide initiative for Columbia students located outside the United States that brings them to dedicated spaces to convene, study, collaborate, and benefit from programming opportunities that improve their remote learning and help integrate them into the University community.

The Data Science Institute is rooted in the concept of directed action. Its mission orients state-of-the-art data science and its application, collaboration with external partners, and training for data scientists at Columbia with a normative orientation "to improve the quality of life for all," and "ensure the responsible use of data to benefit society." Its project areas include cybersecurity, health analytics, and work on smart cities, including energy efficiency, in addition to research on media and society, where it has achieved access to millions of declassified federal government documents. It also has been considering, at depth, how to make Artificial Intelligence trustworthy and inclusive, thus pointing the way toward concern with ethics as projects advance based on scholarship and partnerships.

This vibrant resource, mobilizing a wide array of faculty, also is involved in Fourth Purpose pedagogy at the BA, MA, and PhD levels, where it extends a doctoral specialization in Data Science in conjunction with Applied Mathematics, Computer Science, Electrical Engineering, Industrial Engineering and Operations Research, and Statistics. DSI's conferences and seminars, seed grants and fellowship programs, research opportunities for graduate and undergraduate students, faculty-led capstone projects, and The Collaboratory that builds interdisciplinary curricula across our schools exemplify what the middle zone can accomplish, not as a competitor to schools and other institutes and centers, but as means to fortify the Fourth Purpose.

DSI also has much to teach about the ethics and manner of partnerships. Its program of industry affiliates, with more than 25 companies as members, has been experimenting with the right balance in university-business relationships. They have been discovering that one size does not fit all, as each company requires individual treatment and care. Perhaps the widest substantive and methodological range at the still developing middle zone is Columbia World Projects, where particular promise lies for synergy and intellectual stimulus as the organization complements its existing strengths with a more open architecture. CWP is young. The academic year 2017-18 was principally devoted to planning and building organizational rudiments. Now entering the third season of activity, its experiences to date demonstrate that it is possible to create Fourth Purpose processes that, at once, are cerebral and practical at a high level.

CWP's mission statement is pure Fourth Purpose. It states how the organization "mobilizes the University's researchers and scholars to work with governments, organizations, businesses and communities to tackle global challenges. Everything we do combines the rich intellectual resources of the university in new ways and connects them to the needs of the world outside." Unlike ZMBBI and CCS, however, CWP is not oriented to a specific topic. Rather, its zones of work exist in two dimensions.

The first concerns research and convening that bring scholars and practitioners together. The CWP team assembles researchers from across Columbia and other universities who are committed to enacting thoughtful change together with professionals from government, foundations, business, civil society, and local communities to confront difficulties that a single discipline or approach could not successfully address. To date, the research and engagement team has been focusing primarily on the future of liberal democracies at a time of disaffection, and on how more inclusive cities can be shaped during an era of intensifying urbanization and ever more stark inequality. Further, and quite crucial for the Fourth Purpose, this aspect of CWP's work has begun to focus systematically on implementation puzzles as knowledge transforms into action. To date, more than 100 faculty in the Arts and Sciences, the Morningside professional schools, and CUIMC have participated in these activities.

The second and larger aspect of CWP is devoted to projects. The organization, in effect, has conducted a University-wide effort to experiment with how to institutionalize the ambition of uniting academic capacities with agents of change. During its two active program years, CWP has gathered some 250 experts at issue-specific forums on energy access, unequal opportunity, cybersecurity, maternal health, disaster preparedness, decarbonization, and the pandemic, with a future forum planned on aging. Projects that it helps generate, vet, select, develop, and deploy must meet the test of being based on significant research and top-tier scholarship across disciplines, planned and realized with outside partners. These interventions are not indefinite, but time-bound, designed to last approximately five years. The methodology is intensive. Following project selection, months of design and development follow before implementation that includes process tracing to identify whether mechanisms work as planned, and to assess outcomes against metrics of success.

Talent

Questions concerning the nature of recruitment and the character of appointments are fundamental to the future of the Fourth Purpose. Which aptitudes and endowments do we need among faculty to advance directed action? How should we address matters of content, type, performance criteria, and the issue of tenure? How much, and what kinds of flexibility should be introduced to produce a promising mix of personnel? In what ways can an effective commitment to directed action ‘count’ in reviews of excellence and achievement? How can we build faculties where a significant group of colleagues are oriented to directed action and use both their research and accumulated practical knowledge to help address complex puzzles and train students to do the same? Which measurement and recognition criteria should prevail? Which peers should be chosen for the core task of systematic evaluation?

It is inevitable that matters of Fourth Purpose-oriented recruitment, evaluation, and promotion will remain tense. Definitions of success will be controversial and not necessarily consistent across domains. Strains between top-tier research-oriented scholars and more applied practitioners are unavoidable. Nevertheless, success—a University world in which research faculty regard applied practitioners as adding significantly to the collegium, and in which practitioners choose to pursue their work within research universities because of the standards and values they represent and the assets they offer—is within reach.

This is possible only if tenure remains central to the talent strategy of the Fourth Purpose. Though not all relevant appointments must pass through the tenure system, this method of evaluation and promotion forces difficult judgments. Tenure assessments were introduced in part to conquer sentiment and kindness during the serious business of evaluating personnel. From the perspective of the Fourth Purpose, the question that presses is whether it is possible to discern and put into operation review procedures within the University’s indispensable tenure system based on appropriate performance criteria.

The University’s tenure standards, employed in each of our schools, are demanding. We believe they can accommodate colleagues whose work is oriented, even in some instances primarily oriented, to Fourth Purpose goals. “In every instance,” they state, “the nominee must be an outstanding scholar who has demonstrated the capacity for imaginative, original work and who shows promise of continuing to make significant contributions to scholarship, teaching and service...The essential requirement for the appointment of any nominee,” the text continues, “is scholarly achievement testifying to an unusually original and creative mind. Regardless of academic age, every candidate should have produced work of true outstanding quality.”

To be sure, this statement of standards is primarily geared to scholars who direct research programs that gain standing among senior colleagues. As the record of CWP indicates, the great majority of faculty members who actively lead and generate directed action in fact have earned tenure at the University. As many tens of cases signify, there is no necessary contradiction between thinking at a level worthy of tenure and advancing knowledge into a realm of practice.

Moreover, our tenure criteria make clear that there is a good deal of flexibility regarding how to identify persons who meet the test of “scholarly achievement testifying to an unusually original and creative mind,” and the need to demonstrate “an active scholarly agenda that shows strong promise of yielding answers to fundamental questions in his or her discipline.” For the statement goes on to note how “a comparable standard applies when the candidate is in a professional or artistic discipline. The customary academic measures provided by publications and papers may be *augmented or replaced* by other considerations, such as journalistic achievements, built architectural projects, or creative works of arts” [italics added].

What matters, in short, is not the form but the degree of originality and influence, “regarded by their peers as among the very best in their areas of endeavor.” Thus, the common expectation of excellence is accompanied by a recognition that tenure “criteria must necessarily be interpreted with flexibility to accommodate the differing disciplines of the candidates and the missions of their schools. Because the scholarship candidates pursue can vary, measures used to evaluate the quality of work will appropriately vary as well.”

If directed action is to secure legitimacy as a core *purpose* at Columbia, it must be able to recruit and tenure faculty at the heart of the enterprise. At issue is not whether the University’s high standards should apply. The Fourth Purpose should demand no less. At issue is how to adjudge performance. Provided that no candidate achieves tenure by making contributions, including those of practice, not grounded in scholarship, and provided the person works at a level of originality and excellence in ways that can be appraised by peers, the degree of shift required within our academic culture to recruit and promote individuals committed to directed action should not be exaggerated.

In short, rigorous standards for achievement can be fostered within expanded existing and elaborated tenure guidelines, though not alone. For good reason, the University also has established other modes of faculty appointment. Most notably, these include Clinical Professorships and Professors of Professional Practice.

As with tenure, the prevailing criteria are clear: “Programs in some professional schools require faculty who have substantial professional expertise but who may lack the scholarly training and credentials expected of the research faculty.” Such appointments are common in schools of Arts, Business, International and Public Affairs, Public Health, Journalism, Law, and Social Work. Comparable clinical appointments are common in

the schools of Medicine, Nursing, and Dentistry. Members of the practice faculty are not adjuncts, nor are they subject to the statutory limits on full-time nontenured service. Holding their positions for a stated term, they ordinarily may be appointed for more than eight years only if they successfully pass a major review similar in nature to a review for tenure.

Concerning such positions, the task force committee dealing with personnel identified, as examples, computationally skilled individuals who can translate data science methods into community services; engineers who can build mission-specific systems that embody fundamental research; and former politicians, business and finance executives, civil society leaders, and policy-makers who can take insights from original research into key policy areas.

Producing performance metrics for directed action is challenging. In academic life, successful performance metrics are often part of an ecosystem. Successful criteria to evaluate research when the tenure system began did not emerge from a single school prioritizing that activity, but from the entire academic system shifting its focus and values. Tenure at all top universities involves seeking counsel from direct competitors in the form of elaborate referee evaluations. That system is feasible only because the participants believe research to be a worthwhile activity. In parallel fashion, success at generating metrics of evaluation for Fourth Purpose colleagues with term appointments is likely to require getting peers on board, not only funding agencies and foundations whose independent reviews can be informative but usually not sufficient.

We thus have an interest in the diffusion of our Fourth Purpose work across higher education, and in collectively exploring, as an example, whether and how demonstrated impact constitutes a good measure of accomplishment. Success would be evaluated by whether university work in fact helps change conditions and behavior by shaping interventions or influencing decision-makers and other actors outside the academy. As prospects for success vary across projects, for much depends on how partners behave, one criterion of appraisal thus might be the ability of the faculty member to create productive partnerships. In all, term appointments judged by such criteria would not supplant but complement the tenure track, for they are geared to recruit and deploy appropriate talent where tenure is not an option. At a research university like ours, such positions can work well only as part of a mixed strategy.

Within a talent strategy, moreover, it will be essential to have professors of diverse kinds on board in sufficient number with specialized skills in implementation. These include scaling, analyzing causal contexts, identifying causal mechanisms, appraising impact, assessing conditions under which randomized control trials should be employed, and identifying when the appraisal of impact requires ever more intense concentration and elaboration.

As it turns out, Columbia has such persons, with tenure or eligible to receive it, leading figures who work on implementation in different scholarly modes. This cohort includes social scientists who conduct field experiments to evaluate the impact of project interventions and leaders in public health who are building what their field has designated as the science of implementation, often based on systematic observations that seek to undergird causal accounts. Recently, CWP brought such persons from within and outside the campus for an opening foray for its own work on implementation.

For the Fourth Purpose to succeed, it will be critical for Columbia to lead the development of implementation scholarship in a middle range between high theory and anecdote, a location insufficiently developed at present. It will also be critical to identify scholars who understand that approaches to implementation must go hand in hand with critical thinking about how contexts can be causal. Interventions that work effectively in one location may not in others with different legal systems, spiritual beliefs, political circumstances, and other sources of structural and cultural variation.

Collaborations

Collaborations across fields and disciplines within academia, and partnerships with a range of practitioners outside of academia—including participants from government, non-governmental organizations, intergovernmental organizations, the media, and the private sector—are fundamental to the process of generating, developing, and implementing successful projects and other Fourth Purpose activities. Successful partnerships, moreover, help change our thinking and our culture. They generate a greater focus and understanding of critical tests we face globally and they improve our ability to implement solutions based on study, research, and action.

What the experiences at CWP and DSI have taught is how the different substantive and institutional perspectives brought by partners help shape the ideas that ultimately turn into projects. These contributions make it more likely that each project will address an issue critical to solving a fundamental difficulty faced by a given community, and that the proposed intervention can realistically be implemented. Rather than make recommendations to practitioners based on completed research and then leave the policy activists to implement those proposals, practitioners are engaged alongside academics from the very outset, generating ideas for projects, frequently allowing research and practice to develop iteratively.

That still leaves open hard questions about how to align the University's interests with those of partner organizations. Does Columbia enter partnerships on the assumption that it is always the managing partner? What happens when a partner and Columbia consider fundamental orientations, such as the need for transparency, very differently?

Partnerships can be weak or strong, a source of clashing views or deepening cooperation during periods of design and implementation. Projects designed to facilitate the exchange of ideas and the integration of effort shape productive interventions, advice, and assistance as work proceeds. In every case, partnerships require time and energy, and often, a good deal of mutual adjustment.

Designing working partnerships may involve aligning different ethical priorities. A government wants to stay in power; a business wants to make money; an NGO might focus intensively on a particular domain to promote social justice at the expense of others, or on how to get organizational funding. Columbia might bring other distinct priorities to the table. Usually, there are complexities to negotiate, potential compromises to make.

Particular puzzles lie in the domain of fostering innovation, entrepreneurship, and commercialization, as in the important work of Columbia Technology Ventures, which manages some 400 research-based inventions with practical applications from Columbia researchers each year. Here lie important opportunities for scalable impact, but not without raising questions involving conflict of interest and commitment, financial relationships, and more. There is much to learn from CTV, and much opportunity to integrate its capacity and expertise into the heart of the Fourth Purpose.

Ideally, over the course of implementation, partners within a project work together, while also working with affected communities and other stakeholders, to consistently redo and improve the work of the project. In the best of such circumstances, partners learn from each other, and address disagreements as they arise, both practical and ethical.

Intellectual collaborations also matter. Fourth Purpose activity enlarges when it cultivates networks that tether Columbia researchers to other colleagues physically near and far, working on topics of uncommon complexity and fundamental importance, as they engage with practitioners and policymakers. As these subjects defy easy answers, take manifold and changing form such that interventions often relocate the problem to new sites, and necessitate expertise across multiple domains, solutions require the participation of more than any one discipline. Inherent complexity compels relationships across subjects and ways of working. Insights accrue, learning takes place, and policy behavior improves as networks strengthen.

Teaching and Learning

The zone of directed action presents new opportunities for our students and university, both in the subject areas for learning and methods for teaching.

Just as Fourth Purpose work exists in many locations on campus, so there exists a rich array of relevant courses and programs, which provide bases for learning how best to further expand such teaching.

In addition to direct patient-oriented learning at CUIMC, the committee on teaching and learning found a quite remarkable diversity of such offerings. Among others, it took note of the Justice in Education program, and teaching under the auspices of the Center for the Study of Social Difference, the Center for the Study of Human Rights, the Center for Journalism and Trauma, the Center for the Study of Religion and Society, the Center for Science and Society, the Center for Spatial Research, and the Center for Resilient Cities and Landscapes, translational and project-based teaching in Engineering, a wide range of architectural studios, various summer boot camps, and a good deal more.

Yet there is much to do. With much campus uncertainty about how an orientation towards the Fourth Purpose can best intersect core educational objectives and the degree to which faculty should develop directed action teaching efforts, it will be important to communicate the role of such teaching as effectively as possible by drawing on impressive current examples. At the heart of such teaching lies the chance to impart knowledge, theories, and ideas gleaned from action and experience.

Course development efforts, including orienting classes at the start of undergraduate, graduate, and professional school curricula, could build cross-disciplinary classes on pressing issues that integrate knowledge, research, and field experiences. When evaluating term-renewals or tenure prospects for faculty members, meaningful teaching activities, including those outside of formal coursework such as teaching with external partners, should be considered during reviews. Project-learning activities can be developed in connection with CWP and DSI. Doctoral programs could experiment with dissertation requirements for students engaged in Fourth Purpose programs by placing, greater emphasis on fieldwork, internships, service learning, engaging with external partners, and embracing, where appropriate, digital and online technologies. Moreover, across levels of higher education, teaching geared to directed action can help prepare young citizens to serve the public good. Further, we could expand our teaching through online content for underserved populations, either free or low-cost, as an integral part of the Fourth Purpose.

Ethics

The Fourth Purpose is inherently ethical, suffused with values and an abundance of moral choices. As Karenna Gore, founder and director of the Center for Earth Ethics at Union Theological Seminary observed in a note prepared for our committee on ethics and partnerships, there is no single orientation or standard:

Ethics involves determinations of right and wrong (or good and evil, moral and immoral, just and unjust) and the implications for how we live, as individuals and collectives. It deals with values and choice. There is no standard system of how to do ethics. Some ethicists focus on outcomes (John Stuart Mill's "the greatest good for the greatest number"), some on duties (Immanuel Kant's "categorical imperative"), some on religious concepts such as sanctity and love (Paul Tillich's "ultimate concern"), some on the relationships of means and ends (Michael Sandel's "the moral limits of markets"). There are also subcategories of ethics depending on who draws the circle of moral concern and why.

As it turns out, major research universities long have been guided by attentiveness to ethics. When Columbia transformed in the late 19th and early 20th centuries to become a significant research university, it substituted secular norms of freedom to teach and learn for the older emphasis on theology and moral reasoning. The new principles, central to the self-identity of the new American research universities, were institutionalized in 1900 with the establishment of the AAU, with Columbia helping to take the lead. Academic freedom was followed by dozens of smaller scale norms and practices that became defining: granting tenure, managing merit-based reward systems, policing plagiarism, promoting transparency, setting teaching standards, arranging fortifications against conflicts of interest, and protecting human subjects.

These ethically based practices and policies are *inward-looking*, designed exclusively for research universities. These rules and arrangements differ from ethics specific to law firms, hospitals, businesses, art museums, think tanks, advocacy organizations, media, and the like, each of which have principles associated with their respective goals. When preparing students for careers in these institutions, research universities treat these institutional ethics as objects of study.

By contrast, the Fourth Purpose is *outward-looking*. Its reliance on collaborating with non-university entities alters the equation. New sites like CWP and DSI are not alone in having to grapple with this circumstance. There already is more blending of the internal and the external than generally is recognized. That is, there are ethics adopted by schools and departments, centers and institutes, some of which are inward looking in the sense already suggested, designating the right and wrong ways to be within an art program, a physics department, or a law school. Simultaneously, however, many units at Columbia have external constituencies and partners.

The medical campus provides iconic instances. Basic science in the lab *discovers* what promises to be a cure of a rare disease; the next step involves field-testing, then making the pill in an implementation phase; and, for the original discovery to have impact there must be a doctor who prescribes the pill and a nurse who sees that it is swallowed. Each step— discovery, implementation, impact—presents ethical dilemmas particular to its properties: transparency in the lab, no conflicts of interest with Pharma, and fair prices for the patient. The medical world also benefits from a well-functioning feedback loop. Consider ICAP. Starting with basic research, proceeding through implementation and impact phases, ICAP systematically then explores what it learned as relevant to its basic research portfolio.

At Morningside Heights, the current landscape is piecemeal. Each school, department, center, and institute decides on its own how much, if any, of its resources to put into implementation and impact, and how much, if any, to create internal linkages across schools. Each adopts ethical principles, often more implicitly than explicitly, suited to its circumstances and goals.

It is noteworthy that as emblematic Fourth Purpose institutions CWP, DSI, and CCS have all been explicit about the centrality of ethics, claiming that ethical reasoning is integral to their specific self-identity. This orientation is not an afterthought. We see CWP screening for projects that specifically benefit marginalized populations; DSI focusing on detecting and correcting bias in Artificial Intelligence; CSS making climate justice a prominent feature, perhaps no less important than modeling glaciology.

The ethical stances of these organizations are both inward looking, focusing on how they should behave within a university setting, and outward looking, asking how research can be empowered to improve world conditions. Which is to say, these bodies are fully aligned with a university transformation perhaps even more ambitious than their twentieth century predecessors, now pointing to a university-wide redefinition of Columbia's obligations to society. A commitment to the Fourth Purpose cannot help but impel Columbia to be ever more aware of itself as a moral actor whose choices have ethical effects.

Not without difficult choices. As an example, when designing external partnerships it will be important to be guided by a framework that welcomes partners without compromising Columbia's principles. These matters require persistent monitoring and systematic review. Not easy, but tasks not to be avoided.

Recommendations

The Fourth Purpose cannot be imposed, only induced. The proposals embedded in this report aim to affect campus possibilities and culture. As the name implies, the central goal of the Fourth Purpose is to expand and strengthen, not supplant, existing commitments. Directed action is not an alternative to research, teaching, or other aspects of public service, but a significant opportunity to reinforce each of these aims.

Our recommendations fall into two principal categories: one concerned with coordination and facilitation, the other with steps in the areas of personnel, partnerships, teaching, and ethics. These proposals seek to enlarge the scope of experience, widen dispositions, and encourage choices that would enrich campus culture by offering attractive options.

Underneath all the instrumental steps we might take to create a strong, coherent, and flexible Fourth Purpose is a conviction—a rock-solid conviction—that the public goods universities can produce to affect the wider public good are distinct as contributions based on a profound community of knowledge, on uncommon openness and transparency, and on high standards of evaluation. Other producers of connection between thinking and doing are motivated differently, shaped in different measure by policy lobbying, profit seeking, or governmental power.

At stake for the prospect of producing such public goods is how we both galvanize and shift dispositions, shape productive experiences, and thus affect the scope and character of choice and behavior.

We start with the need to enhance relevant organizational capacity at the center of the institution, and then turn to specific actions that would build assets and compose a framework within which productive activity is likely to gain force. Though each of the core issues discussed below is not unique to directed action, individually and collectively they take distinctive form within the ambit of the Fourth Purpose.

Absent central assistance and direction, directed action will remain fragmented, and, with the exceptions of CCS and ZMBBI, and, to a degree, the work of the Global Centers, DSI, and CWP, will remain insufficiently visible inside or outside Columbia to serve as a defining mission of the University.

We thus would begin—and this is our principal organizational recommendation—by creating an administrative team within the Office of the Provost, led by a Vice Provost for Directed Action that would be asked to play a catalytic role. The new office holder would join the existing Cabinet of Vice Provosts who currently administer, among other related functions, faculty affairs, faculty advancement, academic programs, communications and engagement, and teaching, learning, and innovation, as well as our libraries and the tasks of advancing equal opportunity and affirmative action. The new

office would be guided in its work by a standing committee of scholars and practitioners, drawn from inside and outside the University. Serving in an advisory role, this body would help establish criteria, procedures, and means of evaluation.

A central goal of the administrative and advisory bodies would be to advance the considerable work underway across Columbia in the great variety of relevant centers and institutes alongside more traditional programs in Arts and Sciences, CUIMC, Lamont, and the Morningside professional schools. An initial step would be to map comprehensively the expansive but not quite known topography of directed action in tandem with efforts to remove barriers, provide information, coordinate action, and promote relevant adjustments to searches for talent, to shaping partnerships, to support creative teaching, and to judging ethical challenges. Once distinguished, the type of survey effort that CWP undertook on a small scale in 2019 could ascertain the manner in which current practices at the University successfully undergird these efforts. Difficulties and barriers to effective work identified by this process would be chronicled and addressed, accompanied by a systematic effort to make connections, reduce duplications, and provide enhanced resources for fundraising of various kinds for the plethora of centers and institutions. Central to such efforts are critical offices—including the Human Research Protection Office, Sponsored Projects Administration, and Columbia Technology Ventures, among other key sites—that could profit from a close relationship with the Office of the Vice Provost for Direct Action. Further, a series of peer-conducted reviews, convened by that office and working closely with the Schools, should come to guide the creation of new sites, appraise the progress of existing institutions, and recommend when particular units might have outlived their creative contributions.

Concurrently, the new Vice Provost office would be mandated to construct tight partnerships with the University's middle zone institutions to help them better serve the schools and the wide array of institutes and centers and to generate more robust collaborations with ZMBBI and the Columbia Climate School. Each of the middle zone institutions brings different assets to directed action. The Global Centers provide an intellectual footprint without the costs associated with overseas campuses. DSI brings not just to Columbia but also to a much wider world deep technical skill and an uncommon ethical sensibility. Not bound by a specific topic, CWP has been the principal manifestation to date within the new institutional set fashioned with the Fourth Purpose impulse. It convenes scholars and practitioners together to engage with pressing issues, build crosscutting networks to confront difficult problems in a manner that could not be as well addressed by a single discipline or approach, and, as its hallmark, to develop interventions based on systematic scholarship.

In addition to underpinning the wide range of work already underway, the new Vice Provost's office would consider and respond to articulated needs and requirements across our Schools while deepening existing links between the Schools and the University's middle zone. Ever closer ties among the Provost's Office, the Schools, and

these middle zone organizations promise to offer intellectual and practical assistance to faculty and students as they develop projects, build partnerships, launch courses, and generate ideas that can better connect Columbia to environments both physically close and geographically distant. Integral to these efforts will be the creation of a standing committee in the Office of the Provost on the ethics of the Fourth Purpose, with particular alertness to the terms of existing and emerging partnerships.

In short, the Vice Provost's office would help advance the Fourth Purpose at each level of the ecology of institutions on campus, including the large number of relevant direct action institutes and centers. Regarding each of these, we make the following observations and suggestions:

The success of the Fourth Purpose at Columbia vitally depends on attracting, mentoring, recognizing, and promoting top-level persons who combine creativity and rigor, imagination and productivity. A central question we have considered is whether our existing institutions—in appointments processes at the Schools and in the University—are up to the task. We believe they are. The criteria identified for tenure track appointments and promotion to tenure as well as the standards and benchmarks for Professors of Practice can accommodate the range of talents we require. Existing forms for designating professorial appointments of different types, we believe, can become ever more flexible (as they have, successfully, when recognizing how persons in theatre and the visual arts should be evaluated).

Though current tenure and recruitment practices are primarily oriented to assess traditional scholarship, their rules explicitly apply to a wide range of ways to work, provided they meet standards of originality, rigor, and excellence. Moreover, the distinction between tenured and practice professorships conveys a wide array of possibilities with which to assemble appealing combinations of Fourth Purpose skills and abilities. Notwithstanding, an early effort should ascertain whether our existing categories are sufficient, as the task force believes they are. This proposition should be tested.

What is clear, however, is that our familiar rules and procedures will secure standing for directed action only when cultural assumptions about directed action scholarship and practice become legitimate. Within Columbia, the authority of the Fourth Purpose will depend on performance, and performance will depend on how persons are placed in appropriate structures. These dimensions must be developed in tandem, not in linear sequence. That requires a combination of experimentation and, in some quarters, a suspension of disbelief. For that, and for many other relevant purposes, leadership matters. A willingness to move in fresh, often unfamiliar, directions and success in crossing borders and building unexpected intellectual and practical arrangements requires the leadership of colleagues who possess an audacious streak.

The cohort of deans and chairs of divisions and departments are pivotal. Academic leaders in the schools articulate expectations, elaborate standards, and guide search processes and promotion reviews. Over time, faculties develop sensibilities and local cultures of consideration and evaluation. Ultimately, whether the Fourth Purpose is limited, even marginalized, as a zone within university life, or whether directed action becomes integral, especially in the humanities, social sciences, and academic science, will depend in considerable measure on the dispositions of lead figures, not limited to those in positions of formal administration but across our faculties.

We thus recommend that the Office of the Provost convene an annual series of seminars and workshops across Columbia, in partnership with CWP, about the qualities and orientations of Fourth Purpose activity. These efforts would be devoted to the advancement of effective, relevant scholarship and to proceeding with various forms of directed action pedagogy.

Regarding the latter, many examples exist, of course, across the University, most notably in various professional schools that self-consciously link thinking and doing by mounting clinics, placements, and field work opportunities in addition to, often in combination with, lectures, seminars, and workshops. At issue is the expansion of these models into unfamiliar locations. A good start would be the construction of scholar-practitioner teaching partnerships across frontiers that separate disciplines and schools. Here, our Center for Teaching and Learning could take on a crucial enhanced role.

A key feature of Fourth Purpose pedagogy, together with its combination of research and action, lies in the domain of implementation. Presently, the range of orientations that fall under this heading is considerable, including, as non-trivial instances, the Public Health community's "science of implementation" and approaches that rely on both pilot and field random controlled experiments. Some key matters—including process tracing, scaling, and the causality of context—are central to each of these approaches. We propose that the crosscutting initiative on implementation recently launched at CWP play an integrating and synchronizing role.

The success of the Fourth Purpose will depend in no small part on navigating the field of tension—both practical and ethical—described in the report with regard to patterns of collaboration. On this matter, we offer two recommendations. First is another mapping exercise of the ethical standards and processes for evaluation utilized across the institution. Medicine, Public Health, Biology, Engineering, Architecture, and other intellectual sites with long experience of inside-outside collaborations, as well as CWP, whose project team now has involvement across the arc of some twenty initial undertakings and has worked with partners across quite a range of types, will have much to teach. Further, the University should create, within the office of the new Vice Provost, the equivalent of the due diligence effort now routinely conducted by the International Gift Review Committee. Even more important, the ethics of directed

action—both inward-looking and outward-looking—must become integral to all its aspects, ranging from the choice of issues to appraisals of interventions to the choice of collaborators and ways of working together. There are no fixed answers, only honed sensibilities.

In all, Columbia can seize a remarkable opportunity: to better comprehend and gather Fourth Purpose activities, to deploy directed action to enrich scholarship, teaching, and contributions to the public weal, and to advance our understanding of how collaborations across the zones of thought and action best can utilize the precious assets universities like ours possess to positively affect human possibilities. The prospect beckons.