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Résumé de l'article

La science psychologique est florissante en Amérique du Nord. Avec la multiplication de ces laboratoires, la communication entre les institutions de recherche est devenue essentielle, les organismes professionnels assurant la diffusion des connaissances par le biais de revues spécialisées et de congrès. Cet article examine la croissance de l'économie morale de la psychologie professionnelle et scientifique au Canada. Bien que les caractéristiques générales de l'organisation sociale de la science psychologique au Canada et aux États-Unis aient suivi des trajectoires semblables, d'importantes différences demeurent évidentes. Plus particulièrement, ces différences sont apparentes dans les valeurs et conventions énoncées par les deux plus importants regroupements professionnels au Canada (la Société canadienne de psychologie) et aux États-Unis (l'American Psychological Association).

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Jordan Richard Schoenherr

Abstract: *Psychological science has flourished in North America since the late 19th century. As laboratories multiplied, professional organizations began to emerge to facilitate communications through journals and conferences. This article examines the development of the moral economy of professional and scientific psychology in Canada. While the general features of the social organization of psychological science in Canada and the United States have followed similar trajectories, important differences are also evident. In particular, these differences are apparent in the values and conventions outlined by the two largest professional organizations in Canada (CPA) and the United States (APA).*

Résumé : *La science psychologique est florissante en Amérique du Nord. Avec la multiplication de ces laboratoires, la communication entre les institutions de recherche est devenue essentielle, les organismes professionnels assurant la diffusion des connaissances par le biais de revues spécialisées et de congrès. Cet article examine la croissance de l'économie morale de la psychologie professionnelle et scientifique au Canada. Bien que les caractéristiques générales de l'organisation sociale de la science psychologique au Canada et aux États-Unis aient suivi des trajectoires semblables, d'importantes différences demeurent évidentes. Plus particulièrement, ces différences sont apparentes dans les valeurs et conventions énoncées par les deux plus importants regroupements professionnels au Canada (la Société canadienne de psychologie) et aux États-Unis (l'American Psychological Association).*

Keywords: Experimental psychology, scientific societies, social organization, codes of conduct

SOCIAL NETWORKS EXERT A STRONG INFLUENCE on the associations of concepts, materials, and methods, as well as the sources of evidence that define a research paradigm. Organizations such as scientific societies are both an antecedent and consequent of the social networks in science, forming out of existing bonds and forging new relationships in hopes of gaining social capital. In North America, scientific societies have provided a means to facilitate communication within widely dispersed research communities, whether through formal dispatches such as newsletters and journals or through informal discussions at scientific meetings. Like other ceremonial social gatherings², scientific societies and their meetings are used to define, refine, and negotiate social norms and the criterion for group membership.³ These norms and conventions constitute a discipline's moral economy,⁴ representing the permissible activities and motivations of researchers along with status criterion that define a symbolic economy of power.⁵ Consequently, professional societies have an important function in terms of monitoring and regulating the beliefs and behaviours of actors within a social network, a critical feature in the process of professionalization.⁶

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In the case of Canadian psychology, the history of scientific societies illustrates the development of social relationships, the negotiation of social identities of groups, and the epistemological boundaries of a discipline. In what follows, I consider the development of the organization of Canadian experimental psychology by considering the overall pattern of disciplinary emergence.⁷ First, I consider a number of antecedents in terms of the German physiological psychology tradition (the “New Psychology”) that influenced North American psychological science and the emergence of formal organizations in the United States. As I will attempt to demonstrate, American professional societies exerted a strong influence on the social organization of Canadian psychology. Second, the evolution of psychological science within Canada is described along with the development of professional societies. I argue that these organizations reflect the creation, and divergence of, collective identities that differ in their valuation of specific norms and conventions related to science and practice. Finally, I provide an analysis of the moral economies of these epistemic communities by comparing the norms developed by the Canadian Psychological Association (CPA) and American Psychological Association (APA). Their respective norms demonstrate a shared collective identity as psychologists across national boundaries, while also demonstrating divergence between these geographically distributed communities.

Templates for Social Organization: The German Laboratory and The Royal Society

Discipline formation requires an exploration of available epistemological, material, and human resources to determine what constitutes evidence, how knowledge can be created, and who is deemed a reliable source of knowledge.⁸ Early psychologists wove together concepts and practices from philosophy, physiology, physics, and astronomy.⁹ One of the most durable threads within psychology can be found in nineteenth-century German physiological research. While his work was influenced by many others, including psychophysicists like Ernst Weber and Gustav Theodore Fechner,¹⁰ Wilhelm Maximilian Wundt is generally given pride of place due to his prolific writings, instrument development, and experimentation. Through his actions, he provided the most comprehensive delineation of an experimental psychological science and trained numerous students in his laboratory.¹¹

Wundt’s status within psychology is defined in terms of a bidirectional relationship with the number of doctoral students and research assistants.¹² For instance, Edward Titchener played a considerable role in (mis)interpreting Wundt’s work for North American psychology¹³ and went on to write widely used textbooks on experimental practices that influenced a generation of researchers. Titchener’s student, Edwin G. Boring, would reify this interpretation in his history of psychology textbook. The Wundtian laboratory, and those that attempted to replicate or modify its content and practices, provided a nucleating site for experimental psychology in Germany and elsewhere through the late nineteenth century.¹⁴

If laboratories provided local organization of social networks, scientific societies did so for larger and more epistemologically diverse research communities. The Royal Society's creation in England in 1660¹⁵ illustrates this process where correspondence among members as well as public demonstrations were used to support the veracity of truth claims, reflecting in the Society's motto: *Nullius in verba*.¹⁶ In 1665, communication was formally directed through the Society's journal, *Philosophical Transactions*. Sponsorship was also provided for seminal works such as Robert Hooke's *Micrographia* in 1665 and Isaac Newton's *Principia Mathematica* in 1687. As other authors have noted, the role of gentlemanly identity and its associated norms as well as the Royal Charter from Charles II were used to confer status and legitimacy upon the new natural philosophy.¹⁷

Drawing on the model of the British Association for the Advancement of Science founded in 1831, American researchers formed the American Association for the Advancement of Science (AAAS) in 1848.¹⁸ Both the annual meetings and its later association with *Science magazine* were critical features of the association's organizational function that helped formed a social scientific network. The affordances of social organization were an explicit focus of the AAAS. As Alexander Dallas Bache noted in his 1851 AAAS presidential address, the organization of science in the United States, "for good or evil, is the means to an end. While science is without organization, it is without power." James McKeen Cattell, president of the American Psychological Association in 1895, offered complementary sentiments concerning the social role of science in 1925 when he noted that "the advancement of science should be the chief concern of a nation that would conserve and increase the welfare of its people." As later scholars have noted, the power and prestige of science can also be thought of as demonstrating the congruity between scientific values and the general values¹⁹ and interests²⁰ of a society. However, due to the breadth of its membership, the AAAS's activities reflected only very general interests in the sciences.

Formation and Fragmentations of the American Psychological Societies

Dissatisfaction with the AAAS soon emerged, with many members feeling that their specific interests were not adequately addressed. In 1883, the American Society of Naturalists was formed, in part, to facilitate the creation of specialized professional societies. Soon after, psychologists came together in the residence of G. Stanley Hall and delineate their own society, the American Psychological Association in July 1892.²¹ The APA's first meeting followed in December of that year, with Hall as its first president. Initially, its 31 members reflected the broad scope of psychology including philosophers, educators, and experimental psychologists. Tensions later arose prompting the introduction of membership criterion in an attempt to differentiate psychologists from other areas of inquiry.²² In particular, many psychologists were concerned with the perceived over-representation of philosophers in

the society.²³ Robert MacLeod later noted that “[the psychologist] was so determined to prove that he was not a philosopher that he seized eagerly upon any little formula that seemed to demonstrate the superiority of observation and measurement over armchair speculation.”²⁴ Hugo Münsterberg had earlier raised this concern, arguing that psychology was “rich in decimals but poor in ideas.”²⁵ Concurrently, psychologists also began to consider how research might address practical concerns. Münsterberg had also noted “experimental psychology has reached a stage at which it seems natural and sound to give attention to its possible service to the practical needs of life.” He called for an “independent experimental science which stands related to the ordinary experimental psychology as engineering to physics.”²⁶ The shift in focus to practical outcomes is also evidenced in the creation of 19 clinics in psychology departments by 1914.²⁷ The discrepant priorities of scientists and practitioners would remain a common theme throughout the formation and fragmentation of North American psychology.

The emergence of numerous clinics significantly impacted the structure of psychological science. In 1917, members of the APA first sought to establish the American Association of Clinical Psychologists (AACP) but it failed to fully materialize.²⁸ By 1919, a specific section for clinical psychology was formed within the APA. Within two years, a section for consulting psychology was also established. Applied psychological organizations expanded and contracted in the 1920s and 1930s until the establishment of the American Association for Applied Psychology (AAAP) in 1938.²⁹ The AAAP was defined by sections for clinical, consulting, educational, and industrial psychology, resulting in the intentional dissolution of the clinical section of the APA. Thus, two fields began to dominate American psychology by the 1940s: experimental and applied psychology.³⁰

At the outset of American involvement in the Second World War, there was greater pressure for psychologists to focus on applied topics. In a pattern consistent with the fragmentation of science more generally,³¹ the APA, following a similar model to that of the AAAP, had formally recognized nineteen divisions by 1944. This divisional growth would continue in an attempt to balance the needs of maintaining a common collective identity as psychologists while accommodating the increasing diversity of interests of these researchers and practitioners. For instance, following early episodes of creation and consolidation, divisional growth increased at a rate of 0.8 divisions per year from the 1960s to 1995.³² During this time, clinical and counseling psychology began to play an ever-increasing role.

Reasserting Experimental Psychology: The Emergence of the Psychonomic Society

During the growth and consolidation of applied psychology, experimental psychologists became increasingly dissatisfied with APA’s perceived shift in focus from experimentation to practice. These concerns were a focus of an elite group of researchers, the Experimentalists,³³ initially formed by Edward Titchener,

Table 1. Inception dates of referenced organizations associated with the formation of North American psychological science

Period	United States	Canada
1800-1850	American Association for the Advancement of Science (1848)	
1850-1900	American Society of Naturalists (1883) American Psychological Association (1892)	The Royal Society of Canada (1882)
1900-1925	American Association of Clinical Psychologists (1917) Society for Experimental Psychologists (1929)	National Research Council (1916) French-Canadian Association for the Advancement of Science (1923)
1925-1950	American Association for Applied Psychology (1938)	Canadian Psychological Association (1939)
1950-1975	The Psychonomic Society (1959)	Canadian Scientific, Technological and Engineering Societies (1970)
1975-2000	Association for Psychological Science (1988) ¹	Société Québécoise pour la Recherche en Psychologie (1978) Canadian Association of Neuroscience (1982) Canadian Society for Brain, Behaviour, and Cognitive Science (1991)

¹Formerly the American Psychological Society

[**Figure 1**] who acted as an incubator for North American psychological science. Following Titchener's death, the Society for Experimental Psychologists (SEP) was created in 1929 as a formal descendent of the Experimentalists. Along with this elite group, there was also a perceived need for a larger, more accessible organization. The seeds of this organization were sown during an AAAS meeting in 1958 and would be followed by further discussion in 1959 at a meeting of the SEP. Those attending felt that there was sufficient grounds to establish a larger psychological society focused on experimentation, one that what would become the Psychonomic Society.

A number of features of the Psychonomic Society are instructive, as they inform the social re-organization of Canadian psychology. The founders first established the broad features of the organization in their initial meeting: “Decisions were made concerning the membership, the nature of the meetings, the form of governance, and the possibility of journal publication.”³⁴ Equally important was how the Psychonomic Society used the APA as a negative model for their organization.³⁵ While the APA was seen to be focusing on clinical practice and licensure, the Psychonomic Society would focus on scientific advocacy and limiting membership fees. The founders of the Psychonomic Society sought to emphasize the equal status among of members, eliminate the influence of commercial interests, and ensure exclusivity for psychological researchers. As William S. Verplanck reported “no special events, e.g. symposia, invited addresses, etc. will be scheduled. No commercial exhibits of any sort will be permitted. No formal relationship with... the press.”³⁶ Similarly, Clifford T. Morgan noted that

We [created the Psychonomic Society] primarily because we wanted meetings ... with a low noise level, meetings of some serenity and dignity, meetings attended by people with a common interest in communicating with each other about science, meetings where it is possible to see and talk with one’s scientific friends without stumbling over people with “patients,” meetings not dominated by program committees who subordinate original scientific papers to symposia or who tell you you can’t have slides, meetings without press rooms and book stalls—in short just plain scientific meetings attended by scientists talking about science.³⁷

These comments reflected the desire to create a common collective identity (i.e., experimental psychologists) that reinforced a formal organization that also explicitly defined itself in opposition to other practitioners (i.e., clinical and counseling psychologists). This echoes the early reconfiguration of the APA to exclude spiritualists and philosophers. The Psychonomic Society continues to perform its scientific advocacy function today although special events, exhibitors, and sponsors are now permitted.

Although this limited review does not permit an exhaustive discussion of features of the social organization of psychological science in the United States, it is critical to note that other professional organizations, such as the APS that focused on experimental psychology, have featured prominently in the history of North American psychological science. Initially called the American Psychological Society, the acronym was later repurposed to accommodate an international focus: the Association for Psychological Science. Rather than focusing on perception, cognition, and neuroscience like the Psychonomic Society, the APS instead focused on experimental psychology. Importantly, along with fragmentation, there is evidence of collaboration among psychological societies. The APA, the Psychonomic Society, and other professional societies, jointly support scientific advocacy through the Federation of Associations of Behavioral and Brain Sciences. As I will argue below, important parallels are evidenced in the organization of Canadian psychology.



Figure 1: The Sixth Meeting of the Experimentalists, Clark University, 1909. Credit: The Society of Experimental Psychologists Archive <http://www.sepsych.org/1909.htm>

Social Organization of Canadian Psychology

The Royal Society of Canada represented the first attempt at a national scientific organization.³⁸ Founded in 1882 by the Governor General, the RSC held annual meetings and published the *Proceedings of the Royal Society of Canada*. In terms of psychology, Canadians followed a very similar path to that of their American neighbours. This is attributable both to the common origins of psychological science, as well as the influence of Canadians observing their counterparts in the United States and participating in American societies.

Psychology first established itself in Canadian universities as moral philosophy in philosophy departments, making Canadian psychology as “old as its universities.”³⁹ James Mark Baldwin established the first psychological laboratory in the British Empire at the University of Toronto in 1890-91.⁴⁰ After Baldwin’s departure, August Kirschmann took over and expanded the laboratory.⁴¹ Kirschmann also introduced the two-volume *Psychological Series* as the publication of Canadian-based psychological research had “...hitherto been without a representative publication.”⁴² At that point, most research from Canadian psychologists was published in American journals (e.g., *American Psychology Journal*). Canadians also participated in APA conventions, with Canadian-born psychologist John Wallace Baird serving as APA president in 1918.⁴³ In 1938, a meeting in the University of Ottawa psychological laboratory

lay the foundation for a Canadian psychological society the following year. In contrast to their American counterparts, the Canadian Psychological Association and its membership explicitly directed their research toward supporting the war effort.⁴⁴ In 1940, Donald O. Hebb founded the *Bulletin of the Canadian Psychological Association*. Paralleling American experience, Canadian laboratories led to professional societies and the establishment of journals and other media.

Canadian psychology first became invested in national affairs and policy beginning with the First World War. In 1916, the federal government established the National Research Council (NRC) to provide advice on scientific matters and later constructed laboratories in 1932.⁴⁵ The NRC expanded rapidly during the Second World War with primary focus on military-related research. This expansion led Canadian psychologists to lobby the NRC for funding, which responded by creating the Associate Committee on Applied Psychology in 1949. During this time, NRC funding was divided into two pools: funds for Defense Research and funds for mental health research through the Department of National Health and Welfare. Although the former consisted of representatives from social, experimental, clinical, and educational psychology, both of these funds were more relevant to applied projects. Funding issues continued to have a significant influence on the fledgling psychological communities. For many psychologists, this became problematic, raising concerns about the independence of psychological science. Edward Alexander Bott at the University of Toronto wrote a post-war report expressing concerns that research would be “(patterned) too closely to suit current requirements or policies of particular departments of government.”⁴⁶ In the post-war period in Canada, even those psychologists who sought practical ends wanted to ensure professional autonomy.

Tensions within psychology were evidenced very early on within the CPA. Hebb described the problem in the *Canadian Journal of Psychology*:

Academic or ivory-tower psychology — experimental, physiological, and comparative (and including an important part of social psychology) — was the goose that laid the golden egg of applied and clinical methods. In Canada, if this goose is not dead, it is very skilful at feigning death. The glaring lack in Canadian psychology is in plain, old-fashioned, intellectual curiosity; hence the lack in academic research to parallel and stimulate research in practical methods.⁴⁷

These tensions reflected a larger trend in psychology similar that in the United States during this period. Other authors have documented the movement for the professionalization of psychology in Canada: the CPA had become focused on issues of licensure and taxation with many believing that science and science advocacy had become comparatively neglected priorities.⁴⁸ Although later efforts by the CPA to accommodate this emerging group represented a self-conscious and concerted effort to redefine the disciplinary structure, early meetings of these individuals suggest that these attempts were

initially disaggregated, often occurring at the provincial level.⁴⁹ This contrasts with the later development of the CPA providing accreditation for doctoral programs in such areas as clinical and counseling psychology.⁵⁰

In order to address the perception of a growing divide between experimental and clinical psychologists, Canadian psychology gradually adapted. In 1956, a divisional structure was proposed, but was rejected by members. By 1972, the CPA had established a divisional structure, consisting of Experimental and Clinical Divisions, that mirrored the APA's structure. Later debates focused on the inadequacy of this structure in accommodating the growing diversity of research interests and which later resulted in the creation of sections in 1989. Among others, sections were created for Industrial/Organizational, Social and Social Responsibility, Health, as well as Brain and Behaviour. This latter group became the scaffolding for another experimental-psychology society: the Canadian Society for Brain, Behaviour, and Cognitive Science (CSBBCS) [Figure 2].

Disciplinary Fragmentation: From Unity to Multiplicity

Despite the creation of a sectional structure, the priorities of experimental and clinical psychologists persisted in the CPA. Over time, commentators have used terms that suggested this was an essential difference between the two groups. MacLeod noted that “[t]he big problem is that we [psychologists] must face two facts: 1. We have a scientific discipline called psychology, and, 2. We have a professional discipline called psychology. These two seem to be moving in different directions...Perhaps the scientific side demands one kind of person, the professional, another.”⁵¹ George A. Ferguson offered a similar insight in his discussion of the perception of multiple social identities at McGill:

Applied students were sometimes viewed as of a lower order, although work required of them for the master's degree was more demanding than for the master's in other areas. Also, it was thought by some that their work might “contaminate” the research of their more pristine associates. In general, the distinction between scientific and applied psychology was divisive.⁵²

With both applied and experimental psychologists making claims for a greater share of resources within the scientific-reward system, the distinction between pure and applied research came to define Canadian psychology as it had in the United States, with concomitant perceptions of different status within the hierarchy of practice.

Evidence of conflicting values is also evident in the CPA archives. During the 1988 meeting, a proposal was tabled to develop separate organizational units, one for Professional Affairs and another for Scientific Affairs. This resolution was rejected with the experimental psychologists blaming the clinical psychologists. The *CPA Chronicle* reported that “[a] significant number of members who considered themselves to be both scientists and professionals did not feel that the two functional Divisions adequately represented their needs.”⁵³ The *Chronicle's* account highlights the dual identities of the majority

of the voters: scientists and professionals. It also reflects the primacy of the scientific-practitioner model of education in applied and clinical psychology in contrast to experimental psychology.⁵⁴ The minority of those who had voted for the establishment of the new organizational structure were individuals that later formed the CSBBCS.

According to Richard Tees, the experimentalists sought to create an organization in the CPA, or one closely linked to it.⁵⁵ The rejection of the proposal by the membership vote may have been a catalyst for selecting the latter of these options, demonstrating the critical difference in opinion among individuals within these collective identities.⁵⁶ If the CPA's mandate was directed toward scientific communication, the membership must have believed that they were effectively accomplishing this task using existing means. This cursory account highlights the importance, if not of the presence of priorities, then of their perceived emphasis.

Comparable to the rationales for founding other scientific societies, the CSBBCS's founding stemmed from the need to obtain funding and recognition from the scientific-reward system. In Canada, the National Science and Engineering and Research Council (NSERC) maintains national Grant Selection Committees (GSC) in order to allocate funds. How a discipline is classified within this organization provides insight into its status as a science and its relationship to other scientific disciplines. Prior to 1989 the GSC for psychological research was situated within the Life Sciences. NSERC created a Cross-Disciplinary section that was intended to include psychological research. NSERC later reversed this decision, reflecting the ambiguous status of psychological research as a science within the larger scientific community.⁵⁷ Interestingly, those who were involved in the formation of the CSBBCS also served as members of the GSC, as well as the Brain and Behaviour division of the CPA.

Motivated by these concerns, members of the APA's Brain and Behaviour division were surveyed to assess the viability of forming a new organization. In 1989, a satellite meeting was held at the CPA conference to discuss the creation of a new society with representatives from animal learning, cognition, and neuroscience/neuropsychology.⁵⁸ Initially calling itself the Canadian Society of Behaviour and Neuroscience, the first organizational meeting was held in Ottawa in 1990, followed by one in Calgary the next year that chose an executive committee. One of the central questions considered in Calgary was the name of the society with considerable debate whether "psychology" should be used in the society's official title.⁵⁹ The name was designed to "satisfy the most recruits ... while alienating the fewest."⁶⁰ APS was a major influence on this fledgling society as it formed during the same period for similar reasons.⁶¹ The CSBBCS's main foci were the promotion of perception, cognitive science, and neuroscience in NSERC and Canadian Institute for Health Research (CIHR) and to highlight the best research in these areas.⁶²

Fragmentation and division in Canadian experimental psychology had



Figure 2: Poster session CSBBCS Calgary, Calgary 2013. Credit: Dan Macdonald, Purple House Photography.

been evident even earlier with the formation of the Canadian Association of Neuroscience (CAN). In a similar manner comparable to psychological organizations, CAN's formation followed from a meeting of the Canadian Federation of Biological Sciences (CFBS) with its first meeting co-located with the CFBS in 1982. The society was formed ostensibly for practical reasons such as the promotion of the interests of researchers in neuroscience within Canada. CAN's first president, Vivian Abrahams, noted in her address to the organization:

Canadian Neuroscientists have been major contributors in this field of science, unfortunately too often while working in other countries...Neuroscience, for too many of you, is an underfunded activity conducted in institutions which do not adequately appreciate you, do not pay you appropriately and delay giving you any kind of security.⁶⁴

CAN represented the specific needs of neuroscientists and, despite a desire to accommodate them within CSBBCS, a specialized organization that served their own interests was more attractive. Bryan Kolb links the decline in neuroscientist participation at CSBBCS to CAN's active representation of neuroscience interests and the "emergence of focused meetings on more specific topics (e.g., vision (ARVO), pharmacology, and so on)."⁶⁵ Psychological scientists and allied researchers in Canada sought out organizations that best represented their own special interests in obtaining resources and building

social networks. Abrahams' speech highlights how neuroscientists perceived that the research-reward structure did not take into account their interests or needs. For professional societies, social organization and reorganization was intimately bound to the status and reward system within science.

Fragmentation within the social organization of Canadian psychology has occurred for reasons other than disciplinary concerns. The Canadian context also provides evidence for the formation of scientific societies related to social identities and language boundaries. A notable feature of Canadian society is its multilingual nature and cultural pluralism. With two official languages (English and French), language can both facilitate and hinder the communication of research. Francophone scientists, for instance, established their own societies and associations; in 1923 in Montreal, they established the French-Canadian Association for the Advancement of Science.⁶⁶ In psychology, disciplinary needs were not met until the founding of the Société Québécoise pour la Recherche en Psychologie (SQRP) in 1978. SQRP promotes French-language psychological research in Québec and improving representation with granting agencies rather advancing a specific kind of psychology (e.g., clinical, social, cognitive).⁶⁷ In this case, while epistemological issues are relevant, the focus is on facilitating dialogue within a linguistic community that is coextensive with a research community, rather fostering cohesion within a specific research area.

While I have emphasized disciplinary fragmentation in an effort to sketch evolutionary patterns of Canadian psychology's social structure, researchers and practitioners have also attempted to maintain and increase accord between the sciences as well as between governmental and nongovernmental organizations. Researchers are clearly aware of shared interests, including the need to unify the sciences and promote their interests in society. Minutes from the 1999 CSBBCS meeting show how researchers also sought to emphasize connectivity with other social groups:

Richard [Tees] noted that in addition to CPA, our society has or should consider having relations with CCDP, APS, EPS, IUpsyS, BDP, CCR...Janet Werker noted that our society might benefit from joining another organization, the Canadian Federation of Biological Societies...The tremendous improvement at NSERC...was noted as was the Government's much welcomed increased support for [research]. Mention was made of the "thank you" letter to the important politicians that Vince DiLollo had drafted for Richard Brown's and Lorraine Allen's signature.⁶⁸

Here we see interest in promoting a social network connecting multiple psychological societies (APS), general scientific societies (CFBS), international societies (the International Union of Psychological Science; IUpsyS), governmental organizations (NSERC), and elected officials. Similarly, fruitful international partnerships are also evidenced. CSBBCS and the UK's Experimental Psychology Society (EPS) have co-hosted a number of meetings, some that antedate the formal creation of the CSBBCS.⁶⁹ While national and geographic concerns exert a considerable influence on the social organization

of science, epistemological issues can still reinforce connections within a larger, research community.⁷⁰

Within the histories of the CPA and CSBBCS, there is also recognition of the desirability of collaboration and coordination of mutual interests. Since the formation of CSBBCS, joint annual meetings have been held with the CPA.⁷¹ Both societies collaborate in their publication of the *Canadian Journal of Experimental Psychology*. One of the primary reasons for continued interaction and coordination are shared values. As norms and conventions reflect a critical feature of the moral economy of a discipline, the next section will examine the codes of conduct of the CPA and APA to illustrate shared and distinct features of psychologists across national boundaries that reflect common features of a collective identity.

Codes of Conduct and the Collective Moral Economy of North American Psychological Science

The fragmentation of psychology into experimental and clinical subdisciplines is perhaps not surprising. In addition to epistemological differences, scientific communities are constrained by social factors such as the number of relationships that can be maintained by an individual. Individuals have a finite amount of attention and must therefore be judicious in their selection of what information they monitor, what activities they take part in, and who is deemed a reliable source of information.⁷² Inasmuch as the early APA and CPA accepted all those interested in psychology but later limited membership,⁷³ the coexistence of experimentalists and clinicians within a single organization might best be viewed as a temporary solution to a problem of social organization. Specifically, experimentalists focused on the conduct and report of research whereas clinicians focused on practice and licensure. Despite the fact that psychology is a diverse discipline⁷⁴ with researchers and practitioners having different priorities, there are many shared values and norms that reflect a collective moral economy⁷⁵ as evidenced in a core set of courses⁷⁶ and stability of curriculum over time.⁷⁷ Thus, while psychology might have to negotiate a diverse set of norms, it constitutes a discipline as cohesive as any other social group. Indeed, disagreements over norms are not uncommon among scientists in general.⁷⁸

A key aspect to professionalization is the monitoring and regulation of a profession's social network to ensure the maintenance of professional standards. It is critical to note shared features, standards, and beliefs might simply reflect a perception rather than the actual state of affairs.⁷⁹ As I noted above, researchers in Canada perceived a need for the formation of a professional society because they believed that their efforts were not met with adequate recognition from existing social organizations (e.g., national bodies, inclusive professional societies). To this end, codes of conduct play a central role in legitimating a profession,⁸⁰ a core feature of professional organizations.⁸¹ Whether educational, aspirational, or regulatory,⁸² codes of conduct reflect the descriptive or prescriptive norms of a scientific community that serve as mutual

points of reference for those within the moral economy. A review of the norms established by both the APA and CPA reveal subtle differences in the number and rank-order of principles.

The creation of a formal code of conduct followed long after APA's 1892 founding with considerable impetus from the revelations of unethical experimentation during the Second World War. Created following a letter-based survey in 1948 of more than a thousand members, the APA initially believed the resulting standards reflected overall concerns of "loyalty or an area of responsibility."⁸³ Published in 1953, the APA code consisted of six standards: public responsibility, client relationship, teaching, research, writing and publishing, and professional relationships. This ordering on its own might suggest that research activities reflected only the fourth and fifth priorities of psychologists again affirming that experimental psychology was viewed as a subdiscipline of psychology as a whole.

In its various forms, the APA code was published, revised, and amended every 5-6 years up to 2016.⁸⁴ The contemporary APA standards identify five principles that guide ethics conduct: A) beneficence and nonmaleficence, defined as the assurance of helping clients and participants as well as ensuring that no harm comes to them; B) fidelity and responsibility, defined as creating trust in the profession and delimitation of services provided by psychologists; C) integrity, defined as honesty and accuracy in the report of findings; D) justice, defined as providing equal treatment; and E) respect for people's rights and dignity, defined as preservation of autonomy and confidentiality. These principles, it is important to note, are specifically identified as "aspirational in nature," reflecting "the highest ethical ideals of the profession."⁸⁵ Thus, the principles were not developed to directly regulate the behaviour of researchers and practitioners, but to provide a template for the motivations and values that formed a collective identity for psychologists.

While Canadian psychologists considered the creation of their own code of conduct following the Second World War,⁸⁶ most efforts in the CPA up to the 1970s focused on how it would adopt the APA's norms.⁸⁷ Starting in 1983, the CPA began a concerted effort to develop a Canadian code. In 1986, 33 years after the adoption of the APA's code, the CPA formally established the Canadian Code of Ethics for Psychologists.⁸⁸ In contrast to the principles of the APA, the CPA code defined its principles as 1) respect for the dignity, rights and autonomy of persons; 2) responsible caring for the best interests of persons; 3) integrity in professional relationships; and 4) responsibility to society. On the whole, however, the CPA and APA norms appear highly similar and commensurable. For instance, the CPA code seemingly merges the APA Principles B and C into its Principle 3. Thus, while there are unique and important features within the CPA code,⁸⁹ both CPA and APA codes reflect the construction of a common collective identity based on prescriptive norms.

One key difference is the ordering of the constituent principles. The selection of letter-based and number-based listing reflects an essential difference in how

these values were weighted. Within the APA, each principle is deemed to be of equal importance (i.e., employing a nominal scale). In contrast, the CPA assumes that some principles supervene upon others (i.e., employing an ordinal scale). Insofar as the CPA code orders its principles in terms of importance, it has been developed to facilitate ethical decision-making. Notwithstanding this intention, it is less clear that researchers and practitioners use the code in this manner or whether these communities in fact agree with the ordering of these principles. At a minimum, it is clear that the code is meant to influence how researchers monitor and regulate their own performance and that of their colleagues.

A recent study considers similarities and differences in the weighting of values.⁹⁰ It observes that APA members believe that the code of conduct used a supervening ordering principle. Using a six-principle code they recovered an ordering that differed from both those of the APA and CPA: integrity, respect for people's rights and dignity, competence, concern for other's welfare, professional and scientific responsibility, and social responsibility.⁹¹ It is of course an open question whether the individual characteristics of researchers who developed the CPA code and those that responded to the APA study and created the subsequent code are similar. Thus, while the formal norms and conventions might be highly similar across geographic boundaries, there are clear differences within the valuation of individual principles. This difference might stem from a discrepancy between those principles formally adopted by the organization and those enacted in the context of research and practice (i.e., the distinction between prescriptive and descriptive norms) or between research communities (e.g., Canadian and American; psychologists that are involved in administering professional societies and survey respondents). Regardless of the source of this discrepancy, it does appear that there is a family-resemblance structure⁹² that defines the moral economies of the members of these communities: while many values are shared, members need not share all of the same values.

In both psychological science and clinical psychology, the influence of codes of conduct is likely to be indirect. Namely, the socialization of students entails a minimal exposure to these norms in the formal undergraduate and graduate curriculum with much of the burden of communicating these norms left to academic supervisors and mentors.⁹³ While both APA and CPA codes are aspirational in nature, they also perform a regulatory function in the context of research ethics. Among other values, research ethics emphasizes beneficence/non-maleficence and respect for individuals' autonomy and confidentiality. Specifically, research ethics boards (REBs) in Canada and Institutional Review Boards (IRBs) in the United States have evolved to play a monitoring and regulatory function, limited to research ethics. Similarly, provincial and state licensing boards also perform monitoring and regulatory functions; however, their scope is limited to professional practices (e.g., education, licensure) and the investigation of complaints. Thus, while differences can be identified in

terms of instantiation of general norms as well as their perceived importance, there is sufficient similarity in prescriptive norms of the CPA and APA to suggest a common moral economy and associated motivations within their respective social exchange systems. As norms and conventions are an integral feature of social identity, there appears to be support for a collective identity as “psychologists.” Indeed, the delay in the adoption of a uniquely Canadian code of conduct might stem from this shared identity as well as the continued cross-border interaction between members of these research communities.

The Social Organization of Psychological Science in Canada

The social organization of scientific research and practice provides important insight into how collective identities and associated norms are formed and negotiated over time. While early formulations of paradigm change overemphasized the social factors that influence scientific research,⁹⁴ social organizations like professional societies, government departments and agencies, and granting councils have considerable influence on the structure of science, and non-negligible influence on its contents.⁹⁵ While organizations such as the CPA and APA appear to share the same norms, their instantiation appears variable. In Canadian psychology, a disciplinary pluralism exists such that, due to limited attention and differences in priorities, research communities fragment into smaller, and more cohesive social groups. Thus, while internal divisions in a scientific society or between scientific societies might be initially attributable to the practical needs of organizing individual members, they will necessarily influence the epistemological concerns of a community. Specifically, those within the social organizational units will increase their frequency of exposure to the ideas and practices within their group, while decreasing their frequency of exposure to those outside their group. This appears to be a comparable process as that observed in the laboratory: the instruments, ideas, and procedures that one becomes familiar with influence the practice of experimentation.⁹⁶ In Canada, continued communication and joint efforts between CPA and CSBBCS illustrate that the recognition of common goals and shared norms still exist with other scientific organizations nationally and internationally. Moreover, a similar pattern is observed in the social organization of American psychological science.

In contrast to a hierarchy in which subdisciplines of psychology (i.e., specific groups) are rank-ordered in terms of their status, the structure of Canadian psychology can be understood in terms of a heterarchy. A heterarchical structure is defined by multiple groups within a larger social organization that have different criterion for assessing fairness and the assignment of rewards and status (i.e., relational exchange norms). As I have discussed above, scientists and practitioners in psychology have both made claims that prevailing exchange norms do not permit adequate recognition of, nor provide rewards to, their members. Consequently, they take this state of affairs to mandate the creation of separate professional societies in order to maintain their legitimacy.



Figure 3: *The one-time Attention Symposium, Dalhousie University, Halifax, 2012. Top row (Left to Right): Eran Zaidel, Avishai Henik, David Shore, Charo Rudea, Bruce Milliken, Charles Spence, and Jin Fan. Bottom Row (Left to Right): Juan Lupia_éz, Raymond Klein, Michael Posner, Gail Eskes, and Paolo Bartolomeo. Credit: Dr. Michael Lawrence.*

This process is nothing new. For instance, in an effort to legitimate their work, early psychological researchers obtained training in experimental methods, acquired instruments, and created laboratories to differentiate themselves from other competing groups (e.g., philosophers).⁹⁷ However, the fact that a common set of norms (e.g., CPA and APA codes of conduct) can be applied to both scientists and practitioners, and that educational models identify both of these features of psychology as relevant, suggest that there are common criteria used within the moral economies of psychologists.

Rather than sharing a collective moral economy, it might be the case that these general, abstract principles reflect metarelational exchange norms. In contrast to exchange norms that govern interaction within a group in terms of the obligations of group members, how resources are to be shared and distributed, as well as how value judgments are made,⁹⁸ metarelational exchange norms govern interactions between groups.⁹⁹ These general codes of conduct might best be seen as a social representation that symbolically reflects a common identity as psychologists. Of course, regardless of their intentions, the formal principles of the CPA and APA might not facilitate interaction of psychologists working in distinct subdisciplines in practice.

The future of Canadian psychology will no doubt continue to demonstrate disciplinary fragmentation due to the limited attention relative to increases in the number of researchers, practitioners, research topics, and areas of

application. For instance, this pattern is evidenced in cognitive and behavioural sciences in Canada.¹⁰⁰ Unique meetings have been commonplace including the Lake Ontario Visionary Establishment (LOVE), the Vancouver Conference on Cognitive Science, and the Banff Annual Symposium in Cognitive Science (BASICS), and Cognitio, an annual conference held in Montréal at UQAM that alternates every second year with a summer school. These conferences are also supplemented with one-time events (e.g., the Attention Symposium held at Dalhousie University in Halifax in 2012, see **Figure 3**). While researchers can balance attendance at a number of these conferences and symposia, these organizations necessarily compete for the attention of researchers not only within Canada but with other international conferences. Though larger, more inclusive conferences will likely continue to perform a symbolic function of defining a group of practitioners, offering legitimation and giving those in attendance a general locus of community interaction, fragmentation will continue to play a critical role in the foci of experimental and applied areas of psychology.

While I have attempted to highlight the basic processes of the evolution of psychological science as a profession, much additional work is required to understand the underlying factors that drive these processes and whether similar processes are evident in the global history of psychological science.¹⁰¹ Factors that might often be classified as externalities relative to scientific practice, such as available funding, charismatic historical figures, and gender also likely play a significant role in the evolution of disciplinary structures. For instance, gender represents such a persistent issue: researchers might select a topic due to its novelty or its status, and status might be determined by past associations with existing social categories such as gender.¹⁰² Exemplifying this is the potential role of gender-biases in the formation of epistemological communities with the history of American psychology.¹⁰³ While female researchers sought out social science areas of psychology (e.g., developmental psychology, counselling), male researchers selected natural-science topics (e.g., sensation, perception, and cognition). While more research is required, findings such as these support the claim that epistemological domains and social organization interact to create and reinforce disciplinary boundaries.

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Endnotes

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