

## **An American Gospel of Science: missionaries, intelligence testing, and the struggle against caste in colonial India, 1919-1941**

**Usama Rafi**

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In late 1916, Justice John W. Goff of the New York Supreme Court admonished a lawyer for submitting psychological examinations as evidence of feeble-mindedness, declaring that ‘standardizing the mind is as futile as standardizing electricity.’<sup>1</sup> Goff’s statement was indicative of the distrust with which the public regarded psychology’s recent turn towards measurement and quantification of mental intelligence. A few years later in India, the British missionary John Hoyland thought he had achieved precisely what Goff’s suggested was impossible. Hoyland had produced a remarkably specific chronology of the development of qualities such as envy, benevolence, spirituality, etc., in the mind of the Indian adolescent.<sup>2</sup> Back in the United States, Hoyland’s methods and conclusions would now have been considered wholly uncontroversial. Within a few years, Goff’s remarks almost read like that of a luddite. Intelligence and ‘I.Q.’ had become firm fixtures in public debates on race, immigration, threats to America’s manifest destiny.

Much of the credit for this transformation belongs to four prominent academic psychologists in America; Lewis M. Terman, Henry H. Goddard, Robert M. Yerkes, and Carl C. Brigham. What allowed these men to bring about this transformation in psychology’s public perception was not simply innovations in scientific techniques but also the conclusions they offered. Their research, communicated through a specific quantitative vocabulary, earned social credibility because it spoke to the deepest anxieties of the age. Terman had created a test to measure the intelligence of children, identifying inferior and superior intellects and suggesting the roles they should play in society. Goddard similarly studied the intelligence of feeble minded families and offered eugenic solutions. Yerkes tested the intelligence of 1.75 million Army

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<sup>1</sup> Daniel J. Kevles, ‘Testing the Army’s Intelligence: Psychologists and the Military in World War I,’ *Journal of American History* 55 (1968): 566.

<sup>2</sup> John S. Hoyland, *An Investigation Regarding the Psychology of the Indian Adolescence* (Jubbulpore: Christian Mission Press, 1921)

recruits, many of whom were uneducated immigrants, during the World War I.<sup>3</sup> One of his students, Brigham, took the results of this research to its logical conclusion, warning of the threat to America's future from racial admixture and immigration, and the resulting decline in national intelligence.<sup>4</sup>

For those looking to quantitative psychology to scientifically validate their racial anxieties and prejudices, Yerkes and Brigham's work was particularly instrumental. Yerkes' study of the recruits, many of whom were uneducated and immigrants, came to a troubling conclusion; the average mental age of the American adult was only thirteen years old, leading him to question aloud the need, and the threat, of democracy in a society with such dismal levels of national intelligence.<sup>5</sup> Brigham, now mostly famous for creating the SAT for the College Board, went further. The real cause of the decline in American intelligence, Brigham argued, was the 'admixture' of blood between races.<sup>6</sup> Brigham declared this decline inevitable, even if all immigration were suspended, since the pure Nordic racial type (Protestants from northwestern Europe) had already been diluted beyond repair. Brigham then chillingly remarked that 'this is the problem which must be met, and our manner of meeting it will determine the future course of our national life.'<sup>7</sup> During the middle of the 1920s, Brigham's scientific work was widely cited by eugenicists in support of the Johnson- Reed Act of 1924, which set quotas on immigration from Southern Europe and Asia to preserve the racial demographic of the United States until its repeal in 1965.<sup>8</sup>

Quantitative intelligence measurement fell from grace, at least in Brigham's own eyes, as swiftly as its meteoric rise. Seven years his initial warning, Brigham disavowed most psychological research on race and intelligence in the past decade, declaring that his own work,

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<sup>3</sup> Robert M. Yerkes, ed., *Psychological Examining in the United States Army* (Washington, Government Printing Office, 1921)

<sup>4</sup> Carl C. Brigham, *A Study of American Intelligence*, (Princeton: Princeton University Press, 1922). Brigham's unique contribution was to apply the scientific language of psychology and intelligence testing to old theories about the racial superiority of the Nordic Anglo-Saxon people over other Caucasian ethnicities. See Reginald Horsman, *Race and Manifest Destiny: The Origins of American Racial Anglo-Saxonism* (Cambridge: Harvard University Press, 1981).

<sup>5</sup> Yerkes, *Psychological Examining*, 785.

<sup>6</sup> Brigham, *A Study of American Intelligence*, 210.

<sup>7</sup> *Ibid*, 212.

<sup>8</sup> Allan Chase, *The Legacy of Malthus: The Social Cost of the New Scientific Racism* (New York: Knopf, 1977), 476; Stephen J. Gould, *The Mismeasure of Man* (New York: W. W. Norton, 1996), pp. 262-263.

‘one of the most pretentious of these comparative racial studies...was without foundation.’<sup>9</sup> In addition to having some minor reservations about statistical methodology of intelligence tests, Brigham realized that unless immigrant groups were tested through vernacular vocabulary and symbols, they were not being testing on anything other than familiarity with American cultural symbols and idioms.<sup>10</sup> Brigham, however, did not offer any explanation of how he had come to these revised conclusions about the nature of intelligence and the pitfalls of quantifying it.<sup>11</sup>

The social and racial preoccupations of early research on measuring and quantifying intelligence have been the primary focus of historians who have documented the pernicious origins of quantitative psychology.<sup>12</sup> Given the normative aspirations which drove the work of these American psychologists, historians have found it only natural that all of them except Yerkes would inevitably realize the subjectivity of their claims and disavow their work, as they eventually did. The question of what was behind this disavowal has remained unanswered. At any rate, only Brigham—who remained the most socially conscious of the implication of research on intelligence measurement—offered any discussion, however brief, of why his work was without any scientific basis even as he remained quiet on what made his come to this conclusion. For the most part, this has been an elusive if not uninteresting question given the fact that the careers of Terman, Goddard, Yerkes, and Brigham have stood in have stood in entirety for the history of intelligence measurement in United States and beyond. Critiques of the scientific and moral poverty of quantitative psychology and intelligence testing have similarly focused on the career of these men.

This is, however, an incomplete history, socially and intellectually. As intelligence testing was paving the way for Brigham’s warning about America’s racial destiny, it was

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<sup>9</sup> Carl C. Brigham, ‘Intelligence tests of immigrant groups,’ *Psychological Review* 37, (1930), p. 165.

<sup>10</sup> Ibid.

<sup>11</sup> Terman and Goddard had offered similarly abrupt and unexplained recantations a few years earlier. See Leila Zenderland, *Measuring Minds: Henry Herbert Goddard and the Origins of American Intelligence Testing* (Cambridge: Cambridge University Press, 1998), 13-18, and epilogue; Gould, *Mismeasure of Man*, 221-222.

<sup>12</sup> For a critical history of quantitative psychology and intelligence measurement, see Kurt Danziger, *Constructing the Subject: Historical Origins of Psychological Research* (Cambridge: Cambridge University Press, 1990); Stephen Gould, *The Mismeasure of Man*; Zenderland, *Measuring Minds*; John Carson, *The measure of merit: talents, intelligence, and inequality in the French and American republics, 1750-1940* (Princeton: Princeton University Press, 2007); JoAnne Brown, *The definition of a profession: The authority of metaphor in the history of intelligence testing, 1890-1930* (Princeton: Princeton University Press, 1992).

engaged in a more progressive social project in colonial India. There, intelligence testing first caught the attention of two American missionaries looking for a more persuasive strategy of communication in their long going crusade against India's religious and social caste system. For these missionaries, David S. Herrick and Charles H. Rice, quantitative psychology was a potent tool in making the case for equality between different castes, especially between the priestly Brahmin caste and the 'untouchable' or 'depressed' caste to which many Christian converts had formerly belonged to. They did so by demonstrating that there existed a psychic unity between man, based on equivalent mental intelligence and measured through scientifically rigorous quantitative metrics.

The missionary struggle against the caste system was nothing new. It had been a steady feature of all missionary activity in India, beginning with the arrival of British missionaries in the early nineteenth century and continuing with the influx of American missionaries towards the end of that century.<sup>13</sup> Herrick and Rice's turn to psychological measurement at the start of the twentieth century was, however, novel. Why did the idea of psychological measurement and the particular practice of intelligence testing appeal to these American missionaries? What does the missionaries' reclamation and mutation of intelligence measurement techniques tell us about the idea of intelligence itself? These are questions I address in this article. To answer this question, one must look at how these missionaries used psychological measurement and how their religious identity affected their work, which in turn created an extra religious scientific identity for them. To be sure, the work of these men was not simply a research experiment. The missionaries' search for Indian intelligence began as a missionary and religious enterprise, not as an afterthought of scientific or developmental interest. Therefore, one must investigate why quantitative psychology became the missionaries' preferred strategy of communication.

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<sup>13</sup> On missionary work against caste and reactions it provoked, see Duncan B. Forrester, *Caste and Christianity: Attitudes and Policies on Caste of Anglo-Saxon Protestant Missions in India* (London: Curzon, 1980); John C. B. Webster, *The Dalit Christians: A history* (Delhi : ISPCCK, 1994.); Nicholas Dirks, *Castes of Mind: Colonialism and the Making of Modern India* (Princeton: Princeton University Press, 2001), 140-171; Jeffrey Cox, *Imperial Fault lines: Christianity and Colonial Power in India, 1818-1940* (Palo Alto: Stanford University Press, 2002), 52-115; Hayden J.A. Bellenoit, *Missionary education and empire in late colonial India, 1860-1920* (London: Pickering & Chatto, 2007), 121-153.

I argue that these American missionaries were drawn to psychology and the measurement of intelligence for three reasons. First, the quantitative language of intelligence tests, relying on numerical and secular signifiers such as IQ, allowed them to communicate an essential equality among people across physical and cultural distance better than simply appealing to moral and theological sentiments, concepts tinged with an unsavoury association to colonialism. Those sentiments could now be corroborated by what Theodore Porter has described as society's 'trust in numbers.'<sup>14</sup>

Second, psychology offered, or at least appeared to them to offer, a more enduring and less subversive way to bring about imperial reform of India's caste system—especially within the community of Indian Christians with their own thriving parochialisms of caste. The ability of the quantitative IQ signifier to simultaneously give a precise comparison between castes and races, while obscuring cultural context, was what led British officials to tolerate, even patronize, research that subversively re-conceptualized understandings of caste.

Finally, these missionaries' pursuit of 'objective' science was also a means to create a new religious identity, one that was based on the removal of *a priori* personal and religious biases. In reality, as I demonstrate, their religious motivations led to as partisan methodologies as those of intelligence testing's pioneers in America, albeit for less pernicious ends. In the final analysis, it is nonetheless significant that these missionaries searched for an extra-religious identity since it brought a religious imperative to their scientific work, one which was crucial to their anti-caste sentiments.

Missionaries have appeared, perhaps more than any other social group, as either the handmaidens of colonization or as agents of unequivocal providentially inspired social progress. Ranajit Guha saw missionaries as one of the dominant groups that underpinned the political economy of British imperialism in India alongside the landed gentry, City financiers, and the Oxbridge trained colonial service elite.<sup>15</sup> This representation is not restricted to India alone. In

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<sup>14</sup> Theodore Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton: Princeton University Press, 1996).

<sup>15</sup> Ranajit Guha, *Subaltern Studies* (Delhi: Oxford University Press, 1982), 8-14.

the case of China, missionary complicity with imperial powers during the Boxer Rebellion was taken as an article of faith by Joseph Esherick to such an extent, that he used the rate of conversions to Christianity as evidence of the proportionality of imperial coercion.<sup>16</sup> On the other hand, laudatory accounts have focused on missionaries' roles in providing education and medical assistance to colonial communities and privately sympathizing with nationalist anti-colonialism, without paying adequate attention to their often collusive relationship with colonial officials.<sup>17</sup>

Both accounts, however, take it for granted that there was one static missionary movement in colonial India and elsewhere under colonial rule. Recent works have emphasized the heavily denominational and internally competitive nature of missions under colonial rule. By shifting attention to the denominational distinctness of missions, the role of previously ignored categories of missionaries have been brought to the fore in an attempt to move away from binary of complicity with or ignorance of imperial rule.<sup>18</sup> A further step in this direction has been to point out the difference between the motivations and practices of American and British Protestant missionaries. Inspired by a specifically Protestant religious and historical identity, American missionaries saw in their 'errand to the world' not so much a need to civilize colonial subjects, but a journey into the wilderness aimed at preaching the gospel to foreign cultures and returning to address social injustices back home with lessons learned abroad.<sup>19</sup> Shifting attention away from theorization of missions in American seminaries to the actual sites of foreign missions, Ussama Makdisi has demonstrated that such lofty ideals rarely lived up to expectations.<sup>20</sup> The exigencies of denominational competition and the constraints of operating

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<sup>16</sup> Joseph Esherick, *The Origins of the Boxer Uprising* (Berkeley: University of California Press, 1987), 89-93.

<sup>17</sup> Among many possibilities, see John C. B. Webster, *The Christian Community and Change in Nineteenth Century North India* (Delhi: Macmillan, 1976); Brian Stanley, *The Bible and the Flag: Protestant Missions and British Imperialism in the Nineteenth and Twentieth Centuries* (Leicester: Apollos, 1990); Andrew Porter, "Cultural Imperialism" and Protestant Missionary Enterprise, 1780-1914,' *Journal of Imperial and Commonwealth History* 25 (1997): 367-391; Ryan Dunch, 'Beyond Cultural Imperialism: Cultural Theory, Christian Missions, and Global Modernity,' *History and Theory* 41 (2002): 301-325

<sup>18</sup> Jeffrey Cox's *Imperial Fault lines* achieves this by examining competition between female Catholic and Protestant missionaries operating in Punjab.

<sup>19</sup> William R. Hutchison, *Errand to the World: American Protestant Thought and Foreign Missions* (Chicago: University of Chicago Press, 1987). Hutchinson, however, only explored American theorizing about foreign missions, not the actual practice of missions outside of American seminaries. For a more critical approach, albeit centered on the contributions of returned missionaries to American social liberalism, see David A. Hollinger's forthcoming *Protestants Abroad: How Missionaries Tried to Change the World but Changed America* (Princeton: Princeton University Press, 2017)

<sup>20</sup> Ussama Makdisi, *Artillery of Heaven: American Missionaries and the Failed Conversion of the Middle East* (Ithaca: Cornell University Press, 2008).

under foreign imperial rule altered the American missionaries' aspiration but also produced innovations in how they communicated their mission. Their success or lack thereof on depended on such negotiations.

The relationship of scientific knowledge and empire, too, has been seen as a fundamentally collusive one, especially in the case of psychology. With good reason, psychological research, focused mostly on psychoanalysis, has been documented as an important building block in the imperial edifice of racial and ethnic categorization designed for colonial rule by difference.<sup>21</sup> Such conclusions are unsurprising given that these works have taken as their units of analysis either colonial officials or anti-colonial nationalists. Missionaries, or other social groups, have until recently not been the units of analysis in histories of scientific research in imperial spaces.<sup>22</sup> Missionaries make a welcome appearance in Erik Linstrum recent study of psychologists in the British Empire in a way that eludes easily compartmentalizing them into colonial facilitators or anti-colonial agitators.<sup>23</sup> Linstrum, however, approached the missionaries research activities as a simple byproduct of top down colonial policies.

When we turn to scrutinize the scientific techniques and language used by the missionaries on their own terms, it reveals their uncertain position in navigating a tricky proposition; they went off on their errand to the world in a colony ruled by their co-religionists but not their compatriots. In the end, these American missionaries were foreigners looking to subvert the caste the system which the British had painstakingly reconfigured over a century and were loath to have it disrupted, especially after the mutiny of 1857.<sup>24</sup> The missionaries' methods of intelligence testing in the mission against caste, then, also reveals a more nuanced history of the relationship between scientific knowledge and the nature of imperial power.

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<sup>21</sup> Among others, see Saul Dubow, *Scientific Racism in Modern South Africa* (Cambridge: Cambridge University Press, 1995); Megan Vaughan, *Curing Their Ills: Colonial Power and African Illness* (Palo Alto: Stanford University Press, 1991); Christiane Hartnack, *Psychoanalysis in Colonial India* (New Delhi: Oxford University Press, 2001).

<sup>22</sup> A notable exception is Marwa El-Shakry's *Reading Darwin in Arabic, 1860-1950* (Chicago: University of Chicago Press, 2013) which focuses on competition between Catholic and Protestant missionaries in Syria and Egypt over using translations of Darwin for evangelical purposes.

<sup>23</sup> The most recent and insightful of these is Erik Linstrum's *Ruling Minds: Psychology in the British Empire* (Cambridge: Harvard University Press, 2016).

<sup>24</sup> Dirks, *Castes of Mind*, 128-228.

The units of analysis I use to examine these missionaries' work merit a brief unpacking. In understanding the appeal of quantification, I draw on a number of insights from Theodore Porter's idea of quantification as a 'social technology' of distance which masks the identity of the researcher and cultural contexts in which quantitative results arise.<sup>25</sup> Porter argues that quantification achieves 'objectivity' more by what is omitted than any positive attitude towards the subject of research.<sup>26</sup> Therefore, quantification is a simply strategy of communication; there is no 'inherent statistical quality' that makes up the essence of the scientific ideas it communicates.<sup>27</sup> Elsewhere, in a study of the career of the British mathematician Karl Pearson, Porter has argued that Pearson's career typified an embrace of quantitative methods as a means of creating a new religious identity based on self-sacrifice through higher standards of objectivity.<sup>28</sup> These considerations assume a special importance for my units of analysis; the permeable concept of intelligence, the tests that articulate their final results quantitatively, and what this exercise symbolized for the missionaries who found a new and higher ideal of self-sacrifice in the process.

In the United States, intelligence testing began with a widely marketed test published by Lewis Terman, a professor at Stanford University, to measure the intelligence of children between the ages of 3 and 16.<sup>29</sup> Terman's test, comprising 67 individual exams, was a revision of the work French psychologist Alfred Binet, who had hoped his test would help the state identify children intellectual lagging students to be placed in remedial classes.<sup>30</sup> Terman's famous 'Stanford Revision' was not simply a linguistic translation of Binet's work. Instead, it was a broad tool, mass marketed and no longer restricted to state use, for social control. Terman believed that intelligence was hereditary, which, he argued, meant that individuals starting endowment of intelligence and their ability to cultivate it afterwards was dependent on birth.<sup>31</sup> Furthermore, different races and ethnic groups had different starting points and limits.

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<sup>25</sup> Porter, *Trust in Numbers*, ix, 49, 73.

<sup>26</sup> *Ibid*, 82.

<sup>27</sup> *Ibid*, 208.

<sup>28</sup> Theodore Porter, *Karl Pearson: The Scientific Life in a Statistical Age* (Princeton: Princeton University Press, 2004), 6-8.

<sup>29</sup> Lewis M. Terman, *The Measurement of Intelligence: an explanation of and a complete guide for the use of the Stanford revision and extension of The Binet-Simon Intelligence Scale* (New York: Houghton, Mifflin & Company, 1916).

<sup>30</sup> Gould, *Mismeasure of Man*, 176-187

<sup>31</sup> Terman, *The Measurement of Intelligence*, 7-11.

Environmental influences were negligible compared to these two points. Terman proposed using a scientific metric like his test to sort out those with low intelligence, which corresponded with certain racial and ethnic groups, for class specific roles and professions in society.<sup>32</sup> As evidence of the need of this, Terman offered the unsubstantiated cost of 500 million dollars per year from crimes committed by low intelligence ‘feeble-minded’ persons.<sup>33</sup> Goddard, Yerkes, and Brigham all began with such assumptions and came to similarly drastic conclusions, even as their methods differed slightly.

Their ability to present such conclusions with a sense of urgency rested on the ability to rank intelligence vertically; a mental age of 15 was undoubtedly higher than that of 10. How could one disagree with that? Such rankings obscured whatever entity called intelligence that tests like Terman’s measured; or even if such a unitary intelligence even existed. For Terman, that ‘intelligence’ was a set of cognitive abilities tested by exercises such as drawing shapes, differentiating between weights, awareness of spatial-temporal details such as the date and time, season, year, etc. Additionally, Terman included tests of character and moral temperament, and was the first to introduce correct and incorrect answers for such questions. Therefore, the ability to score points on Terman's test for a question that required a child to define an abstract concept such as ‘envy’ depended on how closely the answer resembled Terman’s own correct conception of the idea.<sup>34</sup> Therefore, when scrutinized, the language of the tests reveal Terman’s particular attitudes about what knowledge and skills were necessary to demonstrate intelligence and abilities that corresponded with his ideas about the compartmentalization of professions in a society with distinct class boundaries.

The intelligence test that the missionaries used in India are the major site of analysis in this paper. A close reading of them reveals that when the missionaries substituted their own moral attitudes with those of men like Terman and Brigham, quantitative rankings of intelligence became as a power social technology in deconstructing the myth of the outcastes’ mental inferiority, strategically masking the missionaries own moral motivations, like the American

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<sup>32</sup> *Ibid*, 115.

<sup>33</sup> *Ibid*, 12.

<sup>34</sup> *Ibid*, 268.

psychologists had done so, and projecting intelligence as an entity that was universal across distances and cultures.

### **Beginnings: Disappointed missionaries, hopeful ‘outcastes’**

The American missionary enterprise in late nineteenth century India was floundering. Their errand to the world was facing a crisis of conversion, especially in the Punjab where the Sialkot Mission of the United Presbyterian Church of North America had been set up in 1854.<sup>35</sup> Despite being the largest American mission in the Punjab, it had only 42 conversions and baptisms to account for in over twenty-five years of educational and community service. Frustration over these numbers and the inability to produce leaders out of native converts led to widespread despondency amongst the missionaries, questioning their own ability and the human value of their spiritual charges.<sup>36</sup>

Soon after, the missionaries shifted the attention of their evangelism to *Chuhras*, an ethnic and tribal group which was considered untouchable and outcaste because of their traditional occupation as scavengers and sweepers.<sup>37</sup> This strategy quickly bore success. By the start of the 1880s, around a thousand *Chuhras* were converting annually, often in mass conversions of whole village communities.<sup>38</sup> By the turn of the century, *Chuhra* Christians outnumbered other Christians in Punjab by twenty to one.<sup>39</sup> By the early twentieth century, the

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<sup>35</sup> After multiple mergers, the United Presbyterian Church of North American is known as the Presbyterian Church (U.S.A) today. Henceforth known as the United Presbyterian Church.

<sup>36</sup> The missionary periodical literature is rife with such accounts of the mission in Punjab in the late nineteenth century. See M. M. P Hogg, ‘The Place of the Foreign Missionary,’ *International Review of Mission* 2 (1913): 542–553; T. T. Brumbaugh, ‘Why Missionaries Quit,’ *Christian Century*, July (1925); N. Manicol, ‘A Christian Looks at India,’ *International Review of Mission* 18 (1929): 59–73; Shirley Jackson Case, ‘Evaluating the Missionary Enterprise,’ *The Journal of Religion* 13/3 (1933): 361–63.

<sup>37</sup> Shyam Lal, *The Changing Bhangis in India: A Study of Caste Association* (Jaipur: Sublime Publications, 1999). I am, of course, aware of the negative association and pernicious origins of the terms *chuhra*, *bhangi*, *panchama*, untouchable, depressed, and outcaste. I use these terms interchangeably to account for their use and prevalence in the historical sources. Since the popularization of the term by B. R. Ambedkar, members of these groups have referred to themselves more accurately as *Dalit* (oppressed). See Ambedkar, *What Congress and Gandhi have done to the untouchables* (Bombay: Thacker, 1945).

<sup>38</sup> John C. B. Webster, ‘The Legacy of John Charles Heinrich,’ *International Bulletin of Missionary Research* 37/1 (2013): 34.

<sup>39</sup> Robert Stewart, *Life and Work in India: An Account of the Conditions, Methods, Difficulties, Results, Future Prospects, and Reflux Influence of Missionary Labor in India, Especially in the Punjab Mission of the United Presbyterian Church* (Philadelphia: Pearl Publishing, 1896), 243

Indian church in Punjab, and elsewhere in the Bombay and Madras presidencies, was predominantly an outcaste church.<sup>40</sup>

The American missionary situation was further complicated as Gandhi's nationalist movement picked up steam. Protestant missions were spending twice as much as their British counterparts on evangelizing to India's poor by the early twentieth century, drawing fierce resistance from Hindu nationalist elites. Susan Haskell Khan has noted that face with this crisis, most American missionaries came to a consensus that the success and survival of a century's work depended upon retreating from aggressive evangelical campaigns and distancing themselves from the British Empire's "civilizing" objectives. Instead, they sought to adopt an increasingly 'service-oriented, culturally inclusive, woman-centered, and theologically ecumenical approach to their evangelical task.' Khan goes on to argue that this feminized missionary culture 'contrasts vividly with the more "male" ethos of the standard imperialist narrative, and gives to the India missionary experience [in America] a proto-feminist character that has rarely been acknowledged.'<sup>41</sup>

An important consequence of this compromise was the change in how missionaries, perhaps the most important cultural interpreters of India, came to discuss the issue of caste discrimination back in the United States. Publically, the American missionary view on issue, now aligned with that of Hindu nationalists, subordinated caste discrimination as a relatively unimportant issue compared to the cruelties of imperialism. Prominent missionaries such as E. Stanley Jones sought to 'Indianize' Christianity by eschewing moralizing attitudes on caste, widow burning, and child marriage. *The Christ of the India Road*, Jones call to preach a "Christ without Western civilization" became best seller in India and the United States.<sup>42</sup>

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<sup>40</sup> C. F. Andrews, 'Our Mission in India Today,' *International Review of Mission* 22 (1933): 189-200.

<sup>41</sup> Susan Haskell Khan, 'The India Mission Field in American History, 1919-1947' (Ph.D. diss., University of California, Berkeley, 2006), 1-2.

<sup>42</sup> E. Stanley Jones, *The Christ of the Indian Road* (New York: Abingdon Press, 1925). Khan notes that *The Christ of the Indian Road* outsold popular bestsellers such as Sinclair Lewis's *Babbalanza* (1922) and Katherine Mayo's *Mother India* (1927), a popular imperialist creed against caste discrimination. See 'The India Mission Field,' 228. This change in missionary attitudes on caste had a significant impact on the changing conceptualization of race from 'caste' to 'colony' in the US during the Civil Rights movement. See Daniel Immerwahr, 'Caste or Colony? Indianizing Race in the United States,' *Modern Intellectual History* 4 (2), 2007: 275-301.

Mission and church affairs in India, however, remained as hierarchical as the colonial bureaucracy. All educational and evangelical activity was funded through money raised mostly from native Christians. Administration was carried out by full time members of the mission, for which only missionaries, not ordinary members of the congregations, were eligible. These missionaries were almost exclusively American or European. As one missionary put it in his exasperation, the church was administered through an “autocratic method of management,” where missionaries were not happy until they were put in charge of something.<sup>43</sup> Much of this was due to what was felt to be a lack of church leaders from amongst the converted Christians and condescending private views on *Chuhra* Christians held by Euro-American missionaries, the latter often being the reason for the former.<sup>44</sup>

Calls for reform were aplenty and took different shapes. Some drew on their own positive experiences in preaching more effectively with Indian pastors.<sup>45</sup> A more effective strategy was to point out the threat to the survival of Christianity if the struggle against caste remained exclusively outside of India’s Christian community, without addressing how it affected the community of Indian Christians. As one reformer put it, ‘in India today, the Christian Church is another caste, or is at least so regarded by the vast majority of non-Christians.’<sup>46</sup> Unless the missionaries themselves fulfilled on the emancipatory promise of Christianity to hopeful outcaste converts, their future evangelical success would be jeopardized not only among the outcastes themselves but also among India’s other religious communities.

The missionaries’ whose work I examine, brought American methods of intelligence testing to such a state of affair in India. Their use of intelligence testing methods in the struggle against caste was as much a way of reforming Indian caste customs as it was to reform Christian attitudes on the inferiority of their new converts. Such sobering realizations also tempered the altruism of their mission to an extent; to fight against the exclusivity of caste was a moral imperative in and of itself, but one wonders if they would have found such innovative methods

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<sup>43</sup>Stewart, *Life and Work in India*, 138.

<sup>44</sup> *Ibid*, 246.

<sup>45</sup> John C. Heinrich, ‘Spreading the Good News in North India,’ *United Presbyterian*, June 9 (1921); ‘The Humblest Indian Can Spread the Evangel,’ *Indian Standard*, December (1926).

<sup>46</sup> John S. Hoyland, *Letters from India* (London: Swarthmore Press, 1919), 11.

for doing so if the outcastes were not converts to Protestantism who faced continued discrimination in the communities of their new faith.

### **Herrick's initial experiment**

In late 1922, David Scudder Herrick faced a dilemma. Two young men were competing for a recently established scholarship at the United Theological College in Bangalore. Herrick was certain that only Paul Raj, the son of an Indian pastor and a university graduate himself, deserved the scholarship. Arumai Samuel, the other candidate, had received only two years of education in a missionary school where he had failed his most recent examination. Herrick was aware that this was not simply an administrative matter. He considered decisions like these a test of whether missionaries like himself could live up to the ideals of their faith in a brave new world of progress and equity driven by faith in god and the human sciences.

Too often, missionaries relied on bureaucratic indicators such as school examination scores, letters of introduction from colonial administrators, etc., to make important decisions that affected the future livelihoods of young Indians like Samuel and Raj. Herrick's dilemma was easily resolved. He decided to give Samuel an opportunity to prove his 'real' worth by having him sit Terman's Stanford-Binet test. If Samuel could demonstrate possession of intelligence required for a rigorous moral education in the seminary, Herrick would find a way for him to join Raj at the College.<sup>47</sup>

Herrick's instincts were spectacularly and for Samuel, tragically, confirmed. Despite being a grown man, Samuel had the mental age of a twelve-year-old according to the test. The matter was quickly resolved thereon. Herrick recommended Raj for the scholarship and that was the end of it. Herrick enthusiastically declared that mental tests did 'score a point' in saving missionary resources and sparing a lifetime of future disappointment for individuals like Samuel, had they proceeded with careers in which they had no prospects of success.<sup>48</sup>

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<sup>47</sup> Linstrum, *Ruling Minds*, 83. See p. 251 for citations to Herrick's original remarks.

<sup>48</sup> *Ibid*, 84.

Herrick's decision to administer the intelligence test to Samuel was not an epiphany that arrived in a moment of profound administrative crisis. Herrick had already dabbled in quantitative measurement of intellectual abilities. Born in India into a missionary family, he had previously studied at Williams College and taught at Hartford Theological Seminary, before returning to India. At Hartford, which was pioneering scientific education for missionaries, Herrick first became aware of psychological measurement and the Army Tests carried out by Yerkes and Brigham.<sup>49</sup>

A year before he had to make the scholarship decision, Herrick published the first ever work of quantitative psychology out of India in the *Journal of Applied Psychology*.<sup>50</sup> Making no reference of his missionary credentials, Herrick began with a set of simple yet provocative question for that time: 'do racial differences extend to mental characteristics? Are differences in color and other physical features accompanied by differences in general intelligence, or in psychomotor ability?'<sup>51</sup> Herrick started from the common enough colonial assumption that caste was the same as race, but he was not content to rely on anthropometric observation in discerning the characteristic features of each race and the differences between races.<sup>52</sup> Instead, he set out to test the validity of racial characteristics by examining 700 boys and girls in south India who had, in his opinion, 'not been approached from a scientific point of view' in government surveys.<sup>53</sup>

Herrick made sure to do justice to his claim of approaching his subjects with a scientific point of view. The sample was split in equal parts into Brahmin and *Panchama* children.<sup>54</sup>

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<sup>49</sup> *Ibid*, 86. On educational innovation at Hartford, see Andrew Harold Walsh, "For Our City's Welfare: Building a Protestant Establishment in Late Nineteenth Century Hartford," Ph.D. diss., (Harvard University, 1996).

<sup>50</sup> D. S. Herrick, 'A comparison of Brahman and Panchama children in South India; with each other and with American children by means of the Goddard Form-Board,' *Journal of Applied Psychology*, 5, (1921), pp. 253–260.

<sup>51</sup> *Ibid*, 253.

<sup>52</sup> By this point, Herrick was not alone in distrusting anthropometric observation. His attitude was reflective of a growing trend to move away from research based on observation towards that based on experimentation ever since the 1898 Torres Straits Expedition led by Cambridge anthropologists. See, Linstrum, *Ruling Minds*, 13-42; Danziger, *Constructing the Subject*, 23-41.

<sup>53</sup> Herrick, 'A comparison of Brahman and Panchama children in South India', 253. Herrick was referring to Edgar Thurston's *Castes and Tribes of Southern India* (Madras: Government Press, 1909).

<sup>54</sup> *Panchama* was the south Indian term for the untouchable or outcastes. To be *Panchama* was less a matter of being in a single caste considered untouchable, like the *Chuhra* in north India, and more a case of being outside of the larger caste categories like Brahmin, Kshatriya, etc.

Additionally, all the children were ‘town-bred’ and had similar educational, cultural, and home environments within their two groups.<sup>55</sup> This was more than a methodological precaution, too. Herrick was publicly dismissive of the Brahmin claim that their bloodline had not mixed with any other castes’, even when he conceded that there were clear physical and ethnic difference between Brahmins and non-Brahmins. Herrick took the Brahmin claim *prima facie*. However, he was inclined to think that there were minimal non-environmental differences in mental abilities of different castes. For this reason, administering the Stanford-Binet test ‘was out of the question’ since it would not produce meaningful and comparable results until the test could be adapted into the two different languages that *Brahmins* and *Panchamas* spoke. This would be a task left for a later ‘scientist.’

Instead, Herrick chose the Goddard Form-Board test designed by Henry Herbert Goddard which required children to fit different shaped objects (circles, squares, stars) in their corresponding slot on a wooden board in the quickest possible time.<sup>56</sup> Unfamiliarity with the shapes of the objects or the fact that none of the children tested had ever seen a form board before did not matter. They would be able to discern what was expected of them after a simple demonstrative exercise.<sup>57</sup>

On average, *Panchama* children scored one to four seconds slower than Brahmin children. This insignificant difference could be down to the difference in the cultural and home environments between the two groups, which were largely homogeneous amongst themselves. Herrick could hardly have made an effective case for the primacy of environment to account for intellectual difference between races with such slim margins of difference. Therefore, he added the results of the same test administered to American children by R.H. Sylvester. Here the difference will much more indicative. At four years, old, Indian children of both castes scored an average of 5 seconds quicker. By age six, they had fallen behind 20 seconds compared to American children. Here was the decisive test of Herrick’s commitment to the belief in mental

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<sup>55</sup> D. S. Herrick, ‘A comparison of Brahman and Panchama children in South India,’ 255.

<sup>56</sup> In a cruel irony, Goddard’s lack of sensitivity to testing subjects in a language unfamiliar to them produced the abysmal results which led him to label millions of early twentieth century immigrants in America as morons, idiots, and imbeciles-- all terms sanctioned with the weight of science behind them. On Goddard, see Leila Zenderland, *Measuring Minds*

<sup>57</sup> D. S. Herrick, ‘A comparison of Brahman and Panchama children in South India,’ 254.

equality. Resisting the temptation to make a generalization about the superiority of one race over the other, Herrick paused and guessed the cause of the difference in the system of kindergarten education which started between the age of four and six in America and had no widespread equivalent in India.<sup>58</sup>

Herrick did not pursue the causes of the difference further and his abruptness on this point is understandable since the aims of the research were not purely scientific. As long as he could demonstrate that there were no drastic differences between races at some fixed point, reasons for later divergences did not matter much to Herrick. The whole exercise had a special extra-scientific significance, which Herrick put forth, now as Rev. Herrick, in an article published in *The Madras Christian College Magazine*.<sup>59</sup> Herrick imagined science's purpose as insubordinate to social and moral aims. Practicing scientific methods was only the means of creating and living a new identity based on objectivity removing anthropometric biases, much as Karl Pearson had imagined.

Compared to Terman's classist aspirations, Herrick's missionary ideals translated into more subjective definitions of what it meant to have intelligence and the purposes of measuring it. Both were heavily influenced by the Protestant missionary ethic of fidelity and self-sacrifice.<sup>60</sup> For Herrick, and later missionary psychologists, intelligence was simply the ability of an individual to mentally adapt to life under new circumstances. Christian circumstances in this case.<sup>61</sup> Yet, Herrick's progressive definitions were still tempered by the rigidity of his belief that moral qualities were closely linked to intelligence; which is why intelligence had to be measured in the first place. Herrick approvingly cited Goddard's infamous, and now discredited, study of the Kallikak family as evidence of this but remained silent on whether deficient intelligence and the resultant moral feeble-mindedness were hereditary.<sup>62</sup>

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<sup>58</sup> *Ibid*, 259-260.

<sup>59</sup> D. S. Herrick, 'The Measurement of Intelligence and its Value for Missionary Work,' *The Madras Christian College Magazine*, July (1923): 157-165.

<sup>60</sup> Hutchison, *Errand to the World*, 2-4.

<sup>61</sup> D. S. Herrick, 'The Measurement of Intelligence,' 158.

<sup>62</sup> *Ibid*, 161. For Goddard's original work, see *The Kallikak Family: A Study in the Heredity of Feeble-Mindedness* (New York: Macmillan, 1912). See Gould, *The Mismeasure of Man*, 188-203, for a critique of Goddard's manipulation of data to arrive at this conclusion.

Herrick was more cautious about how intelligence could be measured, however. He was certain that no test of intelligence alone could produce any meaningful result of an abstract intelligence.<sup>63</sup> However, the tests were useful in ‘comparing one person with another in respect of what they can do with their mind.’<sup>64</sup> This was immensely valuable to resource strapped missions in India. The students enrolled in missionary schools, Christian or otherwise, were a precious resource. As Herrick put it, ‘every boy and girl in our schools in a potential agent for spreading Christianity, even though he may never become a teacher, evangelist, or preacher.’<sup>65</sup> Therefore, it served a moral and administrative purpose to have rigorous selection procedures. Ironically, Herrick conceived his testing regime to be outside India’s unfair examination system which he had criticized earlier, sparking the need for intelligence testing altogether. Nonetheless, Herrick’ offered a reassurance to those who may face similar dilemmas as he had done in deciding whether Samuel or Raj would get the scholarship, stating that ‘natural selection’ was consistent with the spirit of Christian charity since ‘God does not grant only based on need, but also on the ability to receive.’<sup>66</sup> Selection and exclusion happened on a daily basis, intelligence testing would ensure that Christian exclusion and selection would be the most impartial of all. All that was needed now was for some committed missionaries to translate and adapt more robust tests for measure intelligence in the Indian environment.

### **Intelligence testing comes of age in India: Rice’s *Hindustani IQ***

After a decade of teaching in missionary colleges in India, Charles Herbert Rice returned to the United States in 1921 to reflect on his acquired knowledge of the Indian mentality. A year later, Rice decided to start a doctorate at Princeton under the supervision of Carl Brigham, who had carried the Army Tests with Robert Yerkes during the War. Before setting off on his initial mission, Rice had received training at Auburn Theological Seminary in New York, which was notable for advocating social justice through ministry.<sup>67</sup> In India, Rice eventually rose to the post

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<sup>63</sup> D. S. Herrick, ‘The Measurement of Intelligence,’ 162.

<sup>64</sup> *Ibid*, 157.

<sup>65</sup> *Ibid*, 162.

<sup>66</sup> *Ibid*, 163.

<sup>67</sup> Auburn Theological Seminary, *Auburn Seminary Record* 17, (Auburn, NY: 1921-1922), pp.109.

of professor at Forman Christian College in Lahore, an institution created as part of the United Presbyterian Church's mission in Punjab.

After preliminary work at Princeton, Rice returned to his teaching post at Forman Christian to begin his field research, armed with Terman's Stanford-Binet test, which he hoped to administer to Indian children in Punjab. With the help of two Indian students, Rice translated Terman's design into 'Hindustani' and Punjabi and began testing over a thousand boys in government and foreign mission schools along with Hindu, Muslim, and Sikh communal schools. His dissertation, published later as a monograph was titled *A Hindustani Binet-Performance Point Scale: With a comparison of the intelligence of certain caste groups in the Panjab*.<sup>68</sup> It was the most thorough application of the Stanford-Binet test in India by a missionary and produced results that fundamentally opposed Terman's conclusions about the hereditary nature of intelligence and its passage by racial genetics.

The monograph served a dual purpose, illustrated best by the title and subtitle of the book. The title laid out Rice's hope that the test design he had standardized may inspire other researchers to 'secure further data with a view to verifying or improving it.'<sup>69</sup> Unlike Terman, Rice did not intend his test for general sale. Instead, he hoped that his test would offer missionaries and government officials an alternative to the 'long series of ordeals' that made-up India's examination regime.<sup>70</sup>

One is quickly disabused of Rice's professed commitment to this 'cold and scientific purpose' in carrying out the research. Like Herrick, Rice was not drawn to psychological measurement because of administrative exigency. Securing and improving the data, too, was part of the larger mission against caste. Hence, the subtitle of Rice's work, *With a Comparison of the Intelligence of Certain Caste Groups in the Panjab*.<sup>71</sup> The aim of Rice's comparison was to demonstrate that the 'depressed classes,' the *Chuhras*, had no hereditary intellectual inferiority

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<sup>68</sup> Charles Herbert Rice, *A Hindustani Binet-Performance Point Scale: With a comparison of the intelligence of certain caste groups in the Panjab* (Princeton: Princeton University Press). There is a strong possibility that the work was published extensively only in India, through the Wesleyan Mission Press in Mysore City.

<sup>69</sup> Rice, *A Hindustani Binet-Performance Point Scale*, 2.

<sup>70</sup> *Ibid*, 5.

<sup>71</sup> *Ibid*, 145.

compared to other castes in India. Rice was particularly interested in a direct comparison between the intelligence of Christians boys and that of children from the priestly Brahmin Hindu caste. Herrick had demonstrated an initial equality between outcastes and Brahmin children at an early age. Rice went one step further, by comparing the intelligence of *Chuhras* before and after conversion, showing them to be inferior and then equal to Brahmin intelligence. In doing so, he hoped to make a powerful demonstration of the merits Christian education and tangible results in the social development of outcastes.

Before such comparisons could be made, Rice had to re-conceptualize the understanding of caste in India prevalent among missionaries and colonial officials. Any definitive argument for the mental equality of depressed class converts to Christianity had to start from a rejection of hereditarian understandings of intelligence in favor of one that emphasized environmental development. This was especially important for cutting Rice's own ties to intelligence measurement methods practice in America. Brigham, his supervisor, had been a proponent of the theory that different races had different hereditary endowments of mental ability which could only develop within clearly defined limits. Different races had their own starting points and limits, and the ceilings of intellectual development for some races were lower than even the initial endowment of other races.<sup>72</sup>

To make a case against this, Rice's comparison could not be based on race alone. Going against colonial understandings of caste as races, Rice conceptualized castes as environmental communities which were predominantly defined by culture, religion, and class or social status.<sup>73</sup> Rice identified six such communities: 'depressed' and 'untouchable' *Chuhras*, Christians, 'Muhammadans', Sikhs, Brahmins, and non-Brahmin Hindus. He categorized all these as castes because they shared the essential quality of caste; cultural, and sometimes occupational, distinction from each other and in the case of the *Chuhra*, isolation from other castes.<sup>74</sup> Rice did concede that within the 'special religious communities' such as 'Muhammadans' and Sikhs,

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<sup>72</sup> This was a prominent theme in Brigham's argument about the decline of average mental intelligence. Most worrying for Brigham was the disruption to these limits caused by the 'admixture' of blood between different races which decreased the average intellectual endowment of Americans. Brigham, *A Study of American Intelligence*, 205-210.

<sup>73</sup> On British understandings of caste and its transformation under colonial rule, see Dirks, *Castes of Mind*

<sup>74</sup> Rice, *A Hindustani Binet-Performance Point Scale*, 85-86.

there could be further racial differences, and thus occupational hierarchies, but it was essential to classify them as castes because they did represent somewhat self-contained cultural and linguistic heritages which informed their educational expectations and outcomes.<sup>75</sup> Defining religious communities as castes was a central feature of the Rice's argument against racial compartmentalization of intelligence. *Chuhra* and Brahmin provided categories that were often racially homogenous for the most part and culturally distinct compared to each other. Yet, the *Chuhras* could transcend their past cultural/environmental community to that of Indian Christianity (at least Rice hoped as much) even as they continued to live physically amongst the unconverted *Chuhras*. Rice paints a vivid description of the communal life for such converts:

The culture is that of the village "untouchable" quarter, and of the Mission village school, plus, in about half of the cases, the teacher's or preacher's house. This home is raised above its neighbors, not in prosperity and elegance, but in cleanliness and in the spirit of hope and progress and self-respect. In this home, there will be a Bible and, possibly, a few school books and pictures.<sup>76</sup>

Despite the full range of six castes, Rice was only interested in a comparison between the *Chuhra*, Christian, and Brahmin castes, especially the latter two. The Brahmin would remain a racially and culturally homogenous control group while Indian Christians would represent the outcome of culture and de-ostracization on previously 'untouchable' racial stock. For this reason, Rice selected Christian converts that did not come from higher caste Hindu or upper class Muslim families. Additionally, he focused on boys whose families had converted to Christianity very recently and included Christian and Brahmin students in a greater proportion than their share in the population.<sup>77</sup> Without such allowances, inter caste comparison, Rice's highest priority, would not have been possible.

The foreword to Rice's work acknowledged his gratitude for Brigham's direction at Princeton and lamented that any perceived shortcomings could have been avoided if he were able

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<sup>75</sup> *Ibid*, 86.

<sup>76</sup> *Ibid*, 87.

<sup>77</sup> *Ibid*, 87.

to rely on Brigham for advice more readily and at a shorter distance.<sup>78</sup> Professional courtesy notwithstanding, only distance from Brigham allowed Rice to develop a test design that could return meaningful results in his search for Indian intelligence. From Terman's original test, Rice selected 35 exams and discarding the rest.<sup>79</sup> The ratio between mental age and chronological age obtained through Rice's 35 tests would yield what he termed Hindustani Intelligence Quotient (HIQ).<sup>80</sup>

The excluded tests were much more noteworthy than those that made it into the final instrument.<sup>81</sup> Rice excluded three categories of tests based on their linguistic unsuitability and cultural relevance in India. The first category included those dealing with temporal and social customs of 'western civilization' with which Indians were unlikely to be familiar. These were tests of the ability to give the date, day of the week, differentiate between AM and PM, date of birth, family surname, etc. Also excluded were tests that measured the child's speed and skill tasks such as tying a bow-tie or shoe laces.<sup>82</sup> The most notable exception was a test that measured a child's moral temperament, an important constituent of intelligence in Terman's revision. This was the test on 'resisting suggestion.'

In Terman's version of this test, children were asked to resist suggestions that induced immoral and unsociable behavior. For these questions, there was no correct answer, yet points were awarded toward a final intelligence score based on the child's ability to obediently follow the teacher's instruction rather than any reasoning on the child's part.<sup>83</sup> Whereas Rice had justified dropping the previous tests on linguistic grounds, for this test, he provided no justification.<sup>84</sup> It is not hard to speculate on Rice's reasons for doing so. Encouraging behavioral traits that cultivated meekness and obedience without strong moral reasons for doing so was a well-established problem for missionaries in India. Such behavior could lead to the possibility of converts relapsing into their old religious beliefs because of communal pressures. Additionally,

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<sup>78</sup> *Ibid*, ix.

<sup>79</sup> It is not clear whether Rice did not include these tests to begin with or only discarded the data from them while translating or analyzing their results.

<sup>80</sup> *Ibid*, 72.

<sup>81</sup> *Ibid*, 95-102.

<sup>82</sup> *Ibid*, 95-96.

<sup>83</sup> Carson, *Measure of Merit*, 189-190.

<sup>84</sup> Rice, *A Hindustani Binet-Performance Point Scale*, 98.

hero-worship and following instruction blindly would inculcate the ability to challenge caste strictures.<sup>85</sup>

Rice's alterations to answer choices on tests he included are notable for the same reasons. This is most apparent in the case of two tests that were important to Terman's measurement of character, the most important constituent of intelligence. The first test required the ability to comprehend and answer questions which started as innocently as 'when sleep comes upon you, what should you do?' but soon became morally loaded to ask 'when by you a thing belonging to you is broken, what ought you to do (about it)? and 'when somebody asks you anything about a man whom you don't know very well, what ought you to reply?' Terman had provided a classification of satisfactory answers for questions such as these. For the question on breaking someone else's property, simple remorse was an unsatisfactory answer which should not be awarded any points. Points could be awarded for any answer that showed willingness for restitution.<sup>86</sup> Rice cited Terman's answering chart as an adequate point of reference for those so inclined, but also expanded the scope of admissible answers. For instance, invocations to God were counted correct answers to some questions not simply because it was a common vernacular practice, but also as a demonstration of the child's ability to comprehend the gravity of an action or event and rationally recall a response that he had been taught to think correct. Such sensitivity to the reasons behind the boys' answers were reflective of Rice's missionary confidence in the ability of the Mission to re-teach *Chuhra* converts if their reasons were initially not acceptable by the norms of Christian morality.<sup>87</sup>

Another important test of character in Terman's revision dealt with the definition of five abstract concepts; pity, revenge, charity, envy, and justice. Answers that defined these concepts correctly did not reveal the presence of some abstract intelligence as much as confirm the belief that one could only be considered intelligent if they displaced certain moral attitudes. Rice, too, proceeded from this. In his version of the test, he swapped pity with mercy as a concept to be defined.<sup>88</sup> This was an interesting substitution. In Terman's classification, acceptable answers

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<sup>85</sup> J. C. Heinrich, *Psychology of a Suppressed People* (1937)

<sup>86</sup> Terman, *The Measurement of Intelligence*, 268.

<sup>87</sup> Rice, *A Hindustani Binet-Performance Point Scale*, 29.

<sup>88</sup> *Ibid*, 37.

included 'to be sorry for someone,' 'to be compassionate,' 'it's when you feel sorry for a tramp and give him something to eat.' Incorrect answers included 'mercy,' 'to think of the poor,' etc.<sup>89</sup> Rice's decision to substitute pity with mercy is indicative of the different priorities which went into decisions over what constituted intelligence and limits to the universalism of the idea of intelligence; intelligence was only what the tester wanted to measure. Recently converted Indian Christians had more cause to know the definition of mercy rather than pity, given their past lives of social and religious ostracization. As long as they showed some familiarity with the concept they could be demonstrated to have tangible intelligence through an HIQ score. For missionary teachers like Rice, this was evidence that their young charges at least had the ability to relearn Christian mercy, if their current understandings were not in line with their teachers'.

In the final analysis, such manipulations could not be performed unless they were communicated through a metric that masked the process. Here lay the real appeal of adapting not only Terman's questions but also his methods of communicating intelligence. A correct answer on Rice's test would yield the same score as the correct answer as Terman's test, despite testing two starkly different conceptions of what was morally relevant to be considered evidence of intelligence. At the same time, the idea of intelligence held a certain symbolic universalism; if the mind was the same all over, so would human intelligence. In the end, a correct answer produced was awarded a 1, and incorrect answer a 0. On a final two digit IQ score, nobody would question how the 1s and 0s would have been awarded, or what had been tested.

All of Rice's conceptual and linguistic calibrations paid rich numeric dividends. For the most part, the Indian boys were not retarded in their mental development. In fact, 28% of the Indian boys (these were between the age of 13 and 16) had a mental age that exceeded the average mental age of 13 that Yerkes and Brigham had calculated from their examination of almost two million adult Army recruits.<sup>90</sup> However, this was not the most important category of results. Those would be based ones that compared the IQ of the depressed, Christian, and Brahmin castes. As Rice expected to find, the unconverted *Chuhra* didn't have much intelligence to begin with, despite his best efforts to find it. The average HIQ of this group was 73. However,

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<sup>89</sup> Terman, *The Measurement of Intelligence*, 282.

<sup>90</sup> Rice, *A Hindustani Binet-Performance Point Scale*, 118.

he found the results he was looking for amongst *Chuhra* converts to Christianity. They had an average HIQ of 99.5, almost identical to that of the Muslim and Sikh boys at 101 and 101.5 respectively, and slightly behind the Brahmin HIQ of 107. The HIQ for all castes except the *Chuhras* was within the same standard deviation.<sup>91</sup> These were striking results, but Rice was not content. Next, he compared students from each caste at the same age group and level of education. The average HIQ of Christian boys now increased to 109, Brahmin and Muslim HIQ was 100, while Sikh and non-Brahmin Hindu HIQ dropped to 94.

Rice final conclusion was that ‘no essential inferiority of the depressed class group can be demonstrated.’<sup>92</sup> Now that he had numbers that could be trusted, Rice was hopeful that future missionaries would not have to rely on conclusions about the outcastes’ inferiority or equality based on anthropometric observations alone.<sup>93</sup> On the final page of this study, Rice implored those few enlisted in the cause of *Chuhra* education to use his test and find others who could be cultivated to lead the outcast Church.<sup>94</sup>

The introduction to Brigham’s infamous work had stated that the author was offering ‘not theories or opinions but facts.’<sup>95</sup> Like his mentor, Rice, too, felt he was presenting facts, not opinions. Both men were presenting their own subjective visions of what constituted intelligence, ultimately. Quantification allowed them to recast them as facts. This was precisely what had drawn Rice to the task in the first place. For the future elevation of the outcastes in India, he hoped, quantitative psychology would be instrumental in laying out the *fact* of their intelligence and ability to the outcastes themselves and the missionaries who believed otherwise privately.

Reading Rice’s work begs the obvious question of why Raj officials would allow meddling in matters of caste, by foreigners no less. A question complicated further by the fact that when J. A. Richey, educational commissioner of the Central Advisory Board of Education in

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<sup>91</sup> *Ibid*, 158-160.

<sup>92</sup> *Ibid*, 182.

<sup>93</sup> Rice was referring to Herbert Risely’s *The People of India; with twenty five illustrations* (Calcutta: Thacker, Spink & Co: 1908). Based on observations of nasal passageways, Risley had concluded that most castes in India were racially the same. Also, see Crispin Bates, ‘Race, caste and tribe in central India: The early origins of Indian anthropometry,’ in P. Robb, ed., *The concept of race in South Asia* (Delhi: Oxford University Press, 1995), pp. 219–259.

<sup>94</sup> Rice, *A Hindustani Binet-Performance Point Scale*, 192.

<sup>95</sup> Brigham, *A Study of American Intelligence*, vii.

India, started a program of replicating the US Army experiments in India, he began by praising Herrick's work a worthy model to build on. Richey then ordered translations and adaptations of the Stanford-Binet test across multiple Indian cities and hired Rice as a personal consultant for the project.<sup>96</sup>

Officials in the Raj first became interested in intelligence testing as a means to reform its examination and selection process for the Indian Civil Service. Speculating whether Richey and Hartog privately agreed with Rice and Herrick on the untouchables' mental equality is insignificant in and of itself. More important to note is the compromise Raj officials made with the missionary pioneers of intelligence testing. Individuals like Rice would assist the government adapt and perfect mental testing for officials use in exchange for using those techniques and data for conclusions they reached about caste equality in their private research, aimed primarily within their personal networks of missionaries and educators in India and the United States. The language of quantitative psychology, and the 'trust in numbers,' would be crucial in brokering this compromise.

Quantitative measures of intelligence appealed to officials and missionaries alike because they were sufficiently vague enough to obscure context and the researcher's motivation, allowing for adaptations and modifications for many different ambitions. However, it also had to be precise and portable enough to make comparisons across races and castes across immense physical and cultural distances. To state that the average HIQ of Christian boy of 12 was 109 compared to Brahmin boy's HIQ of 100 served these dual purposes spectacularly, much as easily available ancestry tests continue to do so today.<sup>97</sup>

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<sup>96</sup> Linstrom, *Ruling Minds*, 91. It is not clear whether the decision to hire Rice was the result of his previous work in Lahore or whether Rice's research was carried out as part of Richey's project. The chronology of Rice's career suggests greater evidence for the former rather than the latter. In either case, Rice administered tests in both missionary and government schools and his own research timelines overlapped with Richey's project. Rice would have required the support of both the American run Forman Christian College and British authorities to carry out his work.

<sup>97</sup> Sarah Zhang, 'Will the Alt-Right Promote a New Kind of Racist Genetics,' *The Atlantic*, Dec. 29, 2016.

## **Out of their hands: intelligence testing outside the mission**

When Brigham repudiated the validity of his original ‘facts’, he was admittedly moved to do so by the realization that intelligence of any kind could only be measured only if the test was administered in the vernacular of the person being tested and framed in cultural idioms familiar to him or her.<sup>98</sup> Brigham’s original work had been abjectly insensitive to such approaches until they became the central feature of Rice’s work in India. It is safe to assume that Brigham may very well have been moved to recant his work because of the drastically different conclusions offered by his student. At any rate, Brigham’s renunciation of his work did not carry the same discursive weight as his original pronouncements did. Why then does it matter that Brigham recanted? The failure of Brigham’s disavowal of his previous research, very possible inspired by his student’s research in India, to substantially overturn public attitudes on racial superiority is not the only irony of Rice’s work in India.

Family circumstances and his wife’s failing health forced Rice to leave India for good in the early 1940s. He left behind a powerful tool for measuring intelligence and making sweeping social claims, now devoid of any caste levelling impulse. A quantitative signifier like IQ could also appeal to local Indian researchers because of the relatively secular nature of such a metric. For them, the difference between an HIQ of 109 and 100 did not explicitly state the superiority of Christianity over Hinduism as an evangelical debate would have done. It did, however, provoke competition and a communal zeal for intelligence scores. Once Indian researchers, working without Rice’s emphasis on caste leveling, discovered that an IQ score could be used to maintain rather than level class and castes stratifications, intelligence testing in India came full circle to its American roots.

For native educators, looking for influence within the colonial educational bureaucracy, intelligence testing also provided an opportunity to demonstrate the worth of Indian intelligence which they felt went unobserved through the examination system, much as the missionaries had felt. However, this was not a simple case of Indians replicating the work that missionaries had

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<sup>98</sup> Brigham, ‘Intelligence tests of immigrant groups,’ 165.

pioneered. They worked with different motivations, and had different ideas of what intelligence meant and could represent socially. With local researchers, intelligence testing fell victim to the parochialism of caste hierarchy, the absence of which was the most unique and progressive feature of psychological measurement undertaken by missionaries.

Rice had identified the communal zeal of Hindus, Muslims, Sikhs, Chuhras, etc. for higher comparative IQs as the biggest threat to his carefully calibrated HIQ scale. Rice had worried that coaching and the practice of putting forward the best students to be tested would compromise the quality of any further research.<sup>99</sup> One hardly had to go to these lengths, however. Venkatrao V. Kamat, a teacher at the Secondary Training College in Bombay, achieved this by simply translating all 67 tests of the Stanford revision into Marathi and Kanarese, administering them boys and girls aged 3 to 19. Designed to influence government policy on education, Kamat's 1940 study titled *Measuring Intelligence of Indian Children*, went through multiple reprints until 1967.<sup>100</sup> Kamat himself enjoyed much professional success as the result of his work when he was appointed as a senior researcher at the Indian Institute of Education, set up in 1948 to produce research that would inform education policy in postcolonial India.

Conceived as building off of Rice's work, the foreword to Kamat's book declared that he had 'gone on the justifiable assumption that there is nothing in the mental constitution of Indian children that warrants the psychologist in trying to devise tests radically different from those which have been found suitable in the west.'<sup>101</sup> The carefully qualified entity that Rice labelled Hindustani intelligence had, ironically, no use for Kamat's aspirations for influencing late-colonial and postcolonial India's education policy. Kamat's site of research was a nondescript town, neither a cosmopolitan center like Bombay nor a backwater village. Here, Kamat felt, the children to be tested were fairly representative of the general population of Indian children.<sup>102</sup> This was driven less by nationalist pride in scoring a point of equality with the West than by Kamat's training in British theories of psychology and intelligence measurement pioneered by

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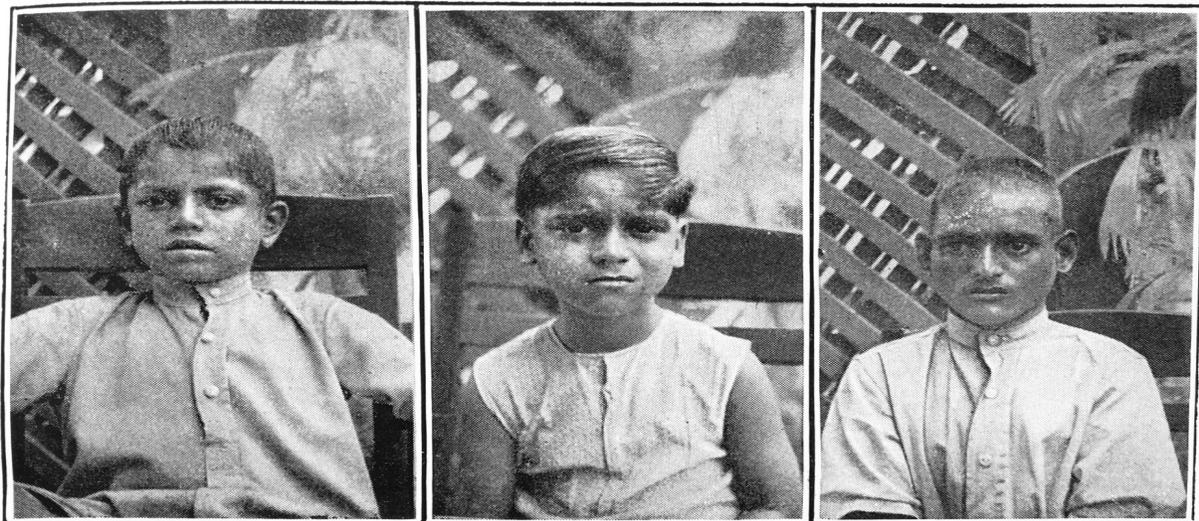
<sup>99</sup> Rice, *A Hindustani Binet-Performance Point Scale*, 146.

<sup>100</sup> Venkatrao V. Kamat, *Measuring the Intelligence of Indian Children*, 2nd Ed. (Bombay: Oxford University Press, 1951).

<sup>101</sup> *Ibid*, vii.

<sup>102</sup> *Ibid*, 44.

Sir Cyril Burt.<sup>103</sup> Burt, a more incorrigible proponent of the hereditary intelligence endowment than the psychologists in America ever were, was concerned more with using intelligence measurement to maintain class hierarchies rather than the racial hierarchies.<sup>104</sup> Likewise, Kamat imagined the measurement of intelligence as a means to stabilize and maintain caste-class interactions in India, much as Terman had tried to stabilize race-class interactions in America.



KRISHNA  
I.Q. 42

MAHADEV  
I.Q. 36

DAMU  
I.Q. 32

Fig 1. Orphaned and abandoned children that Kamat scientifically classified ‘morons’ and ‘imbeciles’ after reviewing their results on his intelligence test.<sup>105</sup>

Given these intellectual influences, Kamat saw intelligence as a biological feature that could vary between individuals because of social conditions, especially between the sexes, but never fundamentally determined by environmental factors. Intelligence, or the lack thereof, was a consequence of biology and endowed as a matter of heredity.<sup>106</sup> Ultimately, Kamat’s work suffered under its own contradictions. He paid more attention than Rice to the occupation and socioeconomic position of subject children’s families in tables of raw data. Yet, his final analysis

<sup>103</sup> *Ibid*, 1-20.

<sup>104</sup> On Burt’s career, see Gould, *The Mismeasure of Man*, 264-286, 303-325; Leslie S. Hearnshaw, *Cyril Burt: Psychologist* (London: Hodder & Stoughton, 1979).

<sup>105</sup> Kamat, *Measuring the Intelligence of Indian Children*, 220.

<sup>106</sup> *Ibid*, 231-235.

was simply a breakdown by different IQ ranges for Indian and American children, which demonstrated little more than the fact that approximately equal portions of the population in both countries conformed to the categories of genius, average, dull, feeble-minded, etc.<sup>107</sup> This was proof that class boundaries reflected real differences in biology. Therefore, even as Kamat revealed that five out of the ten ‘feebleminded’ children his study identified were of Brahmin caste with fathers of lowly occupation, he still stuck by Burt’s hereditarian theory; poor hereditary intelligence resulted in lower class and occupational status, not the other way around.<sup>108</sup> This was a deliberate strategy, however, which allowed him Kamat to conceptualize caste as the social manifestation of *biological*, and not social or economics, factors.<sup>109</sup>

This did set Kamat apart from the Brahmin blood purists that Herrick had tried to debunk. Indeed, Kamat believed, driven by class/caste aspirations rather than racial one, that certain children were bound to reach a cul-de-sac in their mental development. His test was supposed to help parents make ‘realistic’ vocational decisions about their children’s future as much as it was supposed to inform a more efficient allocation of state resources in education. The study included a table that suggested various occupational and educational institutions where children with corresponding IQs could be placed by the state and their parents. As a vivid demonstration of this, Kamat included an appendix which included his commentary on the IQ results of abandoned and orphaned children at an orphanage in Bombay. Again, Kamat offered paradoxical evidence that hereditary was an especially potent factor in determining the intelligence of children whose IQs were in the subcategories of feeblemindedness (morons, idiots, imbeciles). Many of the children that appeared in the index suffered for a serious neuro-physical conditions like epilepsy and facial nerve paralysis along with social conditions like a lack of bowel control training. Kamat concluded that poor intellectual endowment was also because of the poor genetic inheritance that caused the children’s ailments.<sup>110</sup> Poverty, disease, and generally poor nutrition never figured prominently in Kamat’s analysis. The children would be better off sent to low skill vocational training center and subsequently put to work, he concluded. Despite much contingency and transmutations, through Rice as an unwitting intermediary Rice, the original

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<sup>107</sup> *Ibid*, 79.

<sup>108</sup> *Ibid*, 84

<sup>109</sup> Shivrang Setlur, ‘Searching for South Asian Intelligence: Psychometry in British India, 1919-1939,’ *Journal of the History of the Behavioral Sciences* 50/4 (2014): 368.

<sup>110</sup> Kamat, *Measuring the Intelligence of Indian Children*, 218-223.

intentions of Terman's test made their way to Kamat, who was only so happy to take them to their logical conclusions.

## Afterword

After Partition, Kamat's 'Bombay-Karnatak Revision' of the Stanford-Binet test was widely picked up in post-colonial efforts to 'keep caste alive' in education policy.<sup>111</sup> As the American psychological profession moved beyond its early simplifications on the relationship between race and intelligence—although public discourse on the subject is still bitterly contentious – a generation of post-colonial Indian psychologist remained fixated on the measurement of IQ and caste comparison, according to one observer.<sup>112</sup> The Indian government set up psychological and intelligence measurement centers in Calcutta, Lucknow, Banaras, Patna, Allahabad, Delhi, Mysore, and Madras. These were followed by psychological research wings at most key ministries of defense and industry.<sup>113</sup> The government run Bureau of Psychology turned out regular pamphlets on the importance of measuring intelligence for national economic development.<sup>114</sup> The ostensible purpose of all these was to identify vocational roles suitable for corresponding intelligence levels as early as the age of seven. Once intelligence testing became subjugated to larger state imperatives of development and social order, the emancipatory prospect of the IQ score could no longer be entertained at the cost of social disruption resulting from national efforts at caste equality. Psychological measurement and intelligence testing became one more facet of what David Ludden has termed 'India's development regime,' policies that differed from the colonial period not so much in ideology as in execution.<sup>115</sup> The idea of caste as it had developed under British rule in the nineteenth century was a result of colonial transformation, neither a simple carry over from pre-colonial India nor a original colonial invention, a process Nicholas Dirks termed created 'castes of mind.'<sup>116</sup> However, colonial officials had faced near continuous frustration in successfully standardizing caste definitions and

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<sup>111</sup> Setlur, 'Searching for South Asian Intelligence,' 372, 371-374.

<sup>112</sup> W. Leslie Barnette, 'Survey of Research with Psychological Tests in India,' *Psychological Bulletin*, 52(2), March 1955, 105-109. Barnette was then a Fulbright scholar and UNESCO advisor on psychological research in India.

<sup>113</sup> Ibid.

<sup>114</sup> C.M Bhatia, *Intelligence Measurement and National Reconstruction* (Allahabad: Hind Kitabs Ltd, 1949)

<sup>115</sup> David Ludden, 'India's Development Regime,' in Nicholas Dirks, ed., *Colonialism and Culture* (Ann Arbor, MI: University of Michigan Press, 1992).

<sup>116</sup> Dirks, *Caste of Mind*.

relations across the entire country. In Kamat's work, intelligence measurement and IQs presented a more durable and portable signifier of caste realities, recast as class conditions. What better way, now, to create 'castes of mind' than through the minds of castes themselves.