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Selling the Psychological Detective

Hugo Münsterberg's Applied Psychology and
The Achievements of Luther Trant, 1907–30

In his 1908 collection of essays, *On the Witness Stand: Essays on Psychology and Crime*, Hugo Münsterberg expounds upon one of the principles that would inform lie detection for the next century: “the hidden feeling betrays itself” (113).¹

It may be easy to suppress intentionally the conspicuous movements by which we usually accentuate the emotions. It is not necessary to become wild with anger and to collapse in sorrow, we may even inhibit laughter and tears. . . . But the lips and hands and arms and legs, which are under our control, are never the only witnesses to the drama which goes on inside—if they keep silent, others will speak. The poets know it well. (114)

Münsterberg, a German émigré, student of Wilhelm Wundt, and founder of American applied psychology, believed that emotions exceed our conscious control; that they affect not only our psychology, but also our physiology; and that they could, therefore, be measured and made legibly useful to other fields, including law enforcement and courts of law.

In the same revelatory breath that explains his primary principle, Münsterberg commends not the scientists that came before him, but the poets, those authors who represent subtle signs of emotion in the bodies of their characters: “There is hardly a tragedy of Shakespeare in which the involuntary signs of secret excitement do not play their role. . . . The

helpless stammering of the excited lover betrays everything which his deliberate words are to deny” (114–15). Münsterberg’s recognition of the poets is neither accidental nor naive; as Otniel Dror notes, “the participants in and developers of the new science [of emotional inscription] were not oblivious to the competing technologies of poets, writers, painters, and actors who shared in the quest for representation. They did not reject these alternative knowledge makers off-hand, but attempted to enlist their representations for scientists’ own ends” (1999b, 368). Indeed, Münsterberg’s record of scholarship and popular writing allies his own work to that of the poets. However, Münsterberg may not have realized that his descriptive statement was also prophetic: over the course of the century, “the poets”—those writers who developed, discussed, and/or disseminated applied psychology’s notions about measurable emotion through narrative—would play an increasingly important role in the deployment and marketing of one particular kind of applied psychology: lie detection technologies, techniques, and principles.

At about the same time that Münsterberg was writing and collecting his essays on crime, law, and psychology, two Chicago newspapermen, Edwin Balmer and William MacHarg, began to compose the adventures of a new kind of hero: a psychologist-detective named Luther Trant. First published in *Hampton’s Magazine* in 1909 and 1910, and later collected as *The Achievements of Luther Trant* (1910), the Luther Trant stories embodied Münsterberg’s principle and its application to crime through the use of various instruments for the detection of deception. Remarkably, the dialogue between Münsterberg’s principle and Balmer and MacHarg’s fiction continued to inform the marketability of lie detection well into the 1920s and 1930s, even—and especially—after Münsterberg’s protégé, William Marston, failed to find legal acceptance for his lie detection test (which used a sphygmomanometer)² in the landmark *Frye v. U.S.* case of 1923. After this failure to find juridical authorization, which I will discuss later in this chapter, Münsterberg’s collected essays and a series of Luther Trant stories were republished in an attempt to secure public acceptance for mechanical lie detection. The latter were republished by Hugo Gernsback in *Amazing Stories* and *Scientific Detective Monthly* (1926–30).

Despite their popularity—and *strategic republication*—the Luther Trant stories have been overlooked³ by scholars working on the cultural history of lie detection and the history of the polygraph.⁴ This is, perhaps, because very often the technologies used in these stories have been seen as

proto/pseudoscience or characterized as emotion inscription technologies (Dror 1999b) differentiated from the polygraph or even *the* lie detector.⁵ In what follows, I construct an alternate genealogy of lie detection that is informed by Münsterberg's principle and framed by the paired circulation of Münsterberg's essays and Luther Trant's adventures. Throughout the early decades of the twentieth century, Münsterberg, Balmer, MacHarg, and later William Marston and Hugo Gernsback were invested in marketing applied psychology as a progressive correction to corruption in law and police work. Indeed, the work of each figure was the product of an era marked by several key debates: the development of psychology as a discipline distinct from philosophy and physiology, the relevance and relationship of psychology to police work and the law, the change in status of witness testimony, and the continuing professionalization of the police force in America.

I first situate both *On the Witness Stand* and *The Achievements of Luther Trant* in the initial struggle to apply psychological techniques and principles to matters of law and police work between 1907 and 1910. Next, I discuss the legal invalidation of Marton's systolic blood pressure test for deception—and by extension mechanized lie detection—through *Frye v. United States* (1923). Finally, I suggest that the popular authorization of lie detection technologies post-*Frye* was further aided by the paired circulation of Münsterberg's republished edition of *On the Witness Stand* (1925) and Hugo Gernsback's fiction magazines *Amazing Stories* and *Scientific Detective Monthly* (1926–30), which recirculated several Luther Trant stories. My goal is to explain, via the span of a thirty-year period, the mutual imbrications of literature and science in the conception and distributed of lie detection as an applied psychological technology.

Hugo Münsterberg's "Wider Tribunal," 1907–10

The longer a discipline can develop itself under the single influence, the search for pure truth, the more solid will be its foundations. But now experimental psychology has reached a stage at which it seems natural and sound to give attention also to its possible service for the practical needs of life.

—HUGO MÜNSTERBERG (1908, 8)

When Hugo Münsterberg accepted William James's invitation to direct Harvard's psychology laboratory in 1892, he arrived at a site of disciplinary (re)formation as the burgeoning discipline of American psychology

was working to differentiate itself from both philosophy and physiology. While Münsterberg embraced the new direction of his primary discipline (he was a founding member of the American Psychological Association, and his ideas about the mind and its relation to the body were aligned with the American psychologists from the functionalist and behaviorist schools), he also served as president of the American Philosophical Association in 1908, and his psychological laboratory at Harvard had all the trappings of a physiology laboratory.

In his laboratory practices and theoretical outlook, Münsterberg attempted to authorize psychology as a natural science through instrumentation. For him, as for many psychologists of the day, “the success of psychology as both an experimental science and form of applied knowledge was predicated upon its ability to replicate the mathematical precision and predictive validity found in the natural sciences” (Ward 2002, 111). One of Münsterberg’s hypotheses, which dovetailed with the work of several of his contemporaries, was that physiological changes can be correlated to mental and emotional states such as guilt, fear, joy, excitement, anger, and relief.⁶ Because Münsterberg’s primary goal was the application of psychology to other fields, he was particularly interested in inspecting the minds of criminal suspects and courtroom witnesses by measuring changes in their body’s physiology. He tested his hypothesis using instruments that originated in various physiological laboratories, which could measure changes in the autonomic nervous system: the sphygmomanometer to monitor changes in blood pressure, the pneumograph to track changes in the frequency and depth of respiration, the automatograph to measure muscle contraction, and the plethysmograph to track changes in the volume of blood in a limb.

Among Münsterberg’s practical and metaphorical favorites was the chronoscope,⁷ used to measure a subject’s reaction time to various stimuli, particularly during word-association tests.⁸ He used several types of chronoscopes in his laboratory,⁹ including the Hipp chronoscope, which required the subject to hold a lip key in their mouth. A small screen was then dropped in front of the subject to start the timed test; this screen typically had a single word written on it. The test ended when the subject either read the word provided aloud or provided a word that s/he associate with the word in front of them. As s/he spoke, the lip key dropped from his/her mouth, stopping the chronoscope from recording time.

Rhetorically, the chronoscope came to embody Münsterberg’s ideas about the measurable relationship between body and mind and the in-

strumental connections between applied psychological and the natural sciences, as described in *On the Witness Stand*.

The chronoscope of the modern psychologist has become, and will become more and more, for the student of crime what the microscope is for the student of disease. It makes visible that which remains otherwise invisible, and shows minute facts which allow a clear diagnosis. The physician needs his magnifier to find out whether there are tubercles in the sputum: the legal psychologist may in the future use his *mental microscope* to make sure whether there are lies in the mind of the suspect. (1908, 77; my emphasis)

Although the chronoscope simply records the time between events, Münsterberg's comparison construes the instrument as both optical and invasive: a "mental microscope." Such terminology begins to establish the literacy of mind reading I discuss in chapter 3, by suggesting the transparency of mind via instrumentation. Such insinuations jibe with other depictions of emotional inscription technologies in the late nineteenth and early twentieth centuries. Indeed, Münsterberg's characterization is both a product and producer of a shift in ways of seeing,¹⁰ as sensorial experience was being supplanted by mechanistic observation. The X-ray, the microscope, the chronoscope, along with a host of other technologies, produced representations of bodily processes that "differed significantly from previous artistic depiction in their mode of production, form and style of representation, method of interpretation, and use" (Dror 1999b, 360). This instrumental sight also challenged divisions between public and private, internal and external, physiology and psychology, the body and its emotions (Ward 2002; Thomas 1999; Dror 1999b).

And yet, as Otniel Dror notes, and Münsterberg's description of the chronoscope illustrates, there is an intriguing contrast "between the simplicity of many of these instruments and their mythical power to 'dive into . . . minds'" (Dror 1990b, 364). In the passage from *On the Witness Stand*, for example, as the chronoscope is metaphorically transformed into a "mental microscope," it becomes "a magnifying-glass for the most subtle mental mechanism, and by it the secrets of the criminal mind may be unveiled" (Münsterberg 1908, 108). Distinctions between the autonomic nervous system, the brain, the mind, the emotions—and lies—are collapsed in a Münsterbergian mythology of visualization and access that we will see again in chapter 3. Münsterberg's specific reference to finding "lies in the mind of the suspect" begins to construct another myth,

that of *the* lie detector, a machine that can distinguish between deception and truth by measuring the body. In the rest of this chapter, we will see how the fictional psychologist-detective Luther Trant translates the gist of Münsterberg's mythos into an applied task for the expert: finding "the marks of crime on men's minds."

Despite his somewhat zealous rhetoric in *On the Witness Stand*, Münsterberg does make an important distinction that challenges several older myths about criminal types: he chooses lies, and not liars, as his proper object of study. In contrast to scholarship on lie detection thus far, it should be noted that Münsterberg is interested in lies as discrete phenomena that are not necessarily associated with any one type of person;¹¹ put another way, he does not discuss "the liar" as a "human kind" (Bunn 1997, 101). Because Münsterberg believes that lies are distinguishable objects within any mind, he points to the suspect not as type but as a storehouse for what he actually seeks: lies. These objects, he argues, can be best located through instrumentation that renders thoughts visible.¹²

His focus on lies brings us to the second half of Münsterberg's objective: to bring European notions about applied psychology to the American academy and lay population, including criminal investigations and the courtroom.¹³ He believed "education, medicine, art, economics, and law" (Münsterberg 1908, 9) could equally benefit from "the new psychology" (20):¹⁴ this blend of qualitative techniques and quantitative instruments said to reveal and record the inner workings of the mind, or as Münsterberg terms it, "the drama which goes on inside" (114).¹⁵ Münsterberg argued that psychological experiments could translate to improved job performance and enhanced familial and civic relationships. Leading the way would be the student of psychology, whose

experiments can indicate best how the energies of mill-hands can reach the best results, and how advertisements ought to be shaped, and what belongs to ideal salesmanship. And experience shows that the politician who wants to know and to master minds, the naturalist who needs to use his mind in the service of discovery, the officer who wants to keep up discipline, and the minister who wants to open minds to inspiration—all are ready to see that certain chapters of Applied Psychology are sources of help and strength for them. (10)

Absent from this laundry list of converts to applied psychology, which Münsterberg included in his 1908 collection, *On the Witness Stand*, are the lawyer and the judge.

Although most fields were open to psychology's influence, lawyers, judges, and even police officers were the most vocal opponents of applied psychology and its constituent instruments. Lawyers and legal scholars were particularly resistant to the psychologist as expert witness and arbiter of witness testimony (Blumenthal 2002), due, in part, to the fact that by the late nineteenth century, lawyers had finally taken precedence in the courtroom over witnesses whose testimony had been declared subjective and therefore problematic (Thomas 1999, 34). Police were wary of the implementation of psychological instruments during interrogations for fear that their authority would be undermined by the psychological expert. In Münsterberg's opinion, both lawyers and police acted like Luddites in their resistance to technological change: the police continued to use what was colloquially known as the third degree¹⁶ as a means to extract confessions; judges relied on their own common sense and observations.

To this resistance, Münsterberg posited science as the ultimate arbiter of the mind, memory, and even the difference between truth and lies: "Cannot science help us out? Cannot science determine with exactitude and safety that which is vague in the mere chance judgment of police officers?" (1908, 117). Münsterberg proposed that the psychologist could better regulate the "the treachery of human memory" (44) by bringing specific instruments and techniques to bear on issues of witness testimony, criminal interrogation, and confession.

There is thus really no doubt that experimental psychology can furnish amply everything which the court demands: it can register objectively the symptoms of the emotions and make the observation thus independent of chance judgment, and, moreover, it can trace emotions through involuntary movements, breathing, pulse, and so on, where ordinary observation fails entirely. (131)

As evidenced here, one of Münsterberg's primary goals was to make psychology useful to other fields. In so doing, Münsterberg hoped both to raise the profile of psychology, cementing its boundaries and authority, and also to remedy a variety of social ills, including, for example, the barbarism of the police's third-degree interrogations.

When his ideas were met with reproach by police and legal scholars (Moore 1907; Wigmore 1909),¹⁷ Münsterberg called upon "the wider tribunal of the general reader" (1908, 11) to validate his ideas. *On the Witness Stand: Essays on Psychology and Crime* represents Münsterberg's collected efforts to persuade the public of psychology's import for the legal

and criminal justice systems. Indeed, the texts for the collection were drawn not from legal journals but from his many popular articles on police and legal reform that had been published in *McClure's*, *Reader's*, *Times*, and *Cosmopolitan* magazines between January 1907 and March 1908. In the introduction to the collection, Münsterberg notes,

The lawyer alone is obdurate. . . . The lawyer and the judge and the juryman are sure that they do not need the experimental psychologist. If the time is ever to come when even the jurist is to show some concession to the spirit of modern psychology, public opinion will have to exert some pressure. Just in the line of the law it therefore seems necessary not to rely simply on the technical statements of scholarly treatises, but to carry the discussion in the most popular form possible before the wider tribunal of the general reader. (1908, 10–11)

Here, Münsterberg singles out the lawyer as the lone resister to the “spirit of modern psychology” and triangulates the debate by introducing the general public as, if not an arbiter, at least an empowered participant in the discussion.¹⁸

However, by calling upon the public, Münsterberg drew the ire of psychological colleagues—including William James—who disagreed about the merits of applying psychology to other fields. Münsterberg, on the other hand, was not a purist; he and his student, William Marston, represented a “particular type of public psychologist—a group that would continue to shape the reputation of psychological knowledge throughout the century” (Ward 2002, 147), who were, in fact, infamous for popularizing psychology in public settings. Münsterberg not only wrote articles for the popular press but also consulted for the film industry and set up mental testing booths at the Chicago World’s Fair in 1893. William James derogatorily termed the latter a “Münsterbergian Circus” because it had the flavor of a side-show demonstration (Hale 1980, 97; Ward 2002, 142). But, as I will illustrate in the next section, Münsterberg’s detractors could not stop the dissemination of his ideas.

Selling Münsterberg’s Principle: *The Achievements of Luther Trant*, 1909–10

Within one year of *On the Witness Stand*’s publication, two *Chicago Tribune* newsmen, Edwin Balmer and William MacHarg, answered Hugo Münsterberg’s call for a wider tribunal by creating a fictional psychological

detective, Luther Trant. Balmer and MacHarg, who served as reporters for the *Tribune* beginning in 1903 and 1898, respectively, were strangers to neither journalism nor literature: Balmer had recently published *Way-laid by Wireless* (1909); MacHarg authored several short pieces of fiction for the *Tribune*, including “A Christmas Fantasy” (Dec. 18, 1898) and “Mr. Dudd of Chicago” (June 25, 1899). Separately, together, and with other coauthors, the men published over twenty books in genres from war stories, to scientific detective fiction, to romances and science fiction.¹⁹ Their real fame—particularly in the Midwest—came from the publication of three books set in Illinois and parts of Michigan: *The Achievements of Luther Trant* (1910a), *The Blind Man’s Eyes* (1916), and *The Indian Drum* (1917) (Obuchowski 1995). The Luther Trant stories were set in Chicago, the city that would become the epicenter for lie detection research between 1920 and 1940.

Much like Sherlock Holmes, Trant is called upon to solve crimes, including embezzlement, murder, and espionage, without resorting to violence or using traditional weapons of any kind. What distinguishes the Luther Trant stories, and the subgenre of scientific detective fiction²⁰ to which they belong, from detective fiction is the application of instruments and principles from experimental psychology to gather information and interrogate suspects. Whereas Sherlock Holmes uses deduction and analyzes trace evidence to solve crimes, Trant relies on the application of the chronoscope, galvanometer, plethysmograph, sphygmograph, and pneumograph, along with principles akin to Münsterberg’s “mental microscope” to find not the marks of crime on the environment but the marks of crime on men’s minds. Indeed, the Luther Trant stories are the earliest American fiction to imagine the application and acceptance of experimental psychological instruments to forensic detective work. In so doing, they break new ground for detective fiction while remaining responsive to and reflective of the historical and then-contemporary debates about the relationship between psychology and the law.

The eleven²¹ Luther Trant stories were first serially published in 1909 and 1910 in *Hampton’s Magazine*, before being collected as *The Achievements of Luther Trant* in 1910.²² Trant’s first venue, *Hampton’s*, was the intellectual and financial brainchild of Benjamin Hampton, who took over the magazine²³ in 1905 just after Theodore Dreiser became an editor for the publication. From its modest beginnings as a rejuvenated but failing publication, Dreiser and Hampton raised circulation to over 100,000 by 1907. After Dreiser left in 1907, *Hampton’s* circulation continued to rise;

by the time of its financial crisis in 1911, circulation was up to 400,000. In this venue, the Luther Trant stories were enormously successful, so much so that they were often featured in the advertisements for the magazine.

Trant's stories fit well with Hampton and Dreiser's vision for *Hampton's* not only because of their exciting plots but also because of their muckraking attempts to expose the ineptitudes of police officers and a legal system that denied the importance of applied psychology. Indeed, Münsterberg's essays and Balmer and MacHarg's scientific detective fiction share an important affiliation with early twentieth-century muckraking: both published their work in magazines renowned for their journalistic efforts to expose corruption. "As early as 1893, [Münsterberg] had published with *McClure's*, but with the advent of muckraking he was called upon for more regular contributions" through which he "voiced a plea for penal reform" (Wilson 1970, 157). *Hampton's Magazine*, where Luther Trant first came to fame, has been characterized by Debi Unger and Irwin Unger as "an important muckraking journal of the day" (2005, 108). Both Münsterberg and the Chicago newsmen are invested in discourses of improvement and progress aimed at correcting the corruption of poor police work and legal blunders.

Luther Trant's narratives are insistent about the potential improvements that could be wrought by the broader application of new psychological technologies to police work and the legal system.²⁴ In particular, Trant is concerned with the "haphazard methods of the courts" (Balmer and MacHarg 1910a, 95), the torturous third-degree interrogations performed by police, and the basic inefficiency of criminal processing. According to Trant, the obstinate judicial system and police force need applied psychology in order to be more objective, more humane, and more effective. All of these agendas are made clear by the opening pages of "The Man in the Room," the first of the Luther Trant stories to be published. Throughout the lengthy preamble to the actual story (which concerns the death of a scientist in his laboratory) readers are privy to an animated discussion between Trant, the "brilliant, but hotheaded young aid" (1910a, 2), and his aging professor, Dr. Reiland. While the aging doctor is skeptical about seeing his techniques applied outside of psychology and even notes, "I, myself, am too old a man to try such new things" (5), Trant comes to represent the imminent sweeping changes brought by the "new psychology" (1910a, 325).²⁵

Trant's first point is one of progress and humanity: "It is astounding, incredible, disgraceful, after five thousand years of civilization our police

and court procedures recognize no higher knowledge of men than the first Pharaoh put into practice in Egypt before the pyramids! . . . Five thousand years of being civilized,’ Trant burst on, ‘and we still have the third degree!’ (Balmer and MacHarg 1910a, 1–2). For Trant, “civilization” necessarily implies progress, and in the case of psychology and interrogation, American courts and police have advanced very little. The third degree, a term used to characterize police interrogations that were physically and psychologically abusive, was prevalent and would remain so until the Wickersham Commission Reports of 1931.²⁶ Beyond the third degree, Trant faults the legal system for being unsystematic, unobjective, and inefficient. Citing several cases ripped from the headlines, Trant argues that through psychology “I shall not take eighteen months to solve [them]. I will not take a week” (1910a, 5). And not only will psychology be more efficient, it will also produce more reliable results: “there is no room for mistakes . . . in scientific psychology,” Trant insists. “Instead of analyzing evidence by the haphazard methods of the courts, we can analyze it scientifically, exactly, incontrovertibly—we can select infallibly the true from the false” (95). Trant’s new breed of detective is capable of modernizing criminal and legal institutions via civilized, scientized approaches to evidence.

In an effort to portray the realism of their psychological detective and his instruments to their readers, Balmer and MacHarg add an editorial foreword to their 1910 collection of Luther Trant stories. Sounding much like Hugo Münsterberg, and stressing the “factual” nature of their stories, the authors argue that

if these facts are not used as yet except in the academic experiments of the psychological laboratories . . . it is not because they are incapable of wider use. . . .The hour is close at hand when they will be used not merely in the determination of guilt and innocence, but to establish in the courts the credibility of witnesses and the impartiality of jurors, and by employers to ascertain the fitness and particular abilities of their employees. (1910a, foreword)

Within the text, several lie detection techniques are even explored by Trant long before they are ever applied by polygraphers in actual criminal cases.²⁷ It is little wonder, then, that from the very first line of the collection, the authors are reticent to classify their collection as a work of the imagination. “Except for its characters and plot,” Balmer and MacHarg explain in their foreword, “this book is not a work of the

imagination.” Implicit in this statement is the desire to disavow the imagination as dangerous to or orthogonal to scientific practice and validation—a phenomenon still visible in contemporary forensic textbooks.²⁸ Underlying this statement are several assumptions: that the imagination is unimportant, and potentially damaging, to the development and authorization of scientific technologies;²⁹ that literature needs to validate its own techniques by disavowing fictional foundations; and that science cannot successfully imagine its potential achievements through extrapolation. Ironically, what Balmer and MacHarg predict through their collection are the achievements of psychology for the forensic sciences, an exercise that demands imaginative thinking but not necessarily fictionalization.

Indeed, Trant’s narratives imagine the as yet unaccomplished application of experimental psychology to criminal investigation and the courts, and thereby forge connections between psychology, the law, and the police that have, until this point, only been fantasies of applied psychology. By imagining the “achievements” of applied psychology, *The Achievements of Luther Trant* not only reflects Münsterberg’s hopes but also illustrates the potential influence of fictional accounts on the development of scientific thought, experiment, and authorization. Or, as Leonard Krasner explains concerning the historical imbrication of fiction and psychology, “the fictional use of psychology not only illustrates an important application of psychology to the solution of crimes but also offers a portrait of the activity of psychologists to the very wide segment of the population that reads such books” (1983, 578). It makes perfect sense, then, that Trant’s stories were, as one early reviewer noted, “absorbingly interesting to the student of psychology as well as to the general reader” (Display ad 9, no title, 1910, 12).

Luther Trant’s liminal place (somewhere between fiction and nonfiction) both benefits, and benefits from, explicit and implicit references to Münsterberg. First, Luther Trant showcases the type of psychologist-detective that Münsterberg conceived but could not produce. He is a “one time assistant in a psychological laboratory, now turned detective” (1910a, Foreword) who uses psychological instruments to solve crimes. As a reviewer from the *New York Herald* notes more explicitly in an advertisement for the detective, Luther Trant is “a new style of detective. The basis of the new detective art and science is the use of measuring and recording instruments chiefly exploited heretofore by Professor Münsterberg” (Display ad 9, no title, 1910, 12).

Likewise, Münsterberg's basic assumptions about measurable connections between body and mind are regularly featured in the text. We are told in "The Hammering Man," for example, that "every emotion reacts upon the pulse, which strengthens in joy and weakens in sorrow, grows slower with anger, faster with despair; and as every slightest variation is detected and registered by the Sphygmograph" (Balmer and MacHarg 1910d, 715). Luther Trant also explains—in nearly the same language later used by Münsterberg's protégé William Marston—that the hidden feeling will betray itself: "No matter how hardened a man may be, no matter how impossible it may have become to detect his feelings in his face or bearing," argues Trant, "he cannot prevent the volume of blood in his hand from decreasing, and his breath from becoming different under the emotions of fear or guilt" (Balmer and MacHarg 1910a, 164);³⁰ or, as Marston argues in 1913, "no normal person can lie without effort. It is impossible to increase one's effort—mental, nervous, or otherwise—without increasing the strength of the heartbeat" (1938b, 29).³¹ The presence of such surety maintains the believability of the fictional text while also reinforcing the authority of an as-yet-unauthorized science.

The instruments featured in Trant's stories all share basic foundational principles that originally linked them to Münsterberg and, by the 1920s and 1930s, connect them to the developing science of polygraphy. In "The Eleventh Hour," for example, as Trant revels in several of his past successes as a psychological detective, he acknowledges the instruments that Münsterberg himself championed.

The delicate instruments of the laboratory—the chronoscopes, kymographs, plethysmographs, which made visible and recorded unerringly, unfalteringly, the most secret emotions of the heart and the hidden workings of the brain; the experimental investigations of Freud and Jung, of the German and French scientists, of Münsterberg and others in America—*had fired him with the belief in them and in himself.* (Balmer and MacHarg 1910a, 325; emphasis added)

The connection between Trant, Münsterberg, and their shared instruments, like the connection between literature, science, and technology, is multidirectional: the instruments create a synergy of belief that feeds both the scientific and popular imagination, which, in turn, creates space and authority for the machines. In the following sections we see that nearly all of the instruments referenced in the Trant collection were

eventually taken up and modified by lawyers and police officers for the purpose of lie detection.

As we have already seen, the instruments, graphic records, and analyses cataloged in Trant's fictional tales participate in the shift in ways of seeing; they also participate in the mechanistic mythos that led Münsterberg to characterize the chronoscope as a "mental microscope." Thanks to Luther Trant, Münsterberg's "mental microscope" is transformed into a kind of literacy—a new language and strategy for reading—that we will reencounter in chapters 2 and 3. His instruments allow him to read the marks of crime on men's minds. As Trant explains it, the shift from Holmesian trace evidence to psychological measurement becomes obvious and elementary: "I read from the marks made upon minds by a crime," Trant explains, "not from scrawls and thumbprints upon paper" (Balmer and MacHarg 1910a, 88). In his opening debate with Professor Reiland, Luther Trant admonished his mentor to "teach any detective what you have taught to me, and if he has half the persistence in looking for the marks of crime on *men* that he had in tracing its marks on *things*, he can clear up half the cases that fill the jail in three days" (3). At least two things should be noted here: first, and most obviously, is Trant's assumption that psychological techniques could be applied to other fields through some basic education. Indeed, if police would only take up these new instruments, they could eliminate the third degree altogether in favor of a more "civilized" approach (3).³² Second, and more important, is the insinuation that psychology can more accurately uncover criminality by examining the minds of men than by the mere examination of a crime scene. One such mark is guilt, detected in each narrative by the same instruments that Münsterberg championed: the galvanometer, sphygmograph, pneumograph, and plethysmograph.³³

This new literacy is made more powerful and accessible because of the didacticism of Luther Trant's narratives. His adventures serve as a space to catalog, explain, and illustrate the interpretation of the graphic trace produced by psychologists and their instruments. On many occasions, these graphs are frequently heuristically simplified for the readership of *Hampton's Magazine*. "The Hammering Man," for example, includes the graphic output of the sphygmomanometer as an illustrative figure. The graphs represent the physiological reactions (in this case changes in the blood pressure) of three Russian revolutionaries as they listen to a young woman recount her father's brutal betrayal. The complex tracings of three different individuals over the course of a pro-

longed interview that should require an expert's interpretation are compressed into five lines of text. These are easily read by the expert psychological detective and even by the lay audience of the magazine. Although the graphs appear fairly similar, and all have been excerpted from any comparative coordinate system, Trant declares that "the test . . . has shown as conclusively and irrefutably as I could hope that that this man [Meyan] is not the revolutionist he claims to be, but is, as we suspected might be the case, an agent of the Russian secret police" (Balmer and MacHarg 1910d, 714). His conclusion is supported by a caption that aids a general reader's interpretation of the various spikes in the inscribed record.

1. Sphygmograph record of healthy pulse under normal conditions. 2 and 3 Sphygmograph records of Dmitri Vasili and Ivan Munikov when Eva Silber told of her father's betrayal; the lower and rapid pulsation thus recorded indicate grief and horror. 4. Record of Meyan on this occasion; the strong and bounding pulse indicates joy. 5. Meyan's sphygmograph record when Trant shows the yellow note that betrayed Herman Silber; the feeble, jerky pulse indicates sudden and overwhelming fear. (714)

From these graphs and their explanation, the reader learns several important lessons about mechanical lie detection: that there is such a thing as a "healthy" pulse and "normal" conditions under which physiology can be measured; that physiology can be equated with particular emotional states, as variable and specific as grief, horror, joy, and fear; that bodies react uncontrollably, but imperceptibly—at least to the naked human eye—when confronted with evidence implicating guilt or even, at the very least, recognition; and that, ultimately, all of these "facts" are perceptible by a machine and readable from a simple graph. An earlier story, "The Man Higher Up" (Oct. 1909), which concerns a corrupt shipping company president and the murder of a checker, also includes the graphic results of a test involving the sphygmomanometer and the plethysmograph. In addition to the pictorial representations, readers are provided with the following interpretation of their curves, an explanation that illustrates how a simple machine can produce a powerful mythos.

If I had it here I would show you how complete, how merciless, is the evidence that you knew what was being done. I would show you how at the point marked 1 on the record your pulse and breathing quick-

ened with alarm under my suggestion; how at the point marked 2 your anxiety and fear increased; and how at 3, when the spring by which this cheating had been carried out was before your eyes, you betrayed yourself uncontrollably, unmistakably . . . how your pulse throbbed with terror; how, though unmoved to outward appearance, you caught your breath, and your laboring lungs struggled under the dread that your wrong doing was discovered and you would be branded—as I trust you will now be branded, Mr. Welter, when the evidence in this case and the testimony of those who witnessed my test are produced before a jury—a deliberate and scheming thief. (1910a, 183)

Implied here are assumptions not only about the instruments, their expert interpretation, and their ability to record emotion but also about their real, practical admissibility in courts of law, as we shall see in the next section concerning William Marston and the *Frye v. U.S.* case.

Ultimately, Luther Trant's proposed reform via instrumental ways of seeing and understanding the criminal, like Münsterberg's hypotheses, demands that psychology fashion that public following that can place pressure on police, lawyers, and judges. Thus, the final and equally crucial cumulative function of Trant's collected "achievements" is the production of a public following. By working with the instruments of lie detection, Trant's collected adventures directly address the issues of popular and legal acceptance of the lie detector decades before its admissibility was reviewed by American courts. Within the stories themselves, several references imagine and predict testing techniques and even crucial cultural centers of lie detection research. Before administering the tests in "The Man Higher Up," Trant explains the new psychological methods to Mr. Rentland—the U.S. Treasury spy who hired him—by referencing his own past cases: "I am a stranger to you, but if you have followed some of the latest criminal cases in Illinois perhaps you know that, using the methods of modern practical psychology, I have been able to get results where old ways have failed" (1910a, 162). Referring explicitly to his own achievements in Illinois, Trant connects himself to Chicago, the eventual center of lie detector investigation, which produced the Northwestern Scientific Crime Laboratory (1930), the publisher of the *American Journal of Police Science* (1930–32), and the workplace of Leonarde Keeler in 1929.

In "The Man Higher Up" in particular, Trant also confronts the contested space of the courtroom directly, long before the definitive verdict

of *Frye* in 1923: “You are thinking now, I suppose, Mr. Welter . . . that such evidence as that directed against you cannot be got before a court. I am not so sure of that. But at least it can go before the public tomorrow morning in the papers, attested by the signatures of the scientific men who witnessed the test” (Balmer and MacHarg 1910a, 182). Crucial to this last statement is the dialogue between the spheres of the courtroom, the laboratory, and the public. Even if it is not accepted by the courts, the lie detector’s testimony, in conjunction with the “signatures of the scientific men who witnessed the test,” will be heard by the public.

As Trant successfully solves cases through the use of various instruments, he gains allies (including American and international corporations, private families, and the police) that reappear throughout later stories eager to laud the merits of Trant’s new psychology. In fact, Trant’s ability to convince even the greatest disbelievers—the police in particular—substantially precedes the actual acceptance of lie detection and other technologies by officers.³⁴ When he first meets Captain Crowley in “The Fast Watch,” for example, the policeman is not only incredulous about Trant’s “psycho” (1910a, 41) techniques but mocks him, calling him a “four-flushing patent palmist” (57). Yet, once Trant illustrates the physical manifestations of criminal guilt through the use of the galvanometer, Crowley and his lead investigator Walker have little choice but to accept his techniques. As in Münsterberg’s own description of the Harvard laboratory, the inclusion of detailed instrumentation descriptions serves to reinforce the scientization of psychology, while also debunking the conflation of experimental psychology and parapsychology. Moreover, these same officers return to champion Trant in a later story, “The Empty Cartridges.” When questioned about the validity of Trant’s methods, Crowley himself replies, “Mr. Sheppard, it’s myself has told you about Mr. Trant before; and I’ll back anything he does to the limit, since I see him catch the Bronson murderer, as I just told you, by a one-cell battery that would not ring a door bell” (256). By the final story, “The Eleventh Hour,” Trant has succeeded so well in applying his new psychology that he and his techniques are constantly in demand.

As he hurried down Michigan Avenue now, he was considering how affairs had changed with him in the last six months. Then he had been a callow assistant in a psychological laboratory. The very professor whom he had served had smiled amusedly, almost derisively, when he had declared his belief in his own powers to apply the necromancy

of the new psychology to the detection of crime. . . . So well had he succeeded that now he could not leave his club even on a Sunday, without disappointing somewhere, in the great-pulsating city, an appeal to him for help in trouble. (1910a, 325)

Although this trajectory is also present in the individual stories as they were first published in *Hampton's Magazine*, their cumulative effect is even greater in the collected achievements of the psychological detective. What Münsterberg attempted, Trant completed: he challenged the doubters—the lawyers and police who denied the power of applied psychology—to prove the worth of the psychological detective and concretize the mythos of the machine. Even “in the face of misunderstanding and derision, [Trant] had tried to trace the criminal, not by the world-old method of the marks he had left on things, but by the evidence which the crime had left on the mind of the criminal himself” (Balmer and MacHarg 1910a, 325).

As Münsterberg urged and Balmer and MacHarg illustrated, lie detection achieved a position of relative prominence among police officers and the public—if not the courts—in the decades following the publication of *On the Witness Stand* and *The Achievements of Luther Trant*.³⁵ By pre-dating and predicting the “achievements” of forensic science, *The Achievements of Luther Trant* illustrates the utility of fictional accounts: it predicts scientific advancement, aids in popularization, and influences the ways science can signify in culture. An analysis of Balmer's, MacHarg's, and Münsterberg's early collected work also reveals an alternative history for the development and dissemination of lie detection. We will see this even more clearly in the final section in which I specifically address several of Luther Trant's adventures that were reprinted by Hugo Gernsback. Before moving on to the republication and repurposing of Luther Trant, I briefly cover the intervening decades in which the founding principle of lie detection and various lie detectors emerged, applied psychology finally had its day in court, and the lie detector found purchase in the public consciousness.

Unauthorized Science: Mechanical Lie Detection Goes to Court, 1923

During the two decades following the initial publication and collection of the Luther Trant series, the development of lie detection tests began to mimic the predictions of Münsterberg, Balmer, and MacHarg. On the

one hand, lie detection began the process of becoming a science called polygraphy, complete with dedicated experimenters, research funding, and laboratory space. On the other hand, lie detection continued to meet much the same resistance to its status and extradisciplinary applicability as did applied psychology. By 1923, at least one form of lie detection, William Marston's lie detection test using a sphygmomanometer, was deemed inadmissible in American courts. In this section, I detail the rise and eventually damaged reputation of lie detection in American courts between 1915 and 1923; in the final section, I explain the ways in which lie detection rallied from its early demise to rise again in the public's opinion.

From the machines and techniques I described in the first section, three schools of lie detection emerged, thanks to the efforts of several men working in disparate academic disciplines, including psychology, law, and law enforcement, led respectively by William Marston, John Larson, and Leonarde Keeler.³⁶ William Marston was the first to publish an academic article on the connections between systolic blood pressure and deception in the 1910s.³⁷ This paper, entitled "Systolic Blood Pressure Symptoms of Deception" (1917), was originally part of his dissertation that earned him a doctorate in psychology from Harvard University. The latter two men, Larson and Keeler, were both protégés of August Vollmer;³⁸ they spent the greater part of their careers at war with each other over the development, distribution, potency, and proper protocols associated with lie detection machines in their various forms (Alder 2007).³⁹

Much like the fictional Luther Trant, Marston, Larson, and Keeler represented the young blood of experimental psychology, law, and police work, respectively: students able to adopt their mentors' work and better adapt it to practical and public applications. So, while Münsterberg had already experimented with lie detection, Marston further advanced the technique by introducing it to judicial court cases and cases of domestic unhappiness. After his initial publications and presentations (between 1913 and 1922), the systolic blood pressure test for deception was taken up and modified by several others who became the core of a new discipline, polygraphy. By 1921, John Larson was experimenting with lie detection under the guidance of August Vollmer; in 1926, Leonarde Keeler (a student of Larson) invented the portable polygraph instrument along with several tests that allowed for the normalization of readings.⁴⁰

Often working in conjunction with each other (as cospecialists or as teachers and students), writing forewords to each other's books and referencing each other's work, these men represented—at least in the early years—what Bruno Latour would characterize as a “network of allies.”⁴¹ Marston, Vollmer, Larson, Keeler, and later Fred Inbau did not work alone; instead they relied on mutual authorization. In his 1932 introduction to John Larson's *Lying and Its Detection*, for example, Vollmer lauds the experimental work of his fellow scientists, noting that “Dr. Larson and other scientific workers, like Marston, are blazing a trail that must ultimately lead to fertile fields. Every encouragement and aid should be given to these tireless pioneers” (x).

Although many proponents of lie detection desired to engage disciplines outside of law enforcement and to “stimulate” (Inbau 1942, v) interest in the progressive successes of science's newest machine, the history of mechanical lie detection is fraught with questions of legitimacy and inclusion. Internal strife often divided the polygraph pioneers. Of central concern were disagreements about the effectiveness of the technology itself and arguments about purist versus populist science. Though many scientific and criminological reports of the 1920s and 1930s claim accuracies of 95 to 100 percent with the “truth machine,” Fred Inbau, Christian Ruckmick, and Leonarde Keeler admit to more modest positive results of around 70 to 80 percent (Ruckmick 1938; Keeler 1934, 1930; Inbau 1934, 1935a, 1935b, 1935c). When Keeler was asked about the singular strength of the lie detector's results in a 1935 courtroom hearing, he admitted, “I wouldn't want to convict a man on the grounds of the records alone” (Vollmer 1937, 134).

Aside from evidential debates, personal disillusionment and internal strife not only challenged but often delegitimized the machine and its proponents. Some polygraphers, such as John Larson, later recanted their initial belief and involvement in the lie detector's development. In a 1961 article concerning the analysis of lie detector evidence, Larson admitted, “I originally hoped that instrumental lie detection would become a legitimate part of professional police science. It is little more than a racket. The lie detector, as used in many places is nothing more than a psychological third-degree aimed at extorting confessions as the old physical beatings were. At times I'm sorry I ever had any part in its development” (Lykken 1998, 29). Others, such as Fred Inbau, challenged the results and methods of fellow polygraphists even during the 1920s and 1930s. In his review of Marston's book *The Lie Detector Test*, Inbau

scoffs at Marston's "exaggerations," argues that this "book is practically useless," and remonstrates with Marston for claiming to be the sole creator and originator of the lie detector (1938, 307).⁴² As a result of such diatribes, internal cohesion between polygraphists was ultimately neither sound nor durable, and such divisions often made external "allies" wary of endorsing what they viewed to be a problematic technology.

Of particular interest is the judicial reaction to the polygraph, because it highlights the necessity of accruing allies in a search for authorization while it simultaneously reveals the uncertain internal dynamics of applied psychology and, by the 1920s and 1930s, police science. In 1923, a young black man named James Alphonzo Frye was to be tried for the second-degree murder of Dr. R. E. Brown. Frye initially confessed—after days of grueling interrogation—but later took back his admission. William Marston was called in to administer his systolic blood pressure test for deception and potentially testify in court. Despite the defense's petition, Judge McCoy denied the admissibility of Marston and his test. When the case came before the appellate court later that same year, Justice Van Orsdel not only upheld McCoy's decision but established a precedent that influenced the admissibility of scientific evidence for over seventy years.⁴³ In his written opinion, Van Orsdel had the following to say.

Just when a scientific principle or discovery crosses the line between the experimental and demonstrable stages is difficult to define. Somewhere in this twilight zone the evidential force of this principle must be recognized, and while courts will go a long way in admitting expert testimony deduced from a well-recognized scientific principle or discovery, the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs. (*Frye v. U.S.*)

The decision draws attention to a fissure in polygraphy's history—a rupture in the foundations of scientific fact production and attempts to discipline knowledge, assigning authority to "the particular field in which [a technology] belongs." In particular, Judge Van Orsdel's reasoning reveals the desire for consensus and the belief that science must complete its deliberations before emerging into the public or judicial sphere. By calling attention to disciplinary boundaries and their potential for authorization, Judge Van Orsdel's decision highlights the troubled interdisciplinarity of lie detection and one of its parent disciplines, applied

psychology. Yet, instead of isolating psychologists, lawyers, and policemen within their respective fields, *Frye v. U.S.* helped usher in another era of cross-disciplinary legitimation for the lie detector in both fiction and science.

Strategic Reemergence: Hugo Gernsback and Luther Trant, 1925–30

Far from losing faith in lie detection after the *Frye* case, proponents of lie detection constructed a network of science and fiction in which they—and their machines, techniques, and theories—were indispensable to the public. Marked by a confluence of sensationalism and edutainment, scientific texts, and popular nonfiction of the era worked to enliven themselves through true crime stories, while literary authors and editors of the period sought to scientize their narratives by referencing and using the very technologies they sought to validate as scientific. In 1925, Hugo Münsterberg's *On the Witness Stand* was reissued. His directive to bring this discussion to the “wider tribunal of the general reader” sounded all the more appropriate after the *Frye* case conclusively proved that “the lawyer and the judge and the juryman are sure that they do not need the experimental psychologist” (1908, xi). Indeed the law versus psychology rhetoric emerged anew after the *Frye* case.⁴⁴

In the scientific and popular nonfiction literature, Münsterberg's reissued call for a “wider tribunal” took many visible and hybrid forms; most referenced the fiction of Luther Trant's major predecessor, Sherlock Holmes. In 1930, editors of the *American Journal of Police Science* translated and republished Edmund Locard's work on “The Analysis of Dust Traces.” Locard, founder of the first modern crime laboratory in France in 1910, argues that “the police expert, or an examining magistrate, would not find it a waste of his time to read Doyle's novels . . . and one might profitably reread from this point of view the stories entitled *A Study in Scarlet*, *The Five Orange Pips*, and *The Sign of Four*” (1930, 277). Henry Morton Robinson's *Science Catches the Criminal* (1935), a veritable encyclopedia of criminalistics from their inception through the mid-1930s, begins by citing Sherlock Holmes and goes on to combine historical facts with sensationalized true crime stories. In fact, a 1935 *New York Times* book review praises Robinson's work for this very reason, lauding the virtues of the “dramatic” stories included throughout and noting that “his book deserves the widest popular attention, for its theme [of technologies for criminal investigation] is one of universal and funda-

mental importance upon which there needs to be a very general spreading of enlightenment. And, besides, it is better stocked with thrills than a detective story” (Kelly 1935, BR4). As late as 1941, T. G. Cooke’s *The Blue Book of Crime*, an advertisement for and explanation of current forensic techniques in fingerprinting, argues that “the mystic days of the supersleuth may be gone, but romance and adventure still live in this profession—excitement still thrills—for the trained man of today finds his work as varied, as stimulating as ever did a Sherlock Holmes—his discoveries as animated and stirring” (1941, 5). Finally, as detailed later in this section, Hugo Gernsback repurposed and republished several Luther Trant stories concerning lie detection between 1926 and 1930. His choice of Luther Trant is particularly notable given the prominence of Sherlock Holmes in the media.

Gernsback, who published several science and technology magazines during the early decades of the twentieth century,⁴⁵ was, by the 1920s, in the business of promoting a new genre of “scientifiction.” To advance his new genre, Gernsback republished and thereby reclaimed various short stories as scientifiction in what he termed “A New Sort of Magazine,”⁴⁶ *Amazing Stories*, initially published in 1926.⁴⁷ The so-called scientific romances of Edgar Allen Poe, Jules Verne, and H. G. Wells were some of the first tales to be redubbed “scientifiction,” “a charming romance intermingled with scientific fact and prophetic vision” (Gernsback 1926, 1).

By the 1930s Gernsback would begin to codify scientific detective fiction in his essay “How to Write ‘Science’ Stories” (1930a). This piece should not be confused with Gernsback’s other submission suggestions for “scientifiction” or science fiction, generally, as it pertains most particularly to the application of science to problems of crime and law. Take, for example, his first pair of “do’s” concerning the subgenre that he hereby defines.

- (1) A Scientific Detective Story is one in which the method of crime is solved, or the criminal traced, by the aid of scientific apparatus or with the help of scientific knowledge possessed by the detective or his coworkers. . . .
- (2) A crime so ingenious, that it requires scientific methods to solve it, usually is committed with scientific aid and in a scientific manner. (27–28)

As with scientifiction, Gernsback argued that scientific detective fiction would become preeminent. “We prophesy that Scientific Detective fiction will supersede all other types. In fact, the ordinary gangster and

detective story will be relegated into the background in a very few years. . . . Literary history is now in the making, and the pioneers in this field will reap large rewards” (1930a, 28). While his hopefulness about both scientification and scientific detective fiction is certainly biased and self-interested, Gernsback’s definitions and the popularity of his magazines ultimately ushered in a new genre that did stand the test of time: science fiction.

Part of his success can no doubt be attributed to the fact that in all of his publications, Gernsback was invested in an “edutainment” model that valued stories that could teach his readers something about science, technology, and progress while also entertaining them. In his editorial introduction to *Amazing Stories* Gernsback extols the virtues of his magazine by noting, “Not only do these amazing tales make tremendously interesting reading—they are also always instructive. They supply knowledge that we might not otherwise obtain—and they supply it in a very palatable form. For the best of these modern writers of scientification have the knack of imparting knowledge, and even inspiration, without once making us aware that we are being taught” (1926, 1). His vision, like Münsterberg’s, is centered around both guiding and relying upon the power of a lay audience’s support.

In 1926 and 1927, Gernsback republished not one but four Luther Trant stories in *Amazing Stories*: “The Man Higher Up,” “The Eleventh Hour,” “The Hammering Man,” and “The Man in the Room.” He would later republish them for a second time in *Scientific Detective Monthly* between 1929 and 1930, with the addition of “The Fast Watch.”⁴⁸ The sheer volume of space devoted to these Luther Trant stories and the fact that they were published alongside the likes of Edgar Allen Poe, Jules Verne, and H. G. Wells indicates Gernsback’s estimation of them. The Luther Trant stories were arguably also selected because they fit Gernsback’s model of edutainment: they educated audiences through expository lumps and embedded textual representations of lie detection technologies, they worked from and for a prophecy model forecasting legal validation, and they reassured the public about the possibility for crime prevention and criminal punishment via technology in an era of increasing police corruption and gangster violence.

Gernsback’s purpose can be seen in the explanatory text boxes he inserts into the stories. In the case of Luther Trant, Gernsback includes information about the technologies used by the psychological detective, in order to highlight what is new and different about Trant’s stories: as

mentioned earlier, they represent a new school of scientific detective fiction popularized in America and distinct from its earlier American and European counterparts in that they feature instrumentation.

If *Amazing Stories* was intended to inform and excite a lay audience about nascent technologies, one of Gernsback's later magazines, *Scientific Detective Monthly*,⁴⁹ was designed to educate the public about how these technologies have been put to proper use by the police. In an early editorial, "Science vs. Crime" (Jan. 1930), Gernsback writes, "I sincerely believe that *Scientific Detective Monthly* will not only prove to be a creative force in this type of literature, but *actually help our police authorities in their work*, by disseminating important knowledge to the public, and be also a constant warning to the criminal that, with adequate scientific laboratories, crime will have less and less chance to survive undetected" (84; emphasis added). The latter part of this statement is an indirect speech act: the likelihood that criminals will read, be educated, and be reformed by *Scientific Detective Monthly* is slim at best; however, Gernsback is speaking not to the criminal but to those who could fund and support the "scientific laboratories," the existence of which will surely produce new and improved instrumentation and techniques for crime fighting.

Gernsback saw himself as a disseminator and mediator of not literature but scientific knowledge. As in Balmer and MacHarg's editorial, Gernsback attempts to authorize his magazine as dealing in fact, not fiction: "While *Scientific Detective Monthly* may print detective stories whose scenes lie in the future, it should be noted that whatever will be published will be good science. We describe no fictional apparatus, no methods not based upon present-day science" (1930a, 84). When he does present an apparatus whose acceptance and deployment are marginal, as in the case of lie detection instruments, Gernsback makes predictions for their eventual authorization in offset text boxes, predicting, as he does, for example, in Balmer and MacHarg's "The Fast Watch" (1930b), that "tests of this nature will be in actual use at a not too distant future to allow the criminals to reveal their own guilt or to establish their innocence."

In the spirit of Hugo Münsterberg and other popularizers, Gernsback's choice of Trant stories in both *Amazing Stories* and *Scientific Detective Monthly* is specifically invested in not only educating the public but illustrating the adoption of lie detection technologies by law enforcement detectives and the court system. Indeed, the stories selected by Gernsback do not represent the breadth of Luther Trant's adventures cataloged in

The Achievements of Luther Trant (1910). Instead, they are a selected set of narratives that explicitly demonstrate the chronoscope and four different technologies that can be used for lie detection (the pneumograph, plethysmograph, galvanometer, and sphygmomanometer), which were later combined into one machine known as the polygraph.

Aside from introducing the public to the instruments, Gernsback was invested in a visionary model of science fiction, for which he would assume the role of disseminator. “Many great science stories destined to be of an historical interest are still to be written,” Gernsback argued, “and *Amazing Stories* magazine will be the medium through which such stories will come to you. Posterity will point to them as having blazed a new trail, not only in literature and fiction, but in progress as well” (1926, 1). In the case of the Luther Trant stories, Gernsback foregrounds his role in bringing this technology to the public for approval, even after it has been deemed inadmissible by the courts. In an offset text box embedded in the first page of “The Man Higher Up,” Gernsback notes that “while the results of psychic evidence have not as yet been accepted by our courts, there is no doubt that at a not distant date such evidence will be given due importance in the conviction of our criminals” (Balmer and MacHarg 1926, text box, 793).⁵⁰ In the third story in this miniseries, “The Hammering Man,” another text box mimics Balmer and MacHarg’s own fiction-science paradox, noting that “the strange part about it all is that although the story is written as fiction, the results can be obtained readily any time today, as the instruments used are well known and can be found in any university and up-to-date college laboratory” (Balmer and MacHarg 1927b, text box, 1118). Moreover, the republication of these four stories not once, but twice—first as scientific fiction/science fiction and then as scientific detective fiction—mirrors their eventual, though fraught transition from speculative technology to applied police science.

Lest lie detection appear dangerous and invasive, the stories reprinted by Gernsback also inform the public about the numerous ways that such technologies promise to protect and intervene on their behalf. It is no coincidence that Gernsback’s reprints emerged in the social climate of the late 1920s and early 1930s during which political corruption often ruled the police force and organized crime ruled prominent cities like New York and Chicago (Powers 1983; Walker 1977, 1998). Lie detection, along with the move toward police professionalization, became more widely and readily acceptable because they promised to sanitize,

organize, and control the objectionable behavior of law enforcement officials. However, instruments like the lie detector, which threatened to reveal inner truths and objectify individuals, were frightening manifestations of technological power, especially in the hands of already questionable law enforcement agencies. Balmer, MacHarg, and (through his editorializing) Gernsback may have been responding to this social unease when they (re)packaged lie detection as a force of progressive social change: to mitigate police corruption, level class distinctions, and erase the advantage stereotypically attributed to populations of various races.

The last story reprinted by Gernsback in *Amazing Stories*, “The Man in the Room,” was the first story published by Balmer and MacHarg. As we have already seen, it directly confronts police corruption as Trant dialogues with his mentor, Dr. Reiland, about the horrors of third-degree interrogations and the inefficient legal system. By reprinting this particular story, Gernsback echoes Münsterberg’s sentiment from *On the Witness Stand* that “the vulgar ordeals of the ‘third degree’ in every form belong to the Middle Ages, and much of the wrangling of attorneys about technicalities in admitting the ‘evidence’ appears to not a few somewhat out of date, too: the methods of experimental psychology are working in the spirit of the twentieth century” (1908, 109). Both characterizations of the third degree and experimental psychology rely on a narrative of progress that values psychology as a forward-looking discipline capable of transforming other fields as well as society at large. I further explore the pattern and implications of this progress narrative in chapters 3, 4, and 5; importantly, the narrative of progress heard here will be repeated at key moments in the cultural history of lie detection explored throughout this book.

In addition to rendering the third degree obsolete, the lie detection instruments—and narratives—reprinted by Gernsback also promise to level class distinctions. By the end of “The Man Higher Up” it becomes clear that the president of a corporation and the common thief are equally susceptible to the instruments of experimental psychology. Neither can control the physical changes that incriminate them. After administering the test, Trant declares to the president, Welter, “you betrayed yourself uncontrollably, unmistakably” (Balmer and MacHarg 1926, 801) and remarks “it’s some advance isn’t it, Rentland, not to have to try such poor devils alone [the checker and the dock superintendent]; but, at last, to capture the man who makes the millions and pays them the pennies—the man higher up?” (1930d, 867). Years later, the popu-

larity of these instruments rested in part on their marked ability to destroy the myth of untouchability associated with the upper classes. Not only is the president of the company charged, but “modern practical psychology” is given credit “for proving the knowledge of the man higher up” (1926, 796), thereby making him vulnerable to psychological investigation and examination.

Finally, “The Eleventh Hour” directly addresses the leveling of racialized propensities for evading detection, which we glimpsed in the *Frye v. U.S.* case and will confront again in contemporary brain-based detection. In this particular narrative, Trant is confronted with a death that occurs under very abnormal circumstances: five shots fired, only four casings found, the abused wife is suspected, strange murmurings are heard in the night, strange shoeprints are found in the snow. When the evidence points to murder and a “Chinaman” as suspect, the rank-and-file police nearly concede the case: “if it was a Chinaman you’ll never get the truth out of him” (Balmer and MacHarg 1927a, 1049). Initially Trant agrees: “I know . . . that it is absolutely hopeless to expect a confession from a Chinaman; they are so accustomed to control the obvious signs of fear, guilt, the slightest trace or hint of emotion, even under the most rigid examination, that it had come to be regarded as a characteristic of the race” (1049). However, this crestfallen moment is then transmuted into an opportunity to showcase “the new psychology [that] does not deal with those obvious signs; it deals with the involuntary reactions in the blood and glands which are common to all men alike—even to Chinamen!” (1049). Several “Chinamen” are brought in, attached to the galvanometer and tested for veracity; Sin Chung Min is found to be the perpetrator of the crime, and an analysis of his exam—particularly at those moments when he is queried about his accomplices—implicates the other three men.

The progress narratives and social leveling highlighted in the selective reprinting of the Luther Trant stories helped to characterize lie detection as a dynamic corrective to uncivilized practices and unfair advantages (be they economic privilege or—in a twisted sense—racialized talents for evasion). Lie detection paradoxically promises to enhance systems of power while remaining a tool of social justice: lie detection is the epitome of Münsterberg’s mental microscope, providing access to those hidden structures, beliefs, and lies that have the power to undermine the functioning of society. Gernsback’s argument jibes with the sentiments of Balmer, MacHarg, and Münsterberg: judges, lawyers, and police need

to recognize the power and potential of applied psychological instruments. Even if courts will not admit testimony from the devices, lawyers scoff at the idea of objective testimony, and police dislike being displaced by machines, the validation of lie detection can be taken to “the wider tribunal of the general reader” in one form or another. As explained in “The Eleventh Hour,” instrumental testimony is confession enough for the public and even for suspects. After his session with the galvanometer, the “Chinaman” commits suicide in his cell. “He considered what we learned from him here confession enough,” Trant explains. “You can safely consider your case settled” (Balmer and MacHarg 1927a, 1051).

In total, Gernsback’s republished and repurposed science fiction made lie detection visible, not as a technology that had failed in the courts, but as a technology ripe with potential—one that could not and should not be restrained by conservative detractors, including judges, lawyers, and police officers. His use of Luther Trant in particular gave voice to a crossover scientific detective capable of applying psychological techniques and instruments to the problems of criminal investigation and criminal law.

Although his “achievements” were published three times over in popular magazines between 1909 and 1930, Luther Trant is an unsung and seemingly unlikely hero in the history of lie detection. His adventures combine technology, law, psychology, and criminal investigation in novel and prophetic ways; his character represents the consummate consulting psychologist; his enthusiasm and knowledge promise to educate the public, eradicate crime, and bring a novel approach to detecting criminality. But Trant would not have made such a splash in the early decades of the twentieth century without the help of his authors and editors who were attuned to debates about the application of psychology to law and detective work championed by Hugo Münsterberg.

The interstices between Luther Trant’s adventures, Münsterberg’s dreams, and the courtroom represent a moment when fiction helped legitimate an applied science and its instrumentation that could not find authorization in courts of law. If scholarship on law and psychology has focused largely on the controversies surrounding Hugo Münsterberg (Blumenthal 2002; Hale 1980) without examining the results of his call for a wider tribunal in the fiction of the first and second decades of the twentieth century, then the wider history I trace in this chapter, framed as it is by both Münsterberg’s collection and *The Achievements of Luther*

Trant, helps us to better contextualize the arenas in which Münsterberg's theories and aspirations held sway. Although he and his disciples were ultimately unsuccessful in persuading the lawyer and the judge, they were capable of creating a public following for lie detection via literature, American scientific detective fiction in particular.

As Hugo Münsterberg assumed, "The poets know it well"—"it" being the basic principle behind lie detection: that emotions will be revealed through the body. I will return to fiction in later chapters; but in the next one I analyze the experimental work of William Marston, perhaps the most (in)famous of Münsterberg's students. As we shall see, his "mock crimes" along with his qualitative and quantitative evaluations of his subjects bring us back to the gray area between science and the imagination, truth and lies.