

# Timing, Talent and Teamwork:

## Owen S. Rich and the Role of Amateurism in the Golden Age of Radio

By Richard L. Porter

Modern scholarship studies and emphasizes the history of most new invention and innovation - generally highlighting the stories of and efforts of a few select individuals - the founder, inventor, and first experimenter of these great discoveries. Often under reported, misunderstood and undervalued is the regional or local individuals, most would be considered "amateurs", whose additional experimentation, innovation and adaptations are the real force behind bringing these societal game changers to a larger audience.

Courage, sometimes to the point of foolhardiness, is necessary if completely new ground is to be broken. Occasionally it may come from the rebel professional and be successful. It will come more often valuably from the amateur. In their own fields only geniuses among the professionals are completely exempt from logical progression. The world at large is more ready to allow the amateur his brilliant wild guesses — and leave it to the professionals to refute them if they can. The amateur faces fewer obstacles. Nothing official is at stake — no position to lose, no authority to maintain. And mankind benefits immeasurably from the cross-fertilization of their ideas. It is from amateurs, including specialists straying out of their own domain, that cross-fertilization comes.<sup>1</sup>

There are bound to be amateurs to start with. They are the leaven that the dull dough of society will always need. "In a civilized state," Edward Gibbon, English Historian wrote, "every faculty of man is expanded and exercised; and the great chain of mutual dependence connects and embraces the several members of society." The vital, renewing links in that chain will always be the amateurs."<sup>2</sup>

The late 1920's to the mid-1950's is commonly called radio's "Golden Age".<sup>3</sup> It is during this period that an extraordinary coincidence of timing and talent takes place across the world. Amateurs and a developing media merge in the birthing of modern day radio.

Who were these first "amateurs" and how did they become the "professionals".<sup>4</sup> This is the story of one of them - Owen C. Rich. His story mirrors the experience and lives of countless others in many states, towns, and universities during the 1940's and 50's.

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<sup>1</sup> Haley, William. "" LETTER FROM ENGLAND": Amateurism." *The American Scholar* (1976): 253-259.

<sup>2</sup> Gibbon, Edward. *The history of the decline and fall of the Roman Empire*. Vol. 3. Harper & brothers, 1847.

<sup>3</sup> Maltin, Leonard. *The Great American Broadcast* Dutton, New York, 1997.

<sup>4</sup> Many names are associated with radio's invention (initially called "wireless" or "wireless telegraph") including James Clerk Maxwell, a Scottish Scientist, Guglielmo Marconi, an Italian inventor, (Bondyopadhyay, Probir K. "Guglielmo Marconi-The father of long distance radio communication-An engineer's tribute." In *Microwave Conference, 1995. 25th European*, vol. 2, pp. 879-885. IEEE, 1995.) the French scientist Ernest Mercadier, French physicist Édouard Branly, American inventor Alexander Graham Bell and German physicist Heinrich Hertz's and dating as far back as the 1860's. But it was World War I that accelerated the development of radio for military communications. (Douglas, Susan J. *Inventing American Broadcasting, 1899-1922*. Johns Hopkins University Press, 1989.)

From radio's earliest days, college and high school students have tested its boundaries. Student radio has been democratizing and distinct. When the Radio Act of 1912 began issuing experimental broadcast licenses, the first in the nation went to St. Joseph's College (later University).<sup>5</sup> A school's radio station came to play an important role in its community. Students tuned in to hear live broadcasts from the sports arena, band and choir concerts, and talk shows—all featuring their classmates. While teachers worked closely with their students on programming choices, students staffed most college stations. With little oversight from university administration, students pushed the boundaries of what they could do with radio.

Indeed, the role of the amateur has even been a necessity as the technological need and demand grew at a pace greater than initial understanding and teaching of its principles. Amateurs were part of the solution to developing this new technology and were often courted and given advice as when immediately following World War I, the Navy Department attempted to gain a complete government monopoly over all radio communication. That effort failed, so the Navy began to develop ideas for promoting interest in radio, since amateurs were a ready reserve of operators.<sup>6</sup>

And within "The Wireless Don'ts" section of the 1922 edition of A. Frederick Collins' *The Radio Amateur's Handbook* contained 95 cautions and words of advice, including "Don't think you are the only one who doesn't know all about wireless. Wireless is a very complex art and there are many things that those experienced have still to learn."<sup>7</sup>

It was just after World War I that commercial radio broadcasting began and became an important mass medium for entertainment and news.<sup>8</sup> Two years later, in March of 1922, Owen C. Rich would be born in Paris, Idaho. These two paths would run together for the remainder of the century and in an important way - reflect the process whereby a new medium expands, develops and becomes a full-fledged format, a powerful communications media, and a profession.

Blossoming skills and pioneering talent would springboard Brigham Young's radio station, first as a carrier-current transmitter (660 AM) in 1946 and as a member of the then newly founded Intercollegiate Broadcasting System network of college radio stations. This would be the first college radio station west of the Mississippi and according to Owen "possibly the most effective".<sup>9</sup> He would then design, build and supervise the beginnings of a fully functional FCC licensed radio known on-air today as Classical 89.

Owen Rich, pushed forward without proper budgets, equipment, nor professional training - eventually becoming a main catalyst along with other individuals such as Dr. T. Earl Pardoe, Dr. Alonzo

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<sup>5</sup> <http://www.radiosurvivor.com/2014/01/24/college-radio-survivor-revealing-history-of-st-josephs-pioneering-college-radio-station/>

<sup>6</sup> White, Thomas H. "United States early radio history." <http://earlyradiohistory.us/sec015.htm> (accessed March 28, 2016) (2003).

<sup>7</sup> Ibid.

<sup>8</sup> Douglas, Susan J. *Inventing American Broadcasting, 1899-1922*. Johns Hopkins University Press, 1989.

<sup>9</sup> Rich, Owen S. *KBYU BYU Broadcasting: the beginning: an autobiographical sketch*. 2nd printing. ed. Brigham Young University, Provo, Utah, 2010, 47.

Morley, Norman Geertsen, Jim Ludlow and many others who brought to existence KBYU-FM, eventually leading "to a high level of professionalism." But initially, he was just an amateur radio enthusiast.

And yet his story is not at odds from countless other students and enthusiasts who were equally working with and in radio as "amateurs". It was at the interested and passionate hands of these amateurs that the fledging media of radio and television would find fertile ground and grow exponentially.

Three elements were ultimately necessary - timing, talent and teamwork.

## 1940

Owen S. Rich, grew up in a small farming community, and like others, he was a self-professed electronics fanatic with an insatiable urge to learn more about what he calls the "Miracle of Radio". Before and during his first year at Brigham Young, he would repair every radio set he could find whether it needed it or not.

Born just on the fringe of the development of radio for the masses, he arrived at Brigham Young University in the fall of 1940, at the most fortunate time possible. Just a week earlier, a studio was set up for speech exercises and various audio recordings.<sup>10</sup> It was this timing and his talent that would contribute to the initial birth of radio and television at Brigham Young University.

In the fall of 1940, 18 year old Owen, just three months out of Fielding High School in Paris, Idaho wrote, "I could not have timed my arrival at BYU any better." The new studio was just completed. The facilities were primitive but functional. To Owen, "they seemed wonderfully complex and fascinating." He had just been interviewed for a job by Dr. T. Earl Pardoe, who was chairman of the speech and Drama Department at the time.

Because of his initial knowledge of electronics, Owen was offered that first job as an assistant stage electrician. That first day they also showed him the brand new sound studio, about 25 feet square, containing soundproof walls, two double-glassed walls, a control room and an announcing booth. Patterned after current broadcast studios of the 1940's.<sup>11</sup>

He writes, "I was overcome with the feeling I was in a different dimension. For the first time in my life I was in a real sound studio. I had dreamed of the day...but I was totally unprepared for the psychological and emotional experience it provided. At that moment I did not know that this studio complex was virtually to become my home. But I did know that it was where I wanted to be. As we left...the dingy hallway seemed brighter...and my life had changed."<sup>12</sup>

Owen had hopes to follow his two great loves - athletics and electronics. But when he arrived at BYU he could not find any course of study in electronics, so he promptly listed himself as a physics major, figuring that would be the closest major wherein electrical experiments were performed. He wasn't alone in his searching for an appropriate outlet for his interests. Examining the college curriculum across America,

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<sup>10</sup> Ibid., 8.

<sup>11</sup> Ibid., 9.

<sup>12</sup> Ibid., 6.

few to no courses existed for the technological or production of this new medium of radio. Most classes were for speech, performance and dramatics.<sup>13</sup>

Owen's job duties consisted of primarily setting up lights for each stage performance and utilizing a script, operating the light controls for the proper dramatic effect. It was fascinating work but his real interest was in the basement radio studio, which seemed to have a magnetic effect on him. There he worked under Norman Geertsen where the studio sounds were sent out via amplifiers to the telephone wires and onto the air for the radio station KOVO that served Utah County.<sup>14</sup>

A greater part of his technical service in the radio studio was to provide voice recordings, hearing tests (for students to determine if they had a hearing loss and at what frequency), and assisting Dr. Alonzo Morley with the lung capacity or diaphragmatic breathing test. In 1940, the two main studio activities were the production of radio plays and the weekly radio program entitled "College Varieties" utilizing all student talent. Owen felt that the student drama could be quite effectively done and approached the quality of the current network dramas. It was these network dramas on the "official" radio stations that served as the inspiration for both the on-air talent as well as the standard Owen and other working amateurs attempted to emulate.

Even with a great basic knowledge of electronics of his day, there were still lessons to be learned including the first time he acted as control room technician, and sent the "College Varieties" show down the telephone line to Station KOVO. He had set the power to maximum volume to insure it arrived. Within minutes, he received a call from the telephone office who declared that every phone in North East Provo was picking up the broadcast. He had sent the signal about 50 times greater than it should have been, causing "crosstalk" in the telephone lines.<sup>15</sup>

By the end of the 1940-41 school year, he was doing most of the engineering and technical work for the studio. When Norman Geertsen was committed to a new studio in the Smith Building. Full responsibility for the Speech and Dramatic Arts studio fell to Owen, now the chief studio technician.

How is it possible that a freshman student at his first job in a university setting could possibly be responsible for the oversight of a new recording studio? No staff or faculty was capable nor officially trained, nor could they be until a course of study and classes could be established. This was new not just to

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<sup>13</sup> A sampling of course offerings from the period lacks radio and electronics science or theory courses. Most Radio and television education at the time focused on acting, speech and dramatic acting for the media. Columbia College Chicago. "Course Catalog" (1940-1941). Catalogs, College Publications, College Archives & Special Collections, Columbia College Chicago.  
[http://digitalcommons.colum.edu/cadc\\_coursecatalogs/23](http://digitalcommons.colum.edu/cadc_coursecatalogs/23)

<sup>14</sup> The station went on the air as KOVO in 1939. In April 1948 it increased its power from 250 W to 1 KW. Radio pioneer Arch L. Madsen, who would later achieve worldwide stature as Bonneville International Corporation's visionary leader, was KOVO's first station manager. Wikipedia contributors, "KOVO," *Wikipedia, The Free Encyclopedia*,  
<https://en.wikipedia.org/w/index.php?title=KOVO&oldid=694071641> (accessed March 28, 2016).

<sup>15</sup> Rich, *KBYU*, 13.

Owen but also the faculty, staff and administrators at Brigham Young University and universities across America.

## The War Years

With the bombing of Pearl Harbor in December 1941, a new chapter began for Owen in the military. He had applied for and gotten a civilian position at Hill Air force Base in Ogden. His extensive background and enthusiasm assisted him in quickly moving up the chain first as a radio mechanic learner, then radio mechanic, master mechanic, then as master radio mechanic instructor as he was introduced to aircraft RADAR equipment.<sup>16</sup>

In 1943, he joined the Coast Guard instead of being drafted into the Air Force. His love for and ongoing thirst for knowledge of electronics propelled him upwards within the ranks of the military. By January of 1944, he was an unofficial member of the teaching staff at the Coast Guard Training Station at Manhattan Beach, Brooklyn, New York. With very little effort, he found himself graduating in the top 10% of a four-month training course at the Capital Engineering Institute in Washington, D.C.<sup>17</sup>

Brazenly, he asked for an audience with the Coast Guard Commander at Coast Guard Headquarters, hoping to pick an assignment close to Salt Lake and family. He was told that if he could prove his qualifications, he would be assigned to any station of his choosing. Passing his tests with flying colors, Owen was assigned to the North Pacific Air Sea Rescue Squadron which was at Port Angeles, Washington but still the closest base to Utah. His growing family would soon join him.

Advancements came quickly and as Chief Aircraft Electronics Technician, he was made responsible for the radio and radar maintenance of all the Coast Guard aircraft in the 13th Naval District.<sup>18</sup> The Coast Guard also operated lighthouses in Puget Sound and on the Pacific Coast. These included radio transmitters that aid in coastal navigation. From time to time, he was assigned to do repairs of these.

## KBYU Radio

It was with these vast experiences and credentials behind him that upon his return to Provo in the summer of 1946, Dr. Pardoe offered him a new position in the Department of Speech and Dramatic Arts to create a radio station.<sup>19</sup> Still just a sophomore but the military experience qualified him as more "professional" than any other available.

As commercial radio dominated the airwaves and the cost of licenses rose, college students found a way around the high price of broadcasting by creating local carrier current, or "gas pipe," networks. Using low-power transmitters sending sufficient power into the electrical and plumbing systems of campus

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<sup>16</sup> Ibid., 17.

<sup>17</sup> Ibid., 19.

<sup>18</sup> Ibid., 21.

<sup>19</sup> Ibid., 23.

dormitories to provide a signal strong enough to be picked up in those dormitories. This set up was just weak enough that they were not classified as a radio station by the FCC.<sup>20</sup>

This concept of college radio was born when a few years earlier when two amateur radio enthusiasts David W. Borst and George Abraham founded the "Intercollegiate Broadcasting System" (IBS) at Brown University in Rhode Island.<sup>21</sup> This network of college radio stations included Columbia, Cornell, Dartmouth, Harvard, M.I.T., Pembroke, Rhode Island State, University of Connecticut, and the University of New Hampshire among others.<sup>22</sup>

Senior faculty member, Dr. Pardoe did not understand the technical ramifications of starting a radio station. Owen explained how every piece of equipment in the control room would need to be replaced, but no capital equipment funds existed. Utilizing only the funds available for department supplies, Owen along with the help of a fellow physics student, Francis Boyer built their own console. Done in six weeks, using a commercial console design manufactured by the Collins Company. It was not pretty, but a high quality system at a fraction of the cost of its commercial equivalent.<sup>23</sup>

A new level of professional production was now possible in the fall quarter of 1946. It was on October 28, 1946 KBYU was officially on the air. The operating schedule was only 7 to 9pm Monday through Friday. Programs included "Campus News", "Popular Music Requests", "Campus Talent", "Campus Clubs on the Air", "Campus Variety Show", "Quiz Show", "KBYU Players Present", and "Music of the Masters".<sup>24</sup>

Enthusiasm for KBYU was contagious. Mostly because radio was at the time the only broadcast medium and the major source of entertainment among all ages. A club had been formed eight months earlier, indicating just how much interest was generated. When the station actually went on the air, the club title was dropped and replaced with the term "KBYU staff" with a set of officers and members. Totally

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<sup>20</sup> Ibid.

<sup>21</sup> David W. Borst began tinkering with radios as a teenager. He and friend Bill Orr constructed radio sets out of spare parts they salvaged and bought in lower Manhattan. At Brown, he co-founded the nation's first student run college radio station "the Brown Network" with fellow student George Abraham. The initial system worked on wires connected to radio receivers in individual dorm rooms. For longer broadcasts, the system ran under Dave's ham radio call letters 1KFG, but soon evolved into an AM station under the present call letters WBRU. Dave and George went on to form the Intercollegiate Broadcasting System (IBS) in February of 1940. Through IBS, Dave helped other colleges establish their own stations by distributing copies of his engineering booklet and helping them register with the FCC. The concept of college radio was born. <http://www.collegebroadcasters.us/content/about/dborst.html>  
<http://www.collegebroadcasters.us/content/about/gabraham.html>

<sup>22</sup> The Intercollegiate Broadcasting System (IBS) is an organization of over 1000 non-profit, education-affiliated radio stations (and webcasters). They were founded in 1940, by George Abraham and David W. Borst, who were among the originators of AM carrier-current campus college radio. Later, IBS was instrumental in getting the FCC to secure an FM "reserved band" from 88.1 to 91.9 MHz, where most noncommercial stations are now located. <http://www.collegebroadcasters.us/content/index.html>

<sup>23</sup> Rich, *KBYU*, 26.

<sup>24</sup> Ibid., 30.

operated by students, each night the studio seemed like a two-hour party. KBYU became one of the centers of BYU student activity. The crush of performers and staff became such a threat to the equipment and facilities that Owen worried over and did what he could to prevent damage.

Soon sweaters arrived emblazoned with the Intercollegiate Broadcast System letters "IBS" and the KBYU microphone. At the time, they were the only member of the network west of the Mississippi.<sup>25</sup> With less than two years of studies, Owen wasn't a member of the faculty or the "staff" and yet was the most knowledgeable technician available and functioned primarily as an advisor and supervisor. He found himself the first BYU broadcasting faculty member although in a sort of no-man's land between students and faculty. He was the studio engineer and teaching assistant. He operated as an "unofficial" junior faculty member and participated in faculty meetings and social functions.<sup>26</sup>

In conjunction with the activation of KBYU, new broadcast classes were started in which he was the instructor - Speech 34 (Radio Sound Effects), Speech 35 (Studio Organization), Speech 36 (Techniques of Recording and Playback), and a graduate course - Speech 135/136 (Studio Organization and Recording).<sup>27</sup> The primary purpose of these classes and the station was to provide training for future broadcasters.

## Expansion

By October of 1947, the studio starting to look like a professional station. Now there were five hours of programing and the first advertising was being sold to local merchants. But earlier in the spring the entire Speech and Dramatic Arts program, including radio, was being moved to the upper part of campus and into Butler Huts, which were small metal buildings, acquired from military surplus about 50 feet long and 20 feet wide.

Owen was told by Dr. Pardoe that one of these huts would be used for the radio studio. Owen considered this one of the great challenges of his life as it was virtually impossible to soundproof the building, but they did. Sound in the building resonated throughout as the rumble from traffic on the street could be heard. Owen was surprisingly pleased when the remodel was done and the console and equipment was moved in during December of 1947.

Out of nostalgia, but without any formality, the building was referred to as Farnsworth Hall, named after Philo Farnsworth who first created the television picture.<sup>28</sup> Still limited in funding Owen with the help of others continued to build their own equipment.

The next expansion included trying to get the radio signal to the Wymount housing areas. But when all the transmitters were turned to the same frequency, there were occasional interference between them,

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<sup>25</sup> Ibid.

<sup>26</sup> Rich, *KBYU*, 29.

<sup>27</sup> Ibid.

<sup>28</sup> Farnsworth, Philo Taylor. "Television by electron image scanning." *Journal of the Franklin Institute* 218, no. 4 (1934): 411-444.

making it impossible to have a clear broadcast signal. In a moment of inspiration, Owen thought of feeding the signal to the Provo City power lines.

The Provo Power Company, after much apprehension but with some convincing by Brigham Young University chief electrician, Lynn Wakefield, and taking great care to have safety fuses in place, connected KBYU up to the primary power loop of all Provo City. Before long, students in cars all over Provo reported that the radio could be heard so long as they were close to power lines. Now they were covering the whole of Provo without seriously breaking the FCC regulations, though bending them.<sup>29</sup>

Now with a larger broadcasting area, a KBYU sales staff was organized and began contacting Provo merchants. Also, prerecorded programs from the "IBS" could be replayed though in one instance they inadequately screened and found that one such program was a tobacco company program. Owen "received a memo from President Wilkinson slapping our wrists and telling us we should not be sponsoring tobacco on KBYU."

Owen's family also moved into the new Wymount Village during this time and while at home, he could listen to the broadcast. If anything went awry, he could be at the studios in about a minute. The workload became difficult for Owen but soon was aided with the help of Jim Ludlow who took over much of the academic load allowing Owen to pursue his bachelor's degree with less distraction.<sup>30</sup>

## Professionalism

Even with a limited budget, they were able to get new turntables, and one of the first professional quality tape recorder (called a Magnacorder). This aided in doing pre-recorded programming. Now the programming schedule was being expanded to include every major college event including major sports events, live broadcasts of student activities including dances, choral groups and concerts.

In the spring, Owen received his bachelor's degree and was immediately given the title of instructor as a full-time faculty.<sup>31</sup> Perhaps we could now say that officially, Owen had become a "professional".

## Conclusion

Owen Rich's specific timing and talent at Brigham Young University had been instrumental in the formation of the curriculum and influenced both past and future broadcasters as well as the direction the communications program would take. Without his expertise, gained both at Brigham Young and in his military training during WWII, it is almost certain that it would have been many more years before radio and television was capitalized on, seriously taught, flourished and appreciated in the intermountain area. His influence has inspired, solidified and affected countless graduates, professionals and KBYU as an instrument for good in the world today.

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<sup>29</sup> Rich, *KBYU*, 41.

<sup>30</sup> *Ibid.*, 43.

<sup>31</sup> *Ibid.*, 49.

This story of amateurism is repeated time and again even in our day with notable examples such as Mark Zuckerberg, who together with his fellow Harvard University students Eduardo Saverin, Andrew McCollum, Dustin Moskovitz, and Chris Hughes, he launched Facebook.<sup>32</sup> And Tim Berners-Lee when in 1989 he built upon the work of Vannevar Bush, Ted Nelson, Donald Davies and others, ultimately “taking the Internet out of the university and into the world.”<sup>33</sup>

No great invention could ever change the world if it had not passed through the hands of an amateur. For all great innovations - it is only after the initial truths are discovered, adaptations tried, improvements made, lessons learned, classes taught, organizations formed, and years of expertise gained - only then do professionals exist. Until then, the world is in need of the amateur to handhold the idea down the path to final fruition.

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<sup>32</sup> Carlson, Nicholas. "At Last—The full story of how Facebook was founded. *Business Insider* 5 (2010): 2.

<sup>33</sup> Keen, Andrew. *The Internet is not the answer*. Atlantic Books Ltd, 2015, 32.