Unleashing Outsiders’ Innovative Potential: Insights from the Quest for Longitude at Sea

It is well known, even intuitively, that innovations with the potential of subverting the established order of a given market very often are pushed forward by entrepreneurs and innovators who reside at the margins of – and at times even outside – that field. Yet the paradox is that the same social position that helps outsiders to pursue innovations that depart from prevailing social and cognitive categories also constrains their ability to obtain support and recognition for their innovations: outsiders lack crucial markers of credibility, social ties to insiders, and most notably, expert authority. Then, the key question is: What processes allow outsiders to stake out some ground in the insiders’ own terrain, especially when their claims to novelty clash with the status quo?

We have spent the last ten years of our scholarly journey tackling this question through a mix of qualitative techniques, large datasets analysis and historical research methods. In our latest study, recently featured on *Organization Science*, we employ a historiographic approach to meticulously trace a fascinating story of outsider-driven innovation that unfolds throughout a large portion of the 18th century. The story centers around John Harrison’s entrepreneurial quest to develop the first marine chronometer, which had a major impact on navigation at sea. In 1714, a few years after the worst maritime disaster in UK history, British Parliament announced three huge rewards to stimulate a solution to the longitude problem. Amid competition from some of the most brilliant minds of the time, the solution came from an outsider, John Harrison – a self-taught craftsman of humble origins from an obscure village in the Lincolnshire and without formal academic education – who challenged the leading academic community with a novel approach to tackle the longitude problem. Here are some of the key takeaways for understanding how outsiders make it happen.

![Figure 2 – John Harrison](image)

- **Reframe your initial disadvantages:** outsider-driven innovations typically fail to gain recognition, even under the most favorable circumstances. For a simple reason: novel ideas are truly consequential when their originators can mobilize resources, persuading powerful incumbents to buttress their efforts. By definition, however, outsiders are strangers to the target field, which makes it particularly difficult for them to secure the support needed to instigate change. Harrison’s forty-seven-year long quest for longitude was punctuated by many setbacks and was on the verge of coming to an abrupt end. Yet he did not lose confidence in his possibilities and reframed the disadvantages as a source of meaning and motivation. Burt Bees’ founder Roxanne Quimby is a great contemporary example. Dismissed (and disowned) by her family as a crazy hippie, she lived for many years at the edges of society in the northern woods of Maine, where she turned her marginalization into an opportunity to pioneer new ways of thinking about sustainability, laying the basis of her natural skin-care products’ business empire.

- **Leverage your positional advantages:** being on the outside “looking in” frees outsiders from the insiders’ norms and expectations, and sets them at a certain social distance from others in the field. Undeniably, Harrison outsider’s perspective gave him the freedom to explore solutions to the longitude problem in an
unconventional way. Historians concur that Harrison’s lack of formal – and, therefore, conventional – training explains why many of his ideas differed from established assumptions about how a precision timekeeper should be made. Coco Chanel is another more contemporary example of the disruptive potential of being located at the periphery. The illegitimate daughter of a laundress and a travelling peddler, Chanel got inspiration for some of her most radical ideas from the very humble surroundings of her infancy. For instance, her much-celebrated predilection for black and white reflected her protracted exposure to the colours of the uniforms of the orphanage (The Abbey of Aubazine) where she spent most of her early life, while the Romanesque austerity of the orphanage would inspire her sense of rigor, shaping Chanel’s signature style based on practical and simple cloths.

- **Understand audience heterogeneity:** different audiences use different evaluation criteria. Thus, a solution that fails to elicit endorsement from one audience may succeed with another. Harrison’s efforts would have been vain had not been for the presence of heterogeneous audiences with varying dispositions towards his solution. Whereas the astronomers’ community endorsed the astronomical lunar distance method, the navy and the politicians preferred a proprietary technology that was easier to use and more ‘seaman-friendly.’ This discrepancy in expectations among multiple audiences affords opportunities for outsiders to select niches in which they can satisfy certain expectations while being shielded, at least temporarily, from alternative expectations. Consider Steve Jobs’ endless meetings with investors early on. The VC industry repeatedly refused to support his project but Jobs did not give up and kept searching for less hostile audiences until he came across Mike Markkula, a young wealthy engineer who saw potential where the VC establishment saw only roadblocks. He made the first investment in Apple Computers. Why did Markkula support Jobs? Because he had different evaluative criteria. Targeting different audiences is critical to increase the odds of finding support for novel (especially radical) ideas.

- **Refuse to be deterred by rejection:** outsiders’ efforts to further their novel ideas usually face—and thus must overcome—opposing forces aimed at defending the status quo. As Bacon famously put it, “the dignitaries who hold high honors for past accomplishments do not usually like to see the current of progress rush too rapidly out of their reach.” Coping with this kind of resistance requires a degree of stamina that only a blend of Messianic fervour and visionary obsession may help to endure. Not surprisingly, in his relentless pursuit of the longitude quest, Harrison displayed a tenacity bordering on fanaticism. Not only did he obstinately experimented with the marine clock for over 40 years, making various versions of it and testing it in multiple transoceanic trials; but also he devised and circulated contentious and accusatory texts to decry the Board’s as unjust, and so counter its growing resistance. Entrepreneur James Dyson’s journey to the top of the Vacuum industry vividly exemplifies the importance of turning oneself into a stubborn man of action. Dyson, like Harrison, was not an industry insider. It took him 15 years of fanatic testing, tweaking, fist-banging and over 5,127 different prototypes to perfect his pioneering bugless vacuum. As he recently declared: “most people thought I was mad […] In the end, it was the rejections of my ideas that galvanized me to do it myself.” Not surprisingly, contemporaries often treat outsiders as crazy. It turns out that the nonconformist, heretic and renegade of an earlier time is almost invariably the cultural hero of today.

Figure 2 – John Harrison’s Marine Chronometer

- **Translation matters:** outsiders are unlikely to master the vocabulary needed to engage insiders with elaborate rhetorical strategies. Thus, they must engage in a process of “translation” – i.e., try to frame their novel ideas in a way their target audiences can understand. As a self-taught man without formal academic education, Harrison struggled to express himself clearly in writing and communicate his ideas comprehensibly to the astronomers’ community. He thus relied on people who could speak the language of
the gatekeepers and were also sufficiently familiar with his own language to be able to assist him with the translation process. First, he relied on George Graham’s support to articulate his idea before the Royal Society. Graham was at the time the finest British horologist and so in a unique position to appreciate the promise of Harrison’s clock. He then enlisted the support of James Short, a Fellow of the Royal Society and himself an instrument maker, who helped Harrison to write the pamphlets used to present Harrison’s case to the Parliament. Finally, he approached for help King George III: passionate horologist and instrument collector himself, the King could understand Harrison’s innovation and empathized immediately with him.

- **Look for and exploit available ‘entry ports’**: one of the most crucial problems outsiders face is how to gain an entry port into audiences’ attention space. Because outsiders lack status, insiders do not regard them worthy of their time and attention. Unless audiences are exposed to a stimulus of sufficient magnitude to exceed their attention threshold, outsiders’ innovative efforts are unlikely to be noticed. In the quest for Longitude, the Scilly’s shipwreck was the stimuli that produced this attention enabling effect: it catapulted the longitude problem into the public sphere, raising an unparalleled level of attention across multiple constituencies. Harrison exploited this mounting state of dissatisfaction to transcend the constraints of his outsider position and get an entry port to the longitude arena. Chanel is again an excellent case in point. She found her entry port to the fashion industry in the aftermath of WWI. By accelerating women’s emancipation, the war triggered a social context highly receptive to Chanel’s sober and sporty style based on simplicity, functionality and more comfortable materials, in stark contrast with the prewar luxurious haute couture. As she famously declared: “One world was ending, another was about to be born […] I would never have thought that I was witnessing the death of luxury…I was in the right place; an opportunity beckoned, I took it.”

Evidence tells us that the very traits that make outsiders so disadvantaged within established occupational structures and categorical systems very often are exactly what is required for the pursuit of exceptional entrepreneurial achievements in art, science and business. Those traits may transform outsiders into outliers: high-impact actors who are outside the normal, reside at the tail of distributions and may change our expectations about what is possible. By understanding the conditions and forces shaping this transformative journey, innovators can learn how to skillfully use it to their own advantage.