

Disruption in shipbuilding 2

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The 'Liberty Ships'

The disruptive technology (**welding**) enabled the industry to progress from:



To.....



I find myself obsessed with the thought of the next disruption in shipbuilding that will change everything and address the problems of our industry. I had something of an epiphany regarding the nature of the disruption this week that I believe takes the thinking forward. This has in part been triggered by watching news of shipbuilding technology developments that are essentially developing Henry Ford's "faster horses" (see previous blogs if that doesn't ring a bell).

The photograph shows what happened (eventually) following the last disruption around 80 years ago. Welding changed everything. But, note the following:

1. In concept the idea is **extremely simple** – changing the way that steel was joined. There is no way that shipbuilders operating in the environment of the left-hand picture could have envisaged what this would lead to – i.e. the right-hand picture. It took about 20 years for block building to really get going.
2. The change in shipbuilding strategy was an **unintended consequence**. The reason for changing the joining process was to facilitate the introduction of female workers into the emergency shipyards of the United States in WWII (see the presentation: "Whatever happened to our shipbuilding industry"). There was a second unintended consequence that was less positive and that we are still wrestling with: the intense heat of welding causes shrinkage and distortion, one of shipbuilding's significant headaches.
3. The change led to a requirement for **significant investment** in new technologies and new shipyards. This led the industry towards countries where that investment was most needed, notably Japan. Strategy in shipbuilding is not common to every shipyard, and the appropriate strategies change over time. Those that did not make the investment, however, did not survive. The old industry disappeared. UK is a very good example of that.
4. The **disruption was just the facilitator**. Much more was needed to make the transition between the two photographs shown above. What the disruption did, however, was open up the possibility of technologies such as building docks, panel lines, automated plate preparation and numerical control.

So, where is the next disruption and what will it enable? I believe I am getting closer to an answer.