

Squire to the Giants

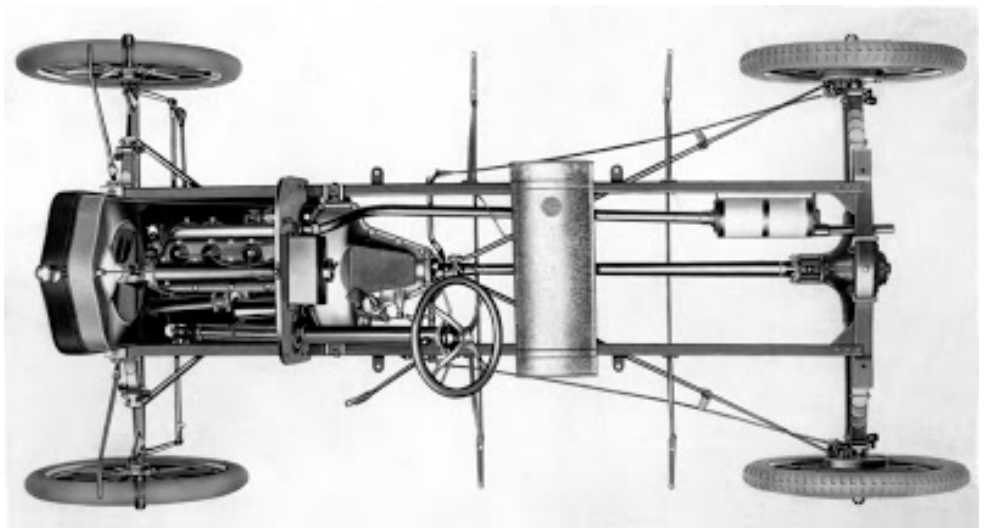
...attempting to stand on their shoulders

Taiichi Ohno

Correction, Clarification and Continual Learning
(<https://squiretothegiants.wordpress.com/2017/01/04/correction-clarification-and-continual-learning/>)

January 4, 2017 January 4, 2017 giantknave Brain Farts Ford, H. Thomas
Johnson, Henry Ford, Manufacturing, Mike Rother, Model T, Russell Ackoff, Taiichi Ohno,
variety

I wrote a post some months back (July 2016) titled 'The River Rouge – A divergent legacy'



(<https://squiretothegiants.wordpress.com/2016/07/28/the-river-rouge-a-divergent-legacy/>). If you haven't read it, then it is necessary context for this post.

I received an interesting comment at the end of the post (from a contributor called Andrew) as follows:

“You’re perpetuating an inaccurate myth about the Model T and production at Highland Park. The Model T was produced with tremendous variation – far more than a modern car. There were at any given time at least six different body styles of Model T, representing a lot more complexity than a simple color change. <http://www.curbsideclassic.com/wp-content/uploads/2011/02/Ford-Model-T-line-up-1911ad-lg.jpg> (<http://www.curbsideclassic.com/wp-content/uploads/2011/02/Ford-Model-T-line-up-1911ad-lg.jpg>)

As to color, the Model T was available in several colors – but not black – in its early days when the production rates were low. Black was introduced, not to minimize variation, but because black paint dried quicker and enabled faster, higher production rates. By 1926, paint science matured to the point that six additional colors were introduced to go along with black (and better compete with Chevrolet).”

I replied to Andrew’s comment and **promised that I would add an addendum¹**...and then, as is usual, life carried on and time flew by. It is now, in this quieter Christmas/ New Year period that I realise that I have a hole to plug.

So here goes...

Correction

My original post, whilst (in my view) highly positive of what Henry Ford achieved, used the enduring “*you can have any colour you like, as long as its black*” line. I used this as the strap line to observe that “[Ford’s] manufacturing process was not designed to handle variety”, as explained in separate books by H. Thomas Johnson (<https://squiretothegiants.wordpress.com/my-giants/h-thomas-johnson/>) and Mike Rother (<https://squiretothegiants.wordpress.com/my-giants/jeffrey-liker-and-mike-rother/>).

My post then went on to contrast two very different approaches to **handling the variety conundrum**.

Andrew’s comment pointed out that the Model T was available:

- in more than one colour; and
- with different body styles.

He went on to suggest that “*The Model T was produced with tremendous variety – far more than a modern car*”.

Colours: Yes, I can see a number of sources that refer to different colours. However, I would suggest splitting the colour story into three parts (each of which Andrew’s comment eludes to):

The early years (1908 – 1914): From cross-checking a number of Ford related websites, it would appear that the Model T was available in a small variety of colours during its early low-level production years (grey, green, blue and red).

The volume years (1914 – 1926): This period corresponds to breakthrough improvements in producing at scale (and reducing the price)....and the only colour available was black.



In his 1922 'My Life and Works' autobiography Ford refers to his salesmen wanting to cater for their customers' every whim, rather than explaining that the product already satisfies their requirements...and it was this exchange that caused his "so long as its black" idiom:

"Therefore in 1909 I announced one morning, without any previous warning, that in the future we were going to build only one model, that the model was going to be "Model T", and that the chassis would be exactly the same for all cars, and I remarked: "Any customer can have a car painted any color that he wants so long as it is black."

Reference is made across a number of sources that black paint was used because its fast-drying properties aided speedy production. Other reasons suggested are the cheap cost of black paint, its durability and ease of reapplication (e.g. when repairing).

The end (1926 – 27): Colour choices were reintroduced...but this can be seen as an attempt to prop sales up and fight off the inevitable death of the Model T:

"Alfred Sloan [General Motors] began to offer inexpensive Chevrolets with amenities that the Model T lacked.....the market began to shift...styling and excitement suddenly counted to the customer.

But Henry Ford refused even to consider replacing his beloved Model T...only one person persisted in warning him of the impending crisis: his son, Edsel...it was the first of many arguments that Edsel would lose.

The Chevrolet continued to take sales from the dour Model T. By 1926, T sales had plummeted, and the realities of the market place finally convinced Henry that the end was at hand. On May 25th 1927, Ford abruptly announced the end of production for the Model T." (Forbes Greatest Business Stories of All Time)

Body styles: Andrew's comment usefully provides a link to an image showing a number of different Model T body styles, though I note that the title refers to 1911 which sits within the 'early years' pre-mass production period.

Breaking the body styles comment into a few parts:

The chassis: The Model T Ford was made up of the chassis (see title picture of this post) and then a body connected on to it.

From what I have read (including Ford's words), **the key point about the Model T Ford was that the chassis 'moving down the line' were all the same.** Sure, they would differ over time as the design was (regularly) improved, but not 'in the line'.

I find the picture below quite interesting – it shows² a long line of Model T chassis waiting for a body (of differing styles) to be lowered on to it from a side process. Note the overhead rail coming in from the right.



Factory Bodies: Yes, I can see that different bodies were available – as can be made out from examining the above picture – but there was a limited range of standard designs (e.g. the Tourer, Roadster, Coupe and Sedan³).

You might ask *“but what about all those other body styles out there?”*...

Aftermarket ‘engineering’: You can come across all sorts of weird and wacky looking vehicles all around the world that have been built on a Model T chassis. This is unsurprising given the sheer volume (and market share) of Model T’s that were out there.

A fair bit of ‘reconfiguring’ occurred, with owners hacking the car apart and customising it for their own needs. Many specialist aftermarket companies sprang up to perform conversions, even maturing to selling prefabricated kits for specific purposes, such as tractors. If you want a laugh at the sorts of conversions carried out then have a look at some of the images [here](http://www.fordmodelt.net/model-t-ford-uses.htm) (<http://www.fordmodelt.net/model-t-ford-uses.htm>) (including a tank, a camper van...and a church!).

So, yes, I do need to correct my previous post’s implication that you could only ever buy a black Model T, and that one Model T was exactly the same as any other.

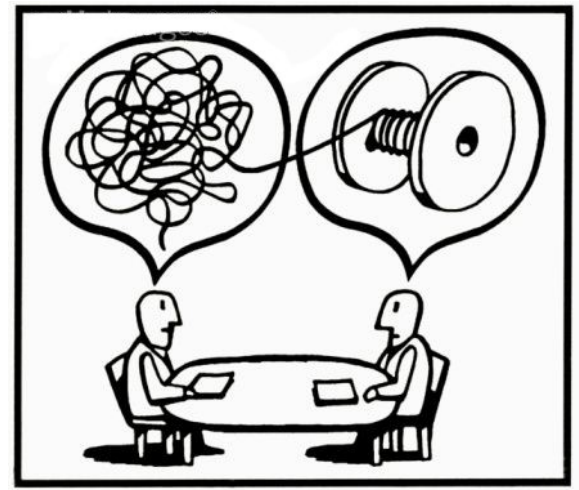
There was some variety, but does that mean Henry Ford had built a manufacturing process specifically aimed at handling this? And so I move on to....

Clarification

Getting back to the point within my original 'River Rouge' post – that of **handling variety in the line**:

Andrew's comment of "*The Model T was produced with tremendous variety...*" might imply that Ford had indeed solved the variety riddle. I don't think that this is the case and I'll use a couple of passages from Ford's own 1926 'Today and Tomorrow' book to illuminate why I believe this:

"Whenever one can line up machinery for the making of exactly one thing and study everything to the end of making only that thing, then the savings which come about are startling."
(Chapter 5)



"The strongest objection to large numbers of styles and designs is that they are incompatible with economical production by any one concern. But when concerns specialize, each on its own design, economy and variety are both attainable. And both are necessary..."

...we believe that no factory is large enough to make two kinds of products. Our organisation is not large enough to make two kinds of motor cars under the same roof." (Chapter 7)

An underlying philosophy of Ford's tremendous production success was a standard product (i.e. the opposite of variety)...which nearly became his undoing and set his organisation onto a path of catch-up with General Motors from the late 1920s onwards.

...none of this takes away from what Ford achieved and what then happened in American manufacturing and, in contrast, across the world in Japan. To summarise:

- Henry Ford made amazing advances in respect of manufacturing, but the Model T's homogeneity became its Achilles heel (a fact that he eventually conceded to his son Edsel and to his competitors);
- In general, American manufacturing from the 1950s onwards went in the **direction of scale** and 'unlearned' much of what Ford had shown them; whilst
- Toyota (learning from Ford) carried on in the **direction of flow** and worked out methods of handling variety in the line...thus achieving great things.

It's worth reflecting that Taiichi Ohno (<https://squiretothegiants.wordpress.com/my-giants/taiichi-ohno-1912-1990/>) credits Henry Ford with Toyota's foundations:

"Taiichi Ohno...always spoke glowingly of Ford's achievements...In 1982, Philip Caldwell, then head of Ford Motor Company, visited Japan. When Caldwell asked Eiji Toyoda, head of Toyota Motors, where Toyota had learned the production methods they employed so successfully in the 1970's, Toyoda replied, 'there's no secret to how we learned to do what we do, Mr Caldwell. We learned it at the Rouge.'" (Johnson, quoting from David Halberstam's 'The Reckoning')

Continual Learning

Andrew's comment on my original post provided me with the impetus to learn some more.

- I entered into a useful dialogue with Tom Johnson and Mike Rother;
- I bought and read Ford's book 'Today and Tomorrow';
- I read around (and cross-checked) a fair bit of internet content; and
- ...I pondered what all of that lot meant.

I reflect on a wonderful Ackoff
(<https://squiretothegiants.wordpress.com/my-giants/russell-ackoff-1919-2009/>). quote:

*Although being taught is an obstruction to learning, **teaching is a marvellous way to learn!***"

i.e. it is in the act of attempting to explain something to others (e.g. via a post) that we can truly learn.

(I believe that) I now know more...but I'm even more certain that there's much more to learn. A never-ending journey 😊

Footnotes

1. Writing an Addendum: I am mindful that a number of you may have read my original post but not seen Andrew's comment or my reply. So, rather than allowing this to remain somewhat hidden, I thought it only right (and respectful of Andrew's fair and useful comment) to elevate my response* to a further post.

(* I am not a fan of the 'gutter press' splashing scandalous statements across their front pages, only to publish a unapologetic, one-line 'retraction' in tiny text somewhere buried on page 13)

2. Using photos: I am mindful that Ford's production processes changed all the time and I have been warned to be careful when using a black and white picture of Model T production methods – such a picture shows how it worked at a point in time...and could easily have changed radically very soon afterwards!

3. Body Styles information taken from <http://www.fordmodelt.net/model-t-ford.htm> (<http://www.fordmodelt.net/model-t-ford.htm>). It shows that each of the main body styles evolved over time e.g. the Touring car went from 2 doors from 1909, to 3 doors from 1912 and then 4 doors from 1926.

...and I just have to add a picture of (what I understand to be) a Model T chassis with a body style of a house – definitely 'after market':





1 Comment

Depths of 'Transformation' (<https://squiretothegiants.wordpress.com/2016/09/21/depths-of-transformation/>)

September 21, 2016 September 22, 2016 giantknaive Brain Farts Dan Jones,
Grady Booch, Jim Womack, John Seddon, Lean, Mike Rother, Taiichi Ohno, Toyota, TQM,
transformation

I've been meaning to write this post for 2 years! It feels good to finally 'get it out of my head' and onto the page.

It's about that lovely 'Transformation' word.

Before I go on, I'll repeat a definition from an earlier post:



(<https://squiretothegiants.wordpress.com/2015/02/16/obsessed/>).

"Transformation: *In an organisational context, a process of profound and radical change that orients an organisation in a new direction and takes it to an entirely different level of effectiveness....transformation implies a basic change of character and little or no resemblance with the past configuration or structure."*
(businessdictionary.com)

To repeat the key phrase: **An entirely different level of effectiveness!** ...and, just in case you missed it, the word is effectiveness, not efficiency.

I'm going to outline 3 levels of (supposed) transformation and I'll do this by borrowing the bones of an idea from Mike Rother's (<https://squiretothegiants.wordpress.com/my-giants/jeffrey-liker-and-mike-rother/>) excellent '*Toyota Kata*' book and extend it with a large dose of my own 'poetic license'.

Level 1 Transformation: 'On the surface'

So, picture the scene: It's the late 1970s. Your organisation desperately wants to improve and, on looking around for someone achieving brilliant results



(<https://squiretothegiants.wordpress.com/2014/11/22/management-by-results-how-does-that-work/>), you spot the awesome Toyota (or such like¹).

You go on a Toyota factory visit. You are amazed at what you see and excitedly ask them how they do it.

You easily observe ('on the surface') lots of obvious methods and tools...and so you grab evidence of how these are carried out – e.g. some template forms, and the instructions that go with them. You also take lots of pictures of their (visual management (<https://squiretothegiants.wordpress.com/2016/06/09/sir-sir-sir-have-you-marked-it-yet/>)) walls to show all this working in situ.

You run back home, hand out the methods and tools and mandate that, from now on, this is what we are doing. (<https://squiretothegiants.wordpress.com/2014/11/22/what-you-see-depends-upon-your-perspective/>)

You helpfully provide training and (so called) 'coaching'... and you put in place 'governance' to ensure it's working. You roll it all up together and you give it a funky title...like your **Quality Toolbox**. Nice.

So what happens?

Well, yep, those tools and methods sure are 'shiny new' and easily applied. There's an initial buzz, probably because of senior management focus...and pressure to prove the comedy 'Return on Investment'

(<https://squiretothegiants.wordpress.com/2016/03/30/unknown-and-unknowable/>) (ROI) calculation that had to be set out in the short-term thinking 'will you pay for our factory trip?' business case.



But the initial effects fall away. Anything achieved was a one-off, or of limited and low level benefit. The changes aren't sustained – with a slide back to the old state. People start to misuse the tools and methods, and do much damage rather than good. There is a brief and ugly fight with the

'methods and tools' compliance police but disillusionment sets in and the early good work becomes discredited and abandoned (just like the last silver bullet...and the one before that...)

Timely reminder: *"A fool with a tool is still a fool"* (Grady Booch)

Note: This 'on the surface' transformation attempt has been likened to organisations going over to Japan in the late 1970s and early 1980s and coming home to fanatically 'do Total Quality Management' (TQM)...and then quietly dropping it a few years later. Sure, some organisations sustained it but most didn't.

Level 2 Transformation: 'Under the skin'

So it's now the 1990s. The methods and tools that came out of the initial Toyota factory visit weren't sustained but the pressure is still on (and mounting) to transform your organisation...and your management can't help noticing that Toyota are still doing amazing!

"Perhaps we didn't look hard enough or close enough or long enough...perhaps we should go back and have a look 'under the skin'."

...and so you go for another factory visit (once you've been given permission following another well written ~~story~~ business case 😊).

This time you take real care – studying 'at the gemba' (<https://squiretothegiants.wordpress.com/2014/12/03/meet-the-process/>) for weeks, asking questions, watching activities, understanding the nature of changes being made to the system before you.

"Eureka! There's something underneath those methods and tools! We can see that there's an underlying logic that we missed last time round...oooh, we could codify them into a set of principles!"

And here's basically what you arrive at:

0. Everything should belong to, or support, a **value stream** (a horizontal flow from customer need, through to its satisfaction)

...and for each value stream we should:

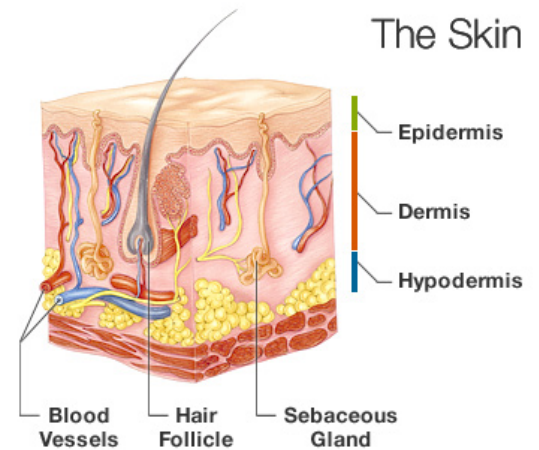
1. **Specify value**, where this is through the eyes of the customer; then

2. **Identify** all the actions performed within **the value stream**, and expose and remove the obvious waste (<https://squiretothegiants.wordpress.com/2015/08/04/enough-rope-to-hang-ourselves/>); then

3. **Create flow** by understanding and removing the barriers; then

4. **Establish pull** by producing only what is needed, when requested; and finally

5. The 'golden nugget': we should continually **strive for perfection** because this is a never-ending journey



Wow, that was profound – your factory tour team now need to give it a name!

And so, after a fun focus group, a young member of your team called John² shouts out *“It needs less of everything to create a given amount of value, so let’s call it ‘Lean’.”*

Whoop, whoop, he’s only gone and cracked it!

You run back home to tell everyone

(<https://squiretothegiants.wordpress.com/2015/09/19/rolling-rolling-rolling/>) about the wonders of ‘Lean’. You hand out books, provide training courses, coaching and mentoring and you slot all those wonderful tools and methods nicely into their place...neat...this is going to be great!

So what happens?

Well, **everyone absolutely LOVES the principles**. They make sooo much sense. They particularly liked playing with Lego in the training

(<https://squiretothegiants.wordpress.com/2014/12/10/the-difference-between/>) sessions to demo flow (<https://squiretothegiants.wordpress.com/2015/02/26/one-at-a-time-please/>), pull (<https://squiretothegiants.wordpress.com/2015/09/13/pulling-power/>), kanban and ‘stop the line’ (<https://squiretothegiants.wordpress.com/2015/03/03/a-gulf-in-thinking/>) thinking.

But after a while (and some short-term gains) you realise that **there’s a huge tension building**. No one can make those darn principles work because they continually clash with existing management practises.

Your senior management employ a gaggle of so-called Lean coaches to try to change the people at the bottom whilst they carry on at the top as before!

Your ‘Lean Office’ (<https://squiretothegiants.wordpress.com/2015/06/11/chalk-and-cheese/>) has become an island of coaches doing great work with the people but unable to turn the tide. Coaching conversations end with responses like:

“Yes, I can see that would be the right thing to do for the value stream...but that’s not what my objectives, performance rating and bonus is based on...or what my manager above me would support...so I’ll stick to soul-destroying fighting within my silo. Sorry about that 😞”

This culminates in huge frustration; a revolving door of broken coaches; and many a good employee finding a better organisation to work for. If you ran an employee survey at this point, the results would make for ugly reading – you’ve created a complete divide between worker reality and management ‘cloud cuckoo land’.

Oh, and that lean word? Well it became capitalised! LEAN...as if it were a thing. You’ve all forgotten that it was just a label thought up by John in a focus group merely to describe what the factory visit team saw.

Pause for reflection: Taiichi Ohno (<https://squiretothegiants.wordpress.com/my-giants/taiichi-ohno-1912-1990/>) is considered to be the father of the Toyota Production System (TPS) but he

Shigeo Shigeo is considered to be the father of the Toyota Production System (TPS), but he didn't want it to be written down³ (codified) because he wanted it to remain dynamic.

And as for that name: "Ohno did not call his innovation 'lean' – he didn't want to call it anything. He could, perhaps foresee the folly of a label." (John Seddon (<https://squiretothegiants.wordpress.com/my-giants/john-seddon/>))

Caution: ...and if you did this 'under the skin' (supposed) transformation within a service organisation (<https://squiretothegiants.wordpress.com/2015/09/02/so-why-cant-we-do-that/>), you may find (if you properly stood back (<https://squiretothegiants.wordpress.com/2015/11/21/im-just-a-spanner/>) to look at it!) that you'd totally f@ck\$ it up!

Credit: The 'Level 2' principles jotted down above are the core of the 1996 book 'Lean Thinking' by Womack and Jones....which they wrote following their research in Japan. They explicitly set out 5 principles, with a foundational one implied (hence why I've labelled it as 'principle nought').

Level 3 Transformation: 'In the DNA'

...and so to the 2000s. The pressure to change your organisation is relentless – the corporate world is 'suffering' from seemingly constant technological disruption...but Toyota continues to be somehow different.

You pluck up the courage and ask for a sabbatical for 6 months – you want to find the meaning of life...well, perhaps not that deep... but you sure as hell want to know what Toyota have got that you don't...and to work this out, you are going to have to go in deep – to their DNA.

Toyota are happy to see you again. But, rather than repeating what you did on the last two trips, you come straight out with it:

*"Okay, you've shown me your tools and methods...you've let me uncover your principles...and **I know that these aren't the answer!** What are you hiding from me?! Come on, I get it, it's a competitive world out there but PLEASE let me in on your secret."*

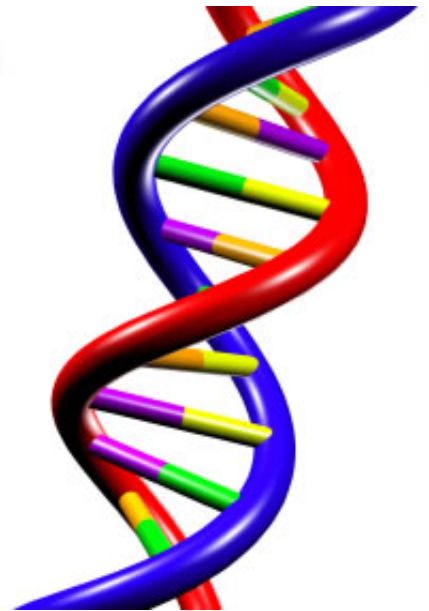
The Toyota managers are perplexed. They don't know what else they can do. They are adamant that they aren't hiding anything from you.

...and so, rather than go straight back home empty handed, you ask if you can work with Toyota to experience what day-to-day work is actually like. They humbly agree to your request.

And six months later your mind has been totally blown!

You really get it....no, REALLY GET IT!

You couldn't see the wood for the trees but now it's as obvious as can be.



It's all about the environment created by management's actions (<https://squiretothegiants.wordpress.com/2016/09/04/are-you-a-lady/>), which come from **their beliefs and behaviours** about human beings

(<https://squiretothegiants.wordpress.com/2015/02/11/oh-no-not-that-old-theory/>): about society, about customers...and, most profoundly, about employees (<https://squiretothegiants.wordpress.com/2015/11/15/getting-away-from-pyramid-selling/>).

This is invisible on a factory visit! But it's still there. It's simply 'in the DNA'.

Sure, you could provide a list of attributes as to what this looks like...but management can't just do them, they have to believe in them – in fact, 'be' them!

Further, there's nothing to be 'implemented' (<https://squiretothegiants.wordpress.com/2015/06/28/how-to-have-a-successful-journey/>) because it can't be!

Everything flows from management's beliefs and behaviours: It's from these that Toyota creates new principles, methods and tools all the time...and throws out old ones that are no longer appropriate. Their systems thinking and human thinking is solid and profound, whilst their method is dynamic and agile.

...and the realisation sinks in: No wonder Toyota are happy to open their door to anyone. The thing that makes them great can't be copied. It has to be lived and breathed...and nurtured from the shop floor all the way up (<https://squiretothegiants.wordpress.com/2015/11/09/farmers-and-facilitation/>). Oh sh1t!

...and so to your new headache: you totally 'get it' but how on earth do you change your organisational system (<https://squiretothegiants.wordpress.com/2016/02/29/crossing-the-divide/>) – now that is THE nut to crack. That would be **transformational**!

Reflection time:

So '**On the surface**', '**Under the skin**' or '**In the DNA**': What level of transformation are you playing at?

...if you are at level 1 or 2 then it's not actually transformation.

...if you are truly at level 3, then here's the final mind blowing bit – it is self-sustaining.

To close: I have been asking myself a HUGE question for a fair while now: Can management's beliefs and behaviours change within a large floating (i.e. short-term thinking) shareholder owned organisation. I'm nearly there with writing down my thoughts. Watch this space...

Footnotes:

1. Just Toyota? I use Toyota in this story since everyone knows who they are...and visits to their factories is precisely what happened regularly over the last several decades. But it isn't just Toyota.

Your own 'Toyota' factory visit could be to another great organisation...and it needn't be a factory

making products – it could be a service organisation. Handelsbanken (<https://squiretothegiants.wordpress.com/2016/05/09/back-to-that-profit-sharing-nirvana/>) would be a great financial services example.

Though beware, there aren't that many 'true Toyotas' out there. And perhaps none that have sustained it for so long.

2. **'John':** He's even called John in the true story – John Krafcik, a young researcher on Womack's MIT research team...and those were his words back in 1987 (as recalled by Womack) to give birth to the Lean label.

3. **Writing it down:** Ohno finally relented when he retired in 1978 and wrote a book on TPS.

4. **Clarification:** I think a great deal of Lean Thinking, but not a lot about 'LEAN' – the implementation movement. I respect Womack and Jones, and their writings...but I note that my favourite Womack book is '*Gemba Walks*' written about a decade after '*Lean Thinking*' in which he humbly reflects that it was about far more than the tools and the principles. It was really about the management system (or, in my words, the DNA).

16 Comments

The River Rouge – a divergent legacy

(<https://squiretothegiants.wordpress.com/2016/07/28/the-river-rouge-a-divergent-legacy/>)

July 28, 2016 July 28, 2016 giantknave Brain Farts Economies of scale, Flow,
H. Thomas Johnson, Henry Ford, Service, Taiichi Ohno

I expect that you've heard of the industrialist Henry Ford (1863 – 1947), but what about his massive 'River Rouge' car plant?

If you had gone for a 'factory visit' in the late 1920s, what would you have noticed?

The Model T Production line¹

Ford wanted to provide a car that the masses could afford to buy – to 'democratise the automobile'. Enter the Ford Model T – a car designed to be easy to drive and easy to repair, with standard interchangeable parts.



...but it wasn't just about the car's design. It was about the design of how the car was made.

In 1906, Ford's engineers did something different – they experimented with the physical layout of their manufacturing system. They **arranged their manufacturing tools in the sequence of processing steps** rather than the normal practise of by machine type. This seems ridiculously

obvious now (hindsight is a wonderful thing!), and the result was considerably higher productivity. This innovation created a **flow in the order of the work** but, at this stage of the Ford story, each work step was still done on stationary tables and stands.

In 1913, they took the next breakthrough step: they experimented with the **moving assembly line** for a small section of the process and, after some fine-tuning, this increased productivity fourfold.....and so the engineers got to work spreading this method throughout the manufacturing value stream.

Ford was constantly reducing his costs, not by 'cost-cutting' but through a **fanatical focus on creating flow**. This was achieved by a combination of continuous (incremental) and breakthrough (step change) improvements...which enabled Ford to pass on these savings by consistently lowering the price of the Model T...which increased demand...which outstripped supply...which meant that ever further production innovations were required to keep up!

A great deal of the experimentation explained above was carried out at the purpose built **Highland Park factory**. It was six-stories high, with a railroad track running down a central atrium (pictured) and cranes lifting materials from the rail carriages up to balconies that opened to the appropriate floors on either side.



The basic pieces of the Model T started at the top floor and, through the use of chutes, conveyors and tubes between floors and the force of gravity, they made their way down through the various sub-assembly processes until they reached the ground floor final assembly conveyor....and then the completed car could 'drive off the line'.

Whilst Highland Park was an amazing feat of engineering, it had its limitations – such as the central crane-way that was probably a huge bottleneck! Henry Ford went for one more innovative jump – he created an enormous horizontal factory complex called the **River Rouge**². The site started with raw iron ore and materials and finished with completed automobiles. It had its own ship docks, power generation plant, blast furnaces and rolling mills – all arranged to achieve flow (I've added the basic flow over an aerial picture).

“The River Rouge Plant in 1925 produced about one vehicle per minute in a total lead time of about three days and nine hours from steel making to finished vehicle.” (Source: Henry Ford's book 'Today and Tomorrow')

“...as long as it's black”

You are probably familiar with the famous Henry Ford quote that ‘*you can have any colour you like, as long as it's black*’. Today this sounds quaint, even humorous but there's a seriously important point within: **the manufacturing process was not designed to handle variety**.

This hadn't been a problem – people just wanted to be able to afford a car! – but rising standards of living and the birth of modern marketing gave rise to the ‘sophisticated consumer’. The new problem became offering ever wider variety (e.g. different colours, engine choices, trim levels, add-ons....) whilst retaining low-prices (and therefore mass-production costs).

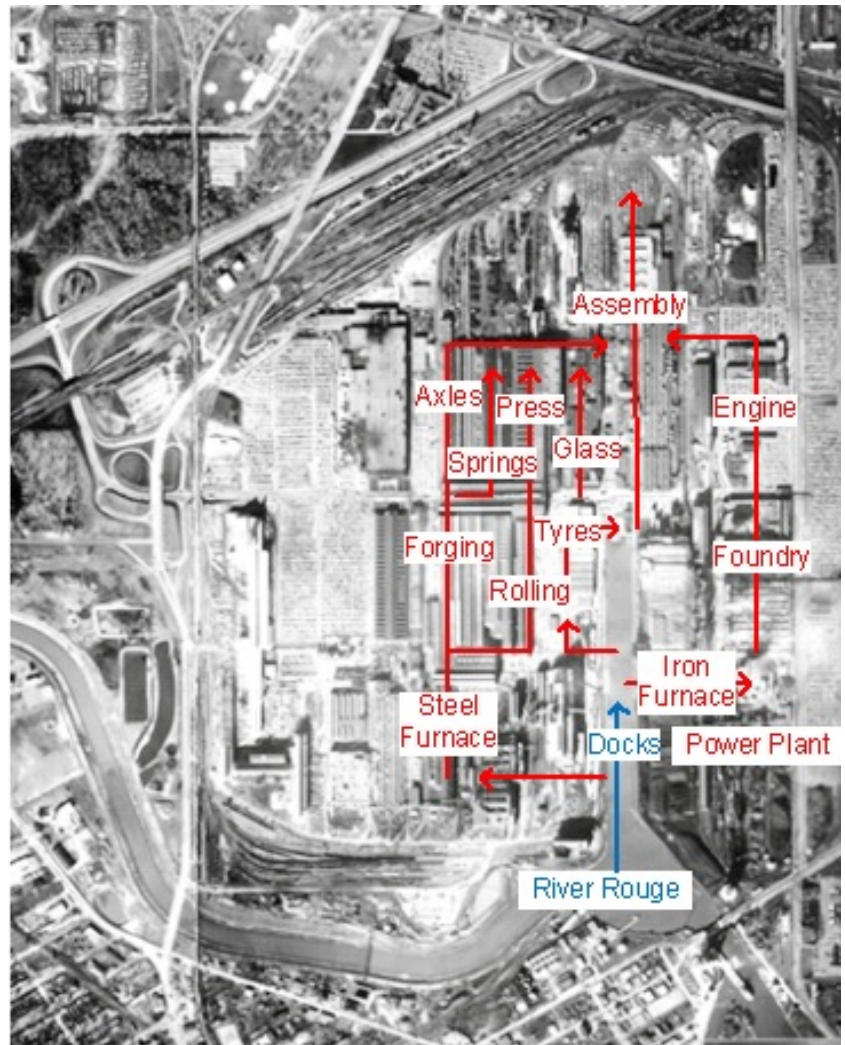
And so to the crux of this post: Lots of organisations from all around America and the world went to the River Rouge to learn...but what did they see...and, therefore, what did they go away to do?

American Manufacturers post World War II.

So American organisations saw scale at the River Rouge.

Unfortunately, achieving the product variety now demanded by customers meant regularly stopping the production line to change tooling to be able to produce the different variants.

Delivering variety was seriously hindering speed.



What to do? Here's what they came up with:

- Let's interrupt the flow and decouple the stages within the production line, **allowing the different processes to operate independently**, and create buffer stocks between each process;
- Let's build each process to the largest scale feasible, and then **run large batches per product variant** through at the fastest rate possible and thus **keep the number of changeovers required down to a minimum**.
- Let's build warehouses to **store all the resultant inventory** (Work-in-process and finished goods)

This fundamentally changed production from workers producing for the next process step to workers merely producing for inventory. It became a case of 'make lots and inspect later'. It was virtually a crime to stop the line³ – a disaster for quality!

Of course, once the main process steps were decoupled, their co-location didn't matter so much. So rather than having a number of end-to-end manufacturing sites across America, the 'logic' could extend to...

- Let's centralise process steps into 'centres of excellence' so that we can increase scale even further! We might end up with, say, a massive steel works in one city, huge sub-assemblies in another city and a mega final assembly yet somewhere else.

...and the above 'solution' (<https://squiretothegiants.wordpress.com/2016/06/16/so-you-think-youve-got-a-problem/>) to variety introduced massive wastes in the forms of transportation across sites; inventory and its motion as it is constantly transferred in and out of the warehouse; over-production and obsolescence; defects through poor quality and rework...and on and on and on.

You could conclude that they 'unlearned' (even destroyed) what Henry Ford had achieved before variety had been introduced.

The above led American manufacturers to the hell of:

- **centralised planning**, culminating in mega algorithms calculated by Manufacturing Resource Planning (MRP ii) computer applications, producing theoretical answers far from reality; and
- '**management by results**' using managerial accounting data (unit costs, rates of return, targets (<https://squiretothegiants.wordpress.com/2014/12/06/the-trouble-with-targets/>), budgets (<https://squiretothegiants.wordpress.com/2016/05/13/the-great-budget-god-in-the-sky/>),...) to command and control the work.

This approach, even though it was hugely wasteful, proved profitable until the 1970s...until domestic demand became satiated and globalisation opened up the market to other manufacturers. Things suddenly became rather competitive....

Over in Japan

The Japanese, and Toyota in particular, saw flow at the River Rouge.

Taiichi Ohno (<https://squiretothegiants.wordpress.com/my-giants/taiichi-ohno-1912-1990/>) (Toyota) realised that **flow was the important bit**: "*[they] observed that Ford's plant conserved resources, by having processes linked in a continuous chain and by running slowly enough so that people could stop and fix errors when they occurred*" (Johnson

...can stop with just errors when they occur now. (Johnson)
(<https://squiretothegiants.wordpress.com/my-giants/h-thomas-johnson/>)⁴)

Japan, unlike America, did not have the luxury of abundant resources after World War II. They couldn't afford to create huge factories or tie up money in inventory...so they had to find a different way – to do a lot with a little.

Taiichi Ohno came to the conclusion that **variety and flow had to go together** i.e. *“a system where material and work flowed continuously, one order at a time”* (Johnson).

This created some clear challenges to work on:

- rather than simply accepting that machine changeovers took time, Ohno set his workers the challenge of **continuously reducing set up and change-over times**; and
- rather than running high-volume batches per variant, Ohno empowered each worker to design and control the steps they performed so that they could **perform different steps on each unit that passed through them**

In short, he set his people a huge visionary challenge, of working together as a system to think about the incremental, and sometimes giant, steps they could take to **handle variety ‘in the line’**.

Rather than centralised planning with standardised work dictated to them, the workers were empowered, and encouraged, to think for themselves, to deal with what was in front of them, to experiment and to innovate....and to share what they had learned.

And, wow, they came up with some fabulous techniques such as ‘Single-Minute Exchange of Dies’ (SMED), ‘pull’ (<https://squiretothegiants.wordpress.com/2015/09/13/pulling-power/>) using kanban, product supermarkets, ‘stop the line’ using andon cords (<https://squiretothegiants.wordpress.com/2015/03/03/a-gulf-in-thinking/>), visual management (<https://squiretothegiants.wordpress.com/2016/06/09/sir-sir-sir-have-you-marked-it-yet/>), machine ‘right sizing’...and on and on.

I could write about each of these...but I’m not going to (at least not now). The point is not the brilliant innovations themselves. It is the clear and permanent challenges that were set and the constant progress towards them.

You may copy ALL of Toyota’s techniques but they (and other like-minded organisations) will still leave you far behind. Why? Because, whilst you are attempting to copy them they are racing yet further ahead. Indeed, what you copy (even if you ‘get’ the why) may be an out-dated technique before you go live! (This is to compare a static vs. dynamic environment (<https://squiretothegiants.wordpress.com/2015/02/18/benchmarking-worse-than-cheating/>))

What about service?

The Western (?) ‘solution’ for service organisations has, sadly, been virtually the same – scale: to standardise, specialise, centralise and ‘crank up the volume’.

Yet the challenge of handling customer variety (<https://squiretothegiants.wordpress.com/2015/05/16/the-spice-of-life/>) is so much bigger: variety for service organisations is virtually infinite – it’s different per customer and, even for a given customer, it differs as their circumstances change.

So should we just pick up the 'Toyota tool kit' and get implementing? No. The techniques to meet the challenge will differ. Service is NOT manufacturing
(<https://squiretothegiants.wordpress.com/2015/09/02/so-why-cant-we-do-that/>).

But can we learn from Toyota? Most certainly – but this must be at the deepest 'beliefs and behaviours' level.

The core message from the above is that service organisations should design their system such that the front line are allowed, and enabled, to absorb variety in customer demand.

If you run a service organisation and you have set up:

- a front office 'order taking' function to categorise demand (which can only be based on the limited information available to them), and break it down into standard 'work objects' from an allowable catalogue of variants;
- a 'workforce management' function to: prioritise and allocate (i.e. push) these work objects into 'work queues', usually by temporal batches (e.g. by day / shift or weekly);
- multiple specialised back office silos to churn through their allocated work, 'motivated' by activity targets (and incentives) regarding volumes of work performed; and, as a result
- **a complete confusion as to who is taking responsibility for resolving the customer need**

...then you have seen scale, through commanding and controlling the work, as the 'solution'.

If, however, you are on a journey towards:

- equipping the people at the point of contact with the necessary expertise and freedom to respond to what most customers will predictably want (i.e. the bulk of demand); and
- where more unusual demand hits the system, **allowing and enabling these same 'front of service' people to 'pull' expertise to assist, yet retaining ownership of the service provision** (thereby speeding up their rate of learning and widening their skills and knowledge)

...then you are on a similar track to Ohno: Pursuing flow for each unique customer demand, through revealing and harvesting the passion and pride within your workers.

Footnotes:

1. Sources: Much of the above comes from early chapters within three books:

- 'Relevance Regained' by H. Thomas Johnson
- 'Profit Beyond Measure' by H. Thomas Johnson
- 'Toyota Kata' by Mike Rother

Other details (including pictures) come from searching around the 'interweb' thing.

...and of course the service ending is inspired by the work of John Seddon.

2. Historical point of detail: *"The River Rouge was built to produce Model T Fords for decades to come, [but] by the time it was capable of full production later in the [1920s], a factory a tenth its size could have handled the demand for Model Ts."* (Wiley)

i.e. Henry Ford had built this huge production machine but his product had gone out of fashion because its competitor, General Motors, was providing the variety that customers now wanted, albeit using scale to do so. Ford was now in a dash to recover.

3. **'Stop the line' crime:** Workers knew that managers wanted them to make as many as possible, with no 'down time'. I understand that this is where the phrase to 'throw a spanner in the works' comes from...which refers to a disgruntled worker 'accidentally' dropping a tool into the assembly line mechanism so that the line stopped and they all got a break whilst the cause was found and rectified.

4. **A fresh giant:** Johnson is a giant for me, and I've been meaning to add his 'giant bio' to this blog for ages now...I have finally done so (<https://squiretothegiants.wordpress.com/my-giants/h-thomas-johnson/>). 😊

[5 Comments](#)

False Economies

[\(https://squiretothegiants.wordpress.com/2015/10/18/false-economies/\)](https://squiretothegiants.wordpress.com/2015/10/18/false-economies/)

[October 18, 2015](#)[October 18, 2015](#) [giantknave](#) [Brain Farts](#) [Alfie Kohn](#)
[Economies of scale](#), [Flow](#), [John Seddon](#), [Service](#), [Systems Thinking](#), [Taiichi Ohno](#)



(<https://squiretothegiants.files.wordpress.com/2015/10/chasing-money.jpg>) So I expect we have all heard the phrase '*Economies of Scale*' and have a view on what is meant.

The phrase is probably covered within the first pages of '*Economics 101*' and every '*Beginner's book of management*'. I think the idea has even leaked out of these domains and is used in every-day parlance. It is seen merely as 'common sense'*.

(* please read and reflect upon a hugely important quote on 'common sense' when you get to the end of this post)

So what is the thinking behind 'Economies of Scale'?

Let's start at the beginning: Why is it said that we benefit from 'economies' as an organisation grows larger?

The idea in a nutshell: To run a business you need resources. As you grow, you don't necessarily

need a linear increase in those resources.

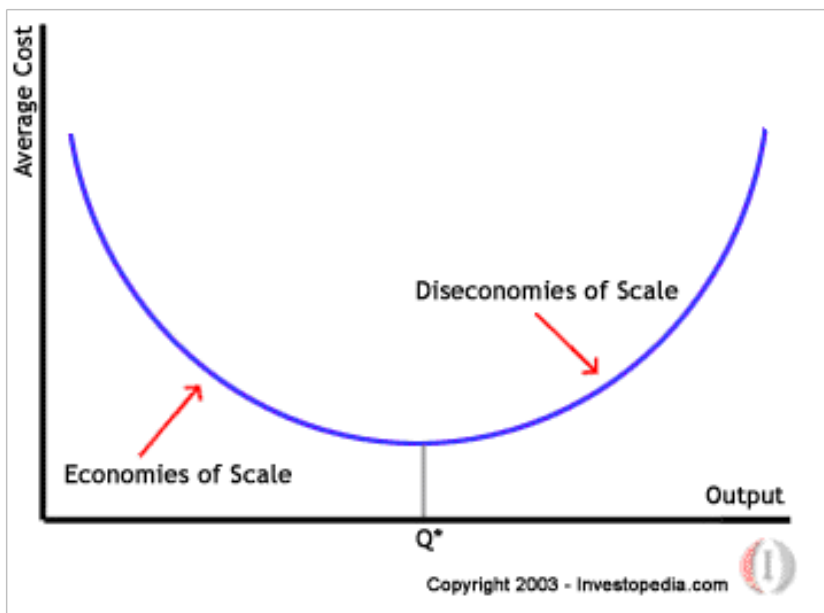
Basic example: A 1-man business premises needs a toilet (if he needs to go, well he needs to go). But when the next person joins the growing company he doesn't get his own personal toilet written into his 'remuneration package'. No, he has to share the existing toilet with his fellow employee. You can see this logic for lots of different things (one building, one IT system, one HR manager....), but I reckon a toilet is about as basic as it gets.

The theory goes that as the volume of output goes up* then unit costs come down (where unit cost = total cost / units of output).

(* I'm writing generally now...I've moved on from toilet humour 😊)

It should be noted that the classical economists that came up with the theory did accept the idea of 'diseconomies of scale': that of costs rising as growing organisations become more complex, more bureaucratic...basically harder to manage.

You'll likely see all this expressed in economics text books with a very simple diagram (below) and, voila, it is surely so!



(<https://squiretothegiants.files.wordpress.com/2015/10/economies-of-scale.gif>)

Getting into more specifics about the phenomenon, three distinct reasons are given for those scale economies:

- **Indivisibility:** Some resources aren't divisible – you can't (easily) have half a toilet, a quarter of a receptionist, $1/8^{\text{th}}$ of a manager and so on.
- **Specialisation along with Standardisation:** this reason goes way back to the writings of Adam Smith and his famous book called '*The Wealth of Nations*' (1776). In it, he used the example of a pin factory to explain the concept of '**the division of labour**'. He explained that one person performing all the steps necessary to making a pin could perhaps make only 20 pins a day but if the pin-making process were broken up into a series of limited and standardised operations, with separate people performing them in a joined-up line, productivity could rise to thousands of pins per day per worker.

- **Machinery:** Investing in ever larger machines mean that they can turn out more and at a faster rate...and our beloved unit costs come down. In service organisations the equivalent could be a 'bigger, better' telephone system, IT system,...etc.

Sounds like a water tight case to me – 'Economies of scale' proven, case dismissed!

Not so fast...a few dissenting voices:

"All the above seems to be about managing our costs? We are concerned about where this might lead – shouldn't we be first and foremost focused on delivering value to our customers?"

"We've got really low unit costs at lots of our activities...and we keep on making 'economies of scale' changes to get them even lower...but this doesn't seem to be reducing our total costs (they remain annoyingly high)...are we missing something?"

"Gosh, that 'economies of scale' average cost curve looks so simple...so all we need to know is when we are at the optimum size (Q) and stop growing. Easy! Can someone tell us when we reach that point? How about a nice warning signal when we are getting close? What do you mean it's just 'theoretical' and no-one actually knows?!"

"I've heard that 'behavioural economics' is debunking a central assumption within Adam Smith's classical economic ideas. Apparently we are all human beings (with our own unique purposes), not rational robots!"

(Nice link: [Who cooked Adam Smith's dinner?](http://www.amazon.co.uk/gp/product/B000000000?colid=UFHBRJCXD56L&coliid=I35UKQ3M4FYNIS&ref_=wl_it_dp_o_pC_nS_img)

(http://www.amazon.co.uk/gp/product/B000000000?colid=UFHBRJCXD56L&coliid=I35UKQ3M4FYNIS&ref_=wl_it_dp_o_pC_nS_img)

(http://www.amazon.co.uk/gp/product/B000000000?colid=UFHBRJCXD56L&coliid=I35UKQ3M4FYNIS&ref_=wl_it_dp_o_pC_nS_img)

"We don't make pins. We are a service organisation. We have much variety in demand and our customers are 'co-producers' within our process...specialisation and standardisation can do much harm to them, and therefore us!"

Meanwhile, on another planet...

Taiichi Ohno (<https://squiretothegiants.wordpress.com/my-giants/taiichi-ohno-1912-1990/>) developed the Toyota Production System (TPS). In so doing, he used totally different thinking, with profound results.

(Note: Historians have identified a core reason for this difference in thinking as the heavily resource-constrained context that Japan found itself in after the 2nd world war. This was in complete contrast to 1950s America that had an abundance of resources and booming customer demand. In short, Ohno had to think differently to succeed.)

The big difference – Flow, not scale, as the objective: Ohno concentrated on total cost, not unit costs. He realised that, first and foremost, what matters is how smoothly and economically a unit of demand is satisfied, from initial need through to its completion (in the eyes of the customer).

The flow is everything that happens between these points and, as well as all the value-adding steps, this includes:

- all the time that nothing is happening (a huge proportion of a traditional process)
- all the steps that occur but shouldn't really need to (i.e. they are non-value adding);
- all the repeat and/or additional steps needed because something wasn't done right; and (the worst of all)
- everything needed to be done when the customer returns with the good or service as not being

acceptable (where this could be days, weeks or even months later)

There's no point in a particular activity being made 'efficient' if this is detrimental to the flow.

'Economies of scale' thinkers (and their management accountants) are obsessed with how much each activity costs and then targeting reductions. Their belief is that, by reducing the costs of each activity, these aggregated savings will come off the bottom line. Such thinking has led to:

- 'large machine thinking' (which also relates to centralisation/ shared services);
- 'batch thinking' to make these resources work (allegedly) more efficiently;
- 'push thinking' to keep these resources always working – high utilisation rates are king; and
- inflexibility due to highly specified roles and tasks

...which cause a huge amount of waste and failure demand.

Ackoff (<https://squiretothegiants.wordpress.com/my-giants/russell-ackoff-1919-2009/>) made incredibly clear in his systems TED talk (<https://squiretothegiants.wordpress.com/2014/12/21/harmony-or-cacophony/>) (using the automobile as his example) that trying to optimise the components of a system will not optimise the system as a whole. In fact, the reverse will be true and we can expect total costs to rise.

Rather than trying to get the cost of a specific activity down, Toyota (and other system thinkers) focus on the end-to-end horizontal flow (what the customer feels). This is a different (systemic) way of thinking and delivers far better outcomes.

It is no coincidence that Ohno is also credited with much of the thinking around waste. It is only by thinking in terms of flow that waste becomes visible, its sources understandable (<https://squiretothegiants.wordpress.com/2015/08/04/enough-rope-to-hang-ourselves/>), and therefore its reduction and removal possible.

In short, **Cost is in flow, not activity.**

Flow thinking has led the design of systems to:

- 'right-size thinking' and 'close to customer thinking';
- 'single-piece flow thinking';
- 'pull thinking'; and
- handling variety 'in the line' thinking (*Note to self: a future post to be written*)

These all seem counter-intuitive to an 'economies of scale' mindset, yet deliver far better outcomes.

(How) does this apply to service?

Okay, so Ohno made cars. You might therefore question whether the above is relevant to service organisations. Here are examples of what the 'Economies of scale' mantra has given us in service, broken down into comments on each of specialisation, standardisation, centralisation and automation:

Specialised resources: Splitting roles into front, (middle) and back offices; into demand takers (and 'failure' placators), transactional processors, back room expert support teams and senior 'authorisers'...meaning that:

- we don't deal with the customer when/ where they want;
 - causing delay, creating frustration – which needs handling;
 - incorrect setting of customer expectations;
 - unclear ownership, leading to the customer having to look out for themselves
- we have multiple hand-offs;
 - causing batching, transportation, misunderstandings, re-work (re-reading, re-entering, repeating, revising);
 - we break a unit of value demand into separate 'work objects' which we (hope to) assign out, track separately, synchronise and bring back together again (...requiring technology);
- we collect information to 'pass on' (...requiring technology)
 - often passing on incomplete and/ incorrect information (or in Seddon's (<https://squiretothegiants.wordpress.com/my-giants/john-seddon/>) words "*dirty data*"), which escalates to the waste of dealing with the defects as the unit progresses down the wrong path;
- we categorise, prioritise, allocate and schedule work around all these roles (...requiring technology)
- ...all of the above lengthens the time to deliver a service and compromises the quality of the outcome, thus generating much failure demand (which we then have to deal with)

Standardised activities: Trying to achieve a standard time (such as Average Handling Times) to perform a standard task (using standard templates/ scripts) that appears to best fit with the category that 'we' (the organisation) jammed the customer into

- rather than listening to the customer's need and attempting to deliver against it (i.e. understanding and absorbing customer variety);

Centralisation: Seeing 'shared services' as the answer using the "*there must be one good way to do everything*" mantra.

- creating competition for shared service resource between business units and the need for SLAs and performance reporting;
- requiring some 'super' IT application that can do it all ("*well, that's what the software vendor said!*" (<https://squiretothegiants.wordpress.com/2014/12/03/it-and-improvement/>));
- 'dumbing down' the differences between services (and thus losing the so-called 'value proposition')
- loosening the link between the customer and the (now distant) service.

Automation: Continually throwing Technology at 'the problem' (usually trying to standardise with an '*out of the box*' configuration because that will be so much more efficient won't it) and, in so doing, creating an ever-increasing and costly IT footprint.

Whilst technology is amazing (and can be very useful), computers are brilliant at performing algorithms (e.g. calculations and repetition) but they are rubbish at absorbing variety, and our attempts at making them do so will continually create failure demand and waste.

In summary: 'Economies of scale' thinking is **more** damaging in service because of the greater variety in demand and the nature of the required outcomes.

To close:

This post isn't saying that scale is wrong. It is arguing that this **isn't the objective**. Much harm is,

and has been, done by blindly following an activity focused logic (and the resultant 'specialise, standardise, centralise, automate' mantra)

Further, I get that some of you might say *"you've misunderstood Steve...we aren't all running around saying we must be big(ger)!"*...but I'd counter that the 'economies of scale' conventional wisdom is implied in a relentless activity cost focus.

Put simply, "Economy comes from flow, NOT scale" (Seddon)

End notes

Beware 'Common sense':

"There is a time to admire the grace and persuasive power of an influential idea, and there is a time to fear its hold over us.

The time to worry is when the idea is so widely shared that we no longer even notice it, when it is so deeply rooted that it feels to us like plain common sense.

At the point when objections are not answered anymore because they are no longer even raised, we are not in control: we do not have the idea; it has us." (Alfie Kohn
(<https://squiretothegiants.wordpress.com/my-giants/alfie-kohn/>))

Credit: The 'Economies of scale' explanation comes from reading a John Seddon paper.

Being fair to Adam Smith: He understood that the specialisation of tasks can lead to *"the almost entire corruption and degeneracy of the great body of the people [the workers]. ... unless government takes some pains to prevent it."* i.e. it might be great for the factory owners...but their workers are people, not machines.

[Leave a comment](#)

Being an All Black

(<https://squiretothegiants.wordpress.com/2015/09/29/being-an-all-black/>)

[September 29, 2015](#)[September 30, 2015](#) [giantknav](#) [Brain Farts](#) [All Blacks](#),
[Culture](#), [Douglas McGregor](#), [Motivation](#), [Steve Hansen](#), [System](#), [Taiichi Ohno](#), [W Edwards](#)
[Deming](#)



(<https://squiretothegiants.files.wordpress.com/2015/09/haka.jpg>) So a few people have sent me the link to the recent Steve Hansen interview (<http://www.3news.co.nz/tvshows/thenation/interview-all-blacks-coach-steve-hansen-2015091210>)* (20 mins. long) – thanks for that, it's very good and worth writing this post about.

** For those of you who live on a different planet – Hansen is the current coach of the All Blacks (that's a rugby team!) and is currently at the 2015 World Cup in England.*

Listening to the interview shows how truly special the All Blacks environment is. I pick out below what I think are key things said that are applicable to any / every organisation that wants to continually strive towards its true purpose:

(Quotes are in blue text with my thoughts following in black)

Interviewer's Question: *"...What defines Steve Hansen's All Blacks?"*

Steve Hansen's Response: *"It's not Steve Hansen's team...it's about a collective group who are trying to do something [purposeful]....we have to set ourselves some lofty goals, and some people may say that's arrogant, but I think if you want to achieve something in life, you've got to set big goals..."*

This links to the setting of a clear challenge* such that everyone involved understands and wants to drive towards it, **not for the leader but for themselves.**

As such, this challenge has to be:

- **Meaningful:** about making the world a better place in some way;
- **Tangible:** easily relevant to everyone who is to be involved, not distant and abstract; and
- **Real:** not a fake side-act for something else (see [POSIWID](https://squiretothegiants.wordpress.com/2015/05/28/posiwid/) (<https://squiretothegiants.wordpress.com/2015/05/28/posiwid/>)).

*The challenge is not about a solution – you should know where you want to go but not impose how you believe you are going to get there (See [How to have a successful journey](https://squiretothegiants.wordpress.com/2015/06/28/how-to-have-a-successful-journey/) (<https://squiretothegiants.wordpress.com/2015/06/28/how-to-have-a-successful-journey/>)).

Interviewer's Question: *"Is that one of the defining factors – the fact that it is a collective?"*

SH Response: *"...for this team to really play well, we need to be as one and **the team has to be greater than the individual...**"*

This fits perfectly with the idea of systems thinking. The All blacks are a system made up of component parts – 15 individuals on the pitch, 7 on the bench, more in reserve, coaches and back room staff.

They want, and need, to optimise the system, not its component parts.

Every player will want to be picked in the 1st 15...but will work together even if they are not. If Dan Carter isn't picked for a game, you'd still expect him to use all his 100+ caps of experience to help his replacement...and he most certainly will – and if you doubt it, look for the water boy!

Interviewer's Question: *"You've talked about humility and...devolving leadership...as the coach...you have to give up some control. Is that right?"*

SH Response: *"Well, it might seem like you have to give up control, but, really, **it's not about control. It's about everybody going in the same direction, trying to achieve the same thing**, so you're not having to control anyone to do that. They want to be alongside you. And in some cases, you want them to be in front of you because they're the people that are out there playing, and they've got to make the big decisions in the moment in the contest. And all we [the coaches] are is here to **facilitate an environment...that is conducive to them being able to play.**"*

This echoes everything posted on this blog about the important thing being the environment. We need to move away from a 'command and control' logic (and all its management instruments of torture) and replace it with a realisation that **Purpose + Environment = the starting point!**

Then, and only then, will the whole team truly work together for the good of all.

Purpose is necessary. Environment is necessary. Neither, on its own, is sufficient.

The other point is that it is about the people 'at the Gemba' making decisions. The coach's job is just to provide the direction and support to enable this.

Interviewer's Question: *"How do you, Steve Hansen, see...get the feel for what a player needs?"*

SH Response: *"Well, once we've talked about the team coming first, **the team's made up of a whole lot of individuals**, so you try and do your best to get to understand the individuals and what makes him or her*

tick...You're really looking at them, 'how am I going to get the best out of that person?' along with the other guys that are helping you do that. It's about watching them every day...you just know after a while when you're rubbing shoulders with them all the time what individuals need and what they don't, and I guess that's the art of coaching."

This echoes what was written in People are people so why should it be (<https://squiretothegiants.wordpress.com/2015/03/18/people-are-people-so-why-should-it-be/>). We are all different, we have different strengths and weaknesses – **the task is to develop each and every one of us, not judge and compare us!**

Interviewer's Question: "...you spend a lot of the time motivating the team..."

SH Response: "Interestingly enough I don't think my job is to motivate the team. **My job is to create an environment where motivated athletes can perform...**"

I think Hansen might have read a bit of McGregor (<https://squiretothegiants.wordpress.com/2015/02/11/oh-no-not-that-old-theory/>) and Herzberg

He understands that I can't motive you...but I can strive to provide an environment that has the best chance of you getting the best out of yourself for the good of you and your team.

I very much doubt that Hansen uses the management tools of cascaded personal objectives, individual targets, judgement and extrinsic rewards. Can you imagine him taking, say, SBW (*that's one of the players*) to one side and saying "Right Sonny, your target this game is 6 offloads, 4 crunching tackles and 2 tries and if you do it, I'll give you a sports car". This would destroy the collaboration that he wants from his collective. It would make it about the individual rather than the team. It would make it about hitting the target and then doing no more.

Who's had a son or daughter playing sport and seen what happens when a parent tries to motivate their child with, say, money for scoring a try (or goal or...). It is a coach's worst nightmare! How on earth can they persuade this individual to get that 'dangling carrot' out of their mind to pass that ball?!

Interviewer's Question: "Everyone wants to get better. I mean, how do you actually do it?"

SH Response: "I think it's about living it every day. You create an environment where you're living every day trying to get better and you're not accepting that what you're doing today's good enough. And I think if you keep pushing that and everyone's bought in to it first and foremost and then you keep pushing it and driving it, it's achievable. But the minute you decide that 'Okay, we've arrived' someone's just going to draw [go] straight past you..."

He understands that it is a never-ending journey and the moment you think '*aren't we just great!*' then you are in trouble.

It's also about looking at yourselves and what you are doing rather than trying to be like somebody else (see Benchmarking – worse than cheating (<https://squiretothegiants.wordpress.com/2015/02/18/benchmarking-worse-than-cheating/>))

...and finally:

Whether they achieve their lofty goal (retaining the world cup) or not, I think you'd agree that they appear to be going about it in a fantastic way.

When I look back at Steve Hansen's interview I think *'he really gets it'*. I also **believe him** – I don't think he is just saying it...and, as such, I would follow him (I just need to get good at rugby now!!!).

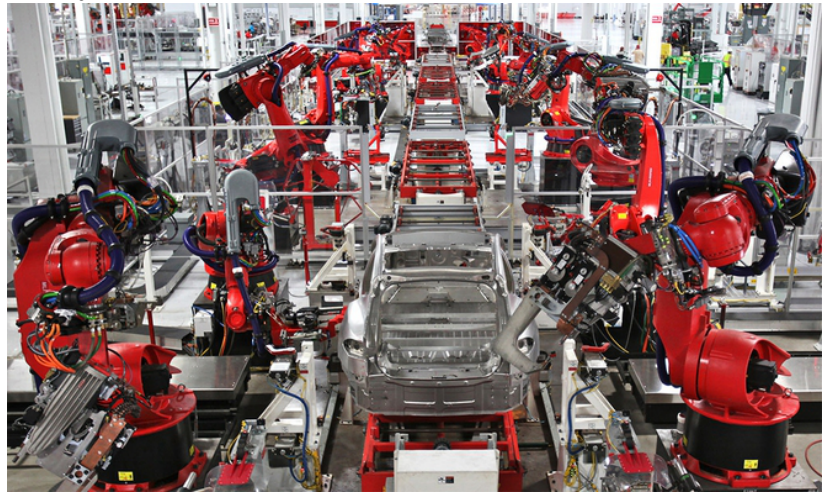
If you didn't know differently, you could easily think that Hansen was a student of Deming (<https://squiretothegiants.wordpress.com/my-giants/w-edwards-deming-1900-1993/>) and Ohno (<https://squiretothegiants.wordpress.com/my-giants/taiichi-ohno-1912-1990/>) ...and who knows, he might be!

4 Comments

So why can't we do that?!

(<https://squiretothegiants.wordpress.com/2015/09/02/so-why-cant-we-do-that/>)

September 2, 2015September 3, 2015 giantknave Brain Farts customer, John
Seddon, Manufacturing, Service, Taiichi Ohno, Toyota



(<https://squiretothegiants.files.wordpress.com/2015/09/tesla-factory.jpg>) I don't know about you but ever since I was a kid I have loved watching short videos of manufacturing plants and staring in wonder at how the products we take for granted actually get made! It all seems so futuristic and alien.

Here's a short (4 mins) yet amazing video (https://www.youtube.com/embed/8_lfxPI5ObM?rel=0) showing the mind-boggling production of TESLA Model S cars over in Fremont, California.

What do you notice? Here's what I see:

- a large, high volume manufacturing plant;
- an ultra clean and tidy environment;
- ordered, smooth flow through specialised process steps;
- consistency of operation and velocity;

- substantial mechanisation & automation;
- calm and assured humans working alongside the machines;
- ...with a high quality product coming out the end.

Sounds fantastic, I'll have some of that!

...so why is it that service organisations don't seem to get anywhere near the awesomeness that is modern day manufacturing?

Here's the answer.....because they try to copy manufacturing!

"Hey, that doesn't make sense..."

Surely (I hear you say) if manufacturing is sooo advanced from the times of Henry Ford and through Taiichi Ohno's (<https://squiretothegiants.wordpress.com/my-giants/taiichi-ohno-1912-1990/>) Toyota Production System, then service organisations should be studying what they have done and applying it to their world?

And, indeed, that is what many (most) service organisations have done. But, in doing so, they have spectacularly missed a crucial point: Service is different to manufacturing and therefore they have been 'solving the wrong problem'.

Here's a fundamental John Seddon (<https://squiretothegiants.wordpress.com/my-giants/john-seddon/>) quote with regards to service:

"Service differs from manufacturing. There is inherently more variety in customer demand....Whilst the Toyota method was developed to solve the problem of how to produce vehicles at the rate of customer demand, in service organisations the problem is how to design the system to absorb variety."

Going back to the TESLA factory, **notice how each car being made is essentially the same**. Now I know that there is some variety – different colours, different engines, different trim levels – but it is basically the same (modular) product. I also know that Taiichi Ohno's Toyota Production System brilliantly worked out methods to deliver this limited variety within the one production process (as opposed to requiring separate lines).

Much of manufacturing has adopted the mantra of '*specialise, standardise, centralise and then automate*'....**but this is just about the opposite of what would be good for a customer requiring their very specific needs to be met for a service.**

Let's carry on with the car example but move on down the process to the service end – the selling, distribution and servicing of the car.

Let's assume that TESLA's competitor, TRAGIC, has applied the manufacturing mantra to their car service processes.

TRAGIC has created a centralised and highly automated 'contact centre' and separate 'service centre', both of which are broken up into highly specialised teams with standardised processes.

- you will be directed to a website on which it is nigh on impossible to find out what you need to know, let alone a way of contacting a human being for a conversation;
- ...assuming you do find a contact number, you will then be punished by a multi-layered IVR that doesn't have an option that meets your specific need;
- you will have a standardised 'scripted' conversation with someone who doesn't seem to be

allowed to help you with your actual needs...but who can transfer you to [insert name of another department here];

- you will then be passed around a number of specialised departments as they all 'pass the parcel';
- you will be allocated to a 'back office' work queue and will have to repeat everything you have said so far to whomever is allocated your 'ticket' ...and they will likely disagree with whatever the person before them said to you along the lines of *"oh no, I only do this"* or *"no, they don't know what they are talking about, we can't do that for you"*;
- you will talk with people who have a standard time slot allocated to you (or at least an 'average handling time' target), who will ask you standardised questions, categorise you according to limited drop-down boxes in their computer and then allocate you to defined 'solutions';
- you will be confused as to who is actually dealing with you (or who even cares);
- you will spend time and effort chasing up what is happening;
- you will be provided with a standardised solution which either doesn't meet (or only partially meets) your needs;
-you will be forced through the whole sorry process again (and perhaps again) as you struggle to get your actual need resolved.

The Point:

In service, the customer comes in 'customer shaped'

(<https://squiretothegiants.wordpress.com/2015/07/11/a-service-revolution/>). Our job is to design the system so that it can absorb their variety, not frustrate it.

Beware the manufacturing mantra of '*specialise, standardise, centralise and then automate*'.

Toyota and automation: I know that the TESLA factory looks like it's been taken over by intelligent robots...but don't get too carried away with automation in manufacturing. It's worth noting that:

- Studies have shown Toyota factories to be significantly more efficient than their competitors despite being less automated;
- Toyota is wary of 'over automation' and has been reported to be reducing/ removing some automation in preference to human beings carrying out the work.

Their rationale? Putting to one side the enormous cost of developing, buying, installing and maintaining robotics, a robot simply does what it is programmed to do. Contrast this with a human that can think about the process they are performing and continually look for ways to improve it.

This can be the difference between static and dynamic processes...but of course this is only relevant *if* the human is in an environment that motivates them to continually improve what they do.

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The 8th, and greatest, waste

(<https://squiretothegiants.wordpress.com/2015/06/08/the-8th-and-greatest-waste/>)

June 8, 2015 giantknave Brain Farts Command and control, Development,
Responsibility, Taiichi Ohno, W Edwards Deming



(<https://squiretothegiants.files.wordpress.com/2015/06/performance-potential.jpg>) I expect many of you sometimes sit back from your desk, sigh, and think something along the lines of:

"Blimey (polite version 😊), I've got so much more to offer this organisation...if only they knew!...if only they properly utilised my particular talents and motivations".

Each of our talents and motivations will likely be very different

(<https://squiretothegiants.wordpress.com/2015/03/18/people-are-people-so-why-should-it-be/>) to one another but they are **incredibly valuable**.

So, what might happen if you took this 'my value is so wasted' thought further, along the lines of:

"Hey, why don't I actually say this the next time that I meet with my Manager!" (or is that Leader? We seem to be confused by these two words

(<https://squiretothegiants.wordpress.com/2015/03/31/confusion-over-two-words/>) nowadays)

What do you think his/ her response would be?

This brings me to something which seems to be all pervasive within a hierarchical 'command and control' organisation...I expect that you would hear the following response:

"but you are responsible for your own development!"

I've heard this at a few organisations throughout my 'career' and it has always made me **deeply uncomfortable**...not because I don't want to further myself (I absolutely do, always have and always will....but not necessarily in the 'go up the greasy *money-and-power* pole' way that might be implied).

It makes me deeply uncomfortable because this “*it’s your responsibility*” response:

- is so lazy and convenient! It sidesteps the need for management to think about why the person feels this way and what is preventing the organisation (and its customers) from benefiting from their potential;
- misunderstands, or worse, ignores the huge role of the management system in what an individual can achieve;
- demonstrates an abdication of responsibility* by the management above as to their role in understanding and developing their people and in enabling them to thrive;

(* as in “*Your development is not actually my problem! I might ‘throw you a few bones’ but take control of your own destiny...I did and look at me!*”);

- really means “*impress me (the manager)*”...where this is more about them than you.

Essentially, you have to do things that they want, rather than things that are in fact of value...and you certainly aren’t being encouraged to think for yourself, be bold, courageous and different.

The “*it’s your responsibility*” response completely bypasses the actual role of management – “*to change the system rather than badgering individuals to do better*” (Deming)

Curiously, the higher you succeed in climbing an organisation, I suspect the greater the risk of hubris and the belief that you got there almost 100% because of you! And therefore the most likely you are to want to deny the effects of the system on what you (as compared to others) were enabled to achieve.

Indeed, if you operate in a command-and-control organisation and are good at playing the necessary game, you may very well ‘go far’...but is this ‘game playing’ actually good for the organisation and, ultimately, towards its purpose? I think not.

The frustrating thing is that the command-and-control management system works very well for those at or near the top and any rational analysis of the waste caused by their management system is likely to be met with denial.

As a result, the only way that change is likely to occur is through those leaders studying the system, obtaining meaningful knowledge as to how it operates and working it out for themselves.

This doesn’t mean that it is hopeless for the rest of us: the more we help those same leaders look at the system and how it actually works then the more likely they are to ‘see’.

Note: The title of this post refers to Taiichi Ohno’s (<https://squiretothegiants.wordpress.com/my-giants/taiichi-ohno-1912-1990/>) original ‘7 wastes’ and the fact that an 8th overarching waste has been added – that of **the waste of untapped human potential**.

This 8th waste will be huge within a command-and-control paradigm.

1 Comment

L.A.M.E

(<https://squiretothegiants.wordpress.com/2014/12/03/l-a-m-e/>)

December 3, 2014March 23, 2015
Ohno

giantknave

Brain Farts

Lean, Taiichi



(https://squiretothegiants.files.wordpress.com/2014/12/inv6153_2_forearm_crutches.jpg) Have you heard people state that they are “*implementing Lean*” or, perhaps if they are further on their journey, that they are “*doing Lean*”? If so, I contend that they don’t really understand ‘Lean’. It is not something that you can tick the box when you ‘get there’.

And, because of this, it is no surprise to me when I come across people with a jaundiced view of ‘Lean’ – their understanding of it is probably not what those who coined the ‘Lean’ label would have hoped. This is no fault of the beholder – they are not cynics, just people who are likely to have experienced (or been passed on war stories about) L.A.M.E.

And before you ask a ‘Lean consultant’ if they agree with the above, bear in mind that there are two types of (usually clever) consultants: a) those that are selling a methodology and a bunch of related tools and b) those that really ‘get it’...and even they are (understandably) trying to make a living.

As a reminder: the word ‘Lean’ was simply attached as a label to describe the system (i.e. the complete management philosophy, principles, and operational practices) that a team at MIT uncovered within the Japanese car industry (but particularly Toyota) through their research, which began as far back as 1977.

The ‘Lean’ label has been on a journey since it was first coined in 1987 – it has spawned an

industry of its own. Of note, one of the foundational researchers, Jim Womack, has spent time reflecting on this journey and accepts that 'the early years' were somewhat unfortunately tools focused. He is trying to reset people's thinking.

Reflect that Taiichi Ohno, often referred to as the father of the Toyota Production System (TPS), didn't want to write it down because he insisted we shouldn't codify method, fearing that it would become stale – being seen as 'the answer' rather than merely the current state of thinking, to be continually challenged and improved.

So, I hope you understand when I try to be very specific when I talk about 'Lean Thinking'...and perhaps even get a bit edgy / pedantic when people switch to talking just about 'Lean'. This is because the real value in what the MIT researchers uncovered (which, incidentally, was being clearly articulated by Deming, Ackoff and others) is that Toyota's success is based on their

management system: the way they think....which has enabled, and continues to enable them to consistently deliver increasing value to their customers, whilst providing secure yet engaging work for their employees...which then delivers excellent results.

You can't pick up a 'Toyota organisation' kit off the shelf and implement it into your organisation. You have to understand why they are achieving and how this differs to you...and it's all in the thinking!

Oh yes, so what's L.A.M.E? This is (yet another) label as dreamt up by Mark Grabban, a Lean blogger in the health space. It stands for 'Lean As Misguidedly Executed'. If you remain within a command-and-control management system, having 'Lean' ostensibly done to you then this is clearly L.A.M.E.

To end with a quote from a favourite blog of mine (Thinkpurpose):

"Don't call it anything: if it has a name, people (including you) will waste time arguing about what 'it' is and isn't....

Call it something: otherwise nobody can ever talk about it!"

As Womack no doubt reflects on choosing to label what they learned from their research – you are damned if you do and damned if you don't.

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