

Future Shock Notes

Chapter 1 - The 800th Lifetime

- Future shock is the term coined for mankind's reaction to the rapidly accelerating change in culture/technology/industry relative to the evolutionary baseline.
- In addition the physics of society have changed - a small event that only affected a few people can have instantaneous worldwide impact thanks to video cameras and the internet

Chapter 2 - The Accelerative Thrust

- Changes in society across many mediums, cultural, technological, industrial, etc is accelerating... now noticeable in one owns lifetime whereas previously this was rare or singular at best
- This can be shown definitively in population density, energy consumption, economic, technology, transportation, etc. In some fields it's exponential (technological growth is inherently exponential as advancement begets advancement)
- Communication advances act as exponential multiplier to just about any of the areas mentioned above. This hastens the technological development cycle. They can also be combined together in multiple ways, leading combinatorial growth.
- It also enhances perspectives, leading to further growth on a layer deeper.
- Accumulation, production, etc of knowledge has also accelerated; another meta-growth engine
- It is dubiously argued that 'situations' in life also happen at an accelerating rate

Chapter 3 - The Pace of Life

- The pace of life for certain folks (say those living in major cities) appears to be faster
- It's possible the degree of future shock one experiences is more pronounced the older you are as the older you are the faster time seems to pass (because more of your life has been lived)
- Transience is the concept of temporaries sine everyday life; it is like throughput or turnover. Future shock can alternatively be stated in terms of transience (i.e. it has increased)

Chapter 4 - Things: The Throwaway Society

- One can understand future shock by looking at how society interacts with

- objects (materials, technologies, etc) it produces
- The ephemeral quality of modern day products (disposables, cheapness, fast-fashion, etc) supposedly shows this accelerating thrust
- Further, objects don't last as long, as evidenced by houses and planned obsolescence
- The accelerative thrust has increased the economy of things:
 - It's cheaper to make stuff
 - Thanks to more frequent development there's a chance to upgrade and improve more often and its affordable
 - The ability to pivot is optimized for to account for future inventions
- Likewise the duration and modularity of items have led to even more
- The evolutionary basis and understanding of scarcity has not aged with how modern society treats objects; leading to conflict
- Likewise this can be seen through increasing models of rental and subscription based ownership instead of literal ownership; partially explained by yet also reflecting and promoting a society that is more focused on "doing" than "having"
- Other examples include the fad business with digital marketing and the proliferation of different "brands" as a core product component

Chapter 5 - Places: The New Nomads

- The power of distance has been greatly reduced thanks to technology, leading to the transience of places as we regularly visit more places on a daily/yearly/etc basis than in the past
- Likewise people move and travel (work, vacation, etc) more frequently
- This can also be seen in our glorification of cars, etc
- This is also seen in how travel is something to aspire to and folks actively seek out, as a hobby, as an identity
- All of this moving alters relationships, which can alter historical ways humans treat and think about commitment
- This can be seen in how nowadays many people would put maintaining their job/career over maintaining their location

Chapter 6 - People: The Modular Man

- Relationships are often more temporary or limited in modern society's and there is less involvement+dependence - look at urban vs rural communities. Relationships are more about function - which makes people modular (a shoe salesman can be replaced with any other shoe salesman when we don't know anything about them as a person)
- This modularization is not necessarily bad; it can allow us to function more optimally and freely; it can reduce conflict too. You can have a fix of

totalistic and modular relationships and perhaps it's a matter of finding the sweet spot

- Relationships also tend to be shorter nowadays (in a broad sense). To accommodate a faster society we've had to account for shorter relationships by implementing processes to help out (ice breakers, welcome committee's, etc)
- We may reach a point where all such relationships will become increasingly transient as we move away from longer historic norms
- The high rate of job turnover may exacerbate this due to it creating more short-term relationships as people change jobs (and often location as a result)
- In fact our business world seems to optimize for and reward those that can disassociate most effectively (i.e. not letting connections to old colleagues hold you back, etc)
- Children experience this early on with constantly changing school classes and classmates

Chapter 7 - Organizations: The Coming Ad-Hocracy

- Bureaucracy (for the purposes of this book): System or organization where clear role in division of labor, vertical hierarchy / chain of command, optimized for performance (many companies nowadays - industrialism)
 - Can be changed by rearrangement
 - Or disbandment
- Organizations are changing at a significant rate compared to the past, see modern company org charts for example and how quickly they change/evolve; they do this in response to other changes
- This has a downstream affect in that turnover happens more frequently and those relationships change as well, more transience
- The rise of project management and the focus on projects shows we are thinking and operating on a more atomic and thus more transient level
- All of this is partially necessitated by a rapidly changing society, which of course has rapidly changing problems
- ^ This is ad-hocracy
- The need to move from Waterfall work models to Agile work models has resulted in a breakdown of the traditional working hierarchy to a flatter model. This of course leads to further transience
- We will move towards a world where bureaucracy is no longer the tool of choice to solve problems, but transient temporary task forces / teams
- The transience makes people less committed to the organization itself, people change jobs more often, etc, less dedicated to "the company"

- This seems largely good, but one side-effect is that it forces people to adapt quicker and faster, which they aren't quite used to (biologically or literally)

Chapter 8 - Information: The Kinetic Image

- Instant and transient celebrities are increasing in quantity over time as the accelerative thrust continues. This is true in politics and sports as well, even fictional characters. The court of public drama happens at an accelerated pace
- The 'entities' above are effectively images of reality and their accelerating pace means the rate at which we must form and forget such images is accelerating
- We can view cultural outputs as a representation of that society at the time, as it was ultimately that which must have led to it (in any functioning society at least)
- Even knowledge and information itself is growing and moving faster, we can barely keep up
- The way we raise children has changed as a result of our knowledge how to constantly changing; whole fields are constantly being reinvented
- Another example is books showing up on bestsellers list of shorter and shorter periods of time
- We experience uncoded messages (like seeing a leaf on the ground and hearing rustling) and coded messages (like language or images). Nowadays we have more man-jaded coded messages than personal observation and raw/uncoded events.
- Moreover said messages are more refined than ever in history due to mass media and fields like advertising and psychology
- Communication is accelerating
- We even use more words nowadays and go through them quicker
- Even art movements are happening quicker and quicker, likewise the purposes and applications for art are less permanent and more transient nowadays (think digital art, advertising art, etc)
- All of this has a corresponding psychological impact, the rapid change can cause stress and an inability to cope, potentially

Chapter 9 - The Scientific Trajectory

- As a result of transience and the accelerative thrust, the future will come so fast we will feel a perpetual sense of novelty, making us feel like 'strangers in a strange land'
- The problem will partially how we handle all of our new-found freedoms
- The author tries to make a point about how in 50 years we could be living

underwater and whatnot, but it falls on deaf ears because.... That didn't happen.

- Similarly for weather modifying tech, again it hasn't happened and we are a faraway off (unless you count global warming...)
- They kind of get biotechnology right though with things like gene editing, bio enhancement, artificial meat
- The author predicts eventually the human body will become modularized, replaceable, and even transient itself
- Likewise we could enhance human intelligence or apply machine intelligence to create something even beyond human, permanently changing human nature
- Even if many of these things don't come true, just a fraction is a lot of change. And it's all accelerating regardless of magnitude

Chapter 10 - The Experience Makers

- What humans want in the future may change; resulting in unpredictable economic impact due to fundamentally different models compared to current ones (examples: we focus on mental achievements rather than physical goods, ownership is meaningless due to godlike 'printers', etc)
- We are moving away from a model of scarcity, which will likely have economic impact; this could potentially diminish or solve 'capitalism vs communism' debates
- The economy will progress from goods to services, but what next? Quality of life? Most likely it will be 'experience industries', as we have already seen with things like AirBnB experiences, etc
- Not only will existing companies incorporate the above, entirely new industries will evolve to serve it
- In the future rather than create authentic experiences, we'll naturally move towards simulated ones (for cost and eventually increased effectiveness)
- We may eventually see for similar reasons experiential outcomes/rewards rather than typical cash or items sought in a more typical economy of the past
- This could eventually lead to the blurring of 'real' and 'simulated'
- With various parts of the world in different stages of this evolution, it could lead to conflict (i.e. one society struggling to eat in a production economy with another focusing on QOL and experiences).

Chapter 11 - The Fractured Family

- Improvements in birth technology (genetic enhancement, embryo selection, etc) will likely change motherhood, which will have an impact

on the very nature of families. A more extreme example is multi-parent babies (+2). The creation of a corresponding marketplace could have many implications as well.

- The transient nature of things (as discussed earlier) will make extended families more difficult to maintain due to varying locations, etc. The nuclear family may become stronger in a sense. This may continue to where there are essentially just partners as people move towards having less kids and later, etc
- We may eventually move to having people who's explicit job is raising kids
- We may have communal families
- Marriage may well change as it is generally based on love and partners growing together. Transience may result in vastly different and unequal rates of growth; challenging this ideal. This has already been seen in divorce rates; in a sense marriage has become a serial process... though it could be parallelized into the future

Chapter 12 - The Origins of Overchoice

- There is a popular Theory of Vanishing Choice that argues science and technology have led to standardization and as a result man will lose their freedom of choice to said standardization
 - However, the author argues this is incorrect and in fact the issue might be a paralysis of choice due to too many options - overchoice
- The above can be seen in how there are more soda brands, paper towel brands, cigarette brands than their use to be (even when adjusting for market cap)
- This is possible due to consumers having more disposable income and technology making so cheaper to do
- Grocery stores may appear more uniform on the outside now and perhaps overall, but the variety inside is like nothing seen before in human history
- This diversity of choice is not just in products but culture, art, and education
- This evidenced in book type production, art types, music genres, degree types / majors, television / tv show types, etc
- The author correctly predicts things like remote schooling, etc, powered by technology and computers

Chapter 13 - A Surfeit of Subcults

- There are more subcultures than ever before
- This is partly due to the fact that specialization breeds subcults (e.g. as

there are more sub-disciplines of science a subculture emerges amongst ease; likewise for genres of music, types of cars, etc... but all multiplied by the volume of such "interests")

- To keep advancing technology we need more specialists, which itself naturally breeds subcults for the same reason
- It's not just professionally, but in terms of what we find 'fun' too (look at all of the TikTok and Subreddit subcultures)
- One sees a repeated process where a small subcult such as hippies begins, becomes super popular, and then fractions into further subcults of itself
- The rate of new subcults and their turnover appears to be accelerating
- This could all lead to 'social overchoice', leading to issues
- It makes our society more complex, more difficult to reason about, and arguably for people to navigate / operate in

Chapter 14 - A Diversity of Life Styles

- Values are changing faster than ever too
- They are diversifying fast and starting to break up consensus
- Each of these lifestyles generally have icons and there are more than ever now
- These subcults and life styles possess so much power because of our seemingly universal need to "belong" and have an identity — we all have a tendency to gravitate towards this and place a strong importance on it. We belong to that group and follow it's social rules and pressures — it helps define how we live our lives — it is a decision to define decisions, a super-decision
- These lifestyles are a kind of super-product a high-level map to guide how they consume and use products from clothing to food to entertainment, etc
- Cognitive dissonance results in folks having a natural issue with other conflict subcults or life styles
- The acceleration of subcults and their fading and coming combined with the above can cause much distress
 - We are perpetually searching for the next subcult, meaning we are more vulnerable to trends or fads or political movements
 - Difficulty unifying large groups of people
- All of this choice can become a negative thing and our freedom can give to a point drive us to feel less free, we start to arrive at future shock

Chapter 15 - Future Shock: The Physical Dimension

- The author argues that there is a limit to how much change humans can

- deal with and we may be pushing past that due to the accelerative thrust
- The author explains how scientists studied change by looking at the degree of change people experienced in their lives and crudely quantifying it and correlating it with dealing future health (personal note: dubious claims that have logical fallacies such as confirmation bias, correlation vs causation, and apples/oranges extrapolation)
- On a neurological and hormonal level humans react to novel stimuli, often a stress response that literally does stress the body

Chapter 16 - Future Shock: The Psychological Dimension

- Future shock also manifests psychologically (not just physically) — i.e. mental health
- Extreme psychological situations (fighting behind enemy lines, etc) have shown the impact of vast change one can have on a person — literally causing them to stop functioning as with Long Range Penetration Strain... or more generally PTSD
- A closer example might be cultural shock of traveling to a new place
- Overstimulation can occur on three levels
 - Sensory: The absence of senses (sight, smell, etc) or the bombardment of them (think A Clockwork Orange). It can result in distortion of reality and confusion (as seen in the types of situations above, whether it be solitary confinement, being blindfolded, or being forced to listen to loud heavy metal)
 - Cognitive: Overstimulation can also affect our ability to think straight. Rationality requires some degree of consistent patterns for the basis of predictions. Future shock can affect both due to the rapid change. Humans appear to have a limit on how much information they can process. One can make the actions of a 'regular' person approach that of schizophrenics by giving information overload.
 - Decisional: A changing environment (future shock) forces us to make more non-programmed/non-rote decisions. The ratio of programmed to non programmed decisions appears to be increasing. This fits in with the above - more decisions mean there must be more information.
- Consequences of future shock appear to be:
 - Denial: Folks simply block out reality to better cope and relies on simple/historical tropes to rationalize reality. This can lead to big troubles when they are eventually forced to update.
 - Specialism: One only adopts change in a single segment of their life and not others. This leads to similar issues
 - Reversionism: One simply refuses to change and aggressively

advocates for the status quo and not changing.

- Simplificationism: One that gets quickly attached to what's new, to the point of obsession and over-focus. They can often deal in absolutes and not grasp the full picture. It can lead to non-rational behavior as they seek simple solutions by not taking in the complexity and bigger picture.
- Withdrawal: Simple isolationism to avoid it all.

Chapter 17 - Coping With Tomorrow

- We cannot simply stop the future so must instead prepare ourselves to cope with it and go about ushering it in in a responsible way
- Direct Coping
 - We should be keenly aware and present in the change going about around us and in us, and looks for signs of corresponding distress — it could be simple as turning down loud music or something more extreme such as avoiding travel to social places
 - We can employ helpful strategies like writing things down when we find ourselves too stressed to remember so many things, etc,
- Personal Stability Zones
 - We can intentionally choose to be stable in some aspects of our lives (job, clothing, relationship, etc) to maintain a good balance of change. They are often different for each person.
 - We can be quite smart about this by trying to forecast change, i.e. making predictions (about when you're likely to face a job change say due to market conditions or a relationship change due to age or a lifestyle change like going to college). This can help us plan ahead so we aren't bored in retirement or changing jobs right as we start a long term relationship, it can set us up for success
 - It can be smart to hedge for a certain maximum level of change so not too much goes on at once
 - Change should be blocked out - it's good and necessary to grow
- Situational Grouping
 - It may make sense to start classifying people not by their status but the changes they are undergoing — thinking about what people are becoming rather than what they are
 - Groups can even be created for such people - those undergoing a divorce or those moving to a new community or those having children go off to college, etc. Doing this can help people cope and prepare them to better deal with it.
 - This is somewhat like therapy for the future rather than working to cope with the past

- Crises Counseling
 - There are already experts to help counsel folks through difficult change, doctors, marriage counselors, career counselors, etc... but many more are needed for new kinds... but with more and more unique types of problem this becomes an increasingly impossible challenge it seems... but it might be possible if all people with experience work collectively together. With technology and a matching system this ought to be possible
- Half-Way Houses
 - Essentially half-way houses for gradually ramping someone up to experience change in a safe, controlled way — like a gradual way of moving from the middle of Alaska to NYC. Imagine a reception facility in NYC to help one do that - it might lead to better outcomes
- Enclaves of the Past
 - We may/should intentionally create communities with lower rates of change whether for reference, retreat, or vacation - a break from overstimulation
- Enclaves of the Future
 - The same as above but in the opposite direction (it could be used for practice or the same)
- Global Space Pageants
 - The implementation of rituals (just like we have now, whether it be coming of age celebrations or other things) - as they have also been shown to insulate against future shock... for example there can be ritualistic, yet non-religious celebrations, etc (think Thanksgiving)... Ritual can still serve a valuable role when it's done to a positive (or non-negative) end

Chapter 18 - Education in the Future Tense

- School throughout the ages has served to meet society's needs
- In ancient times it was simply repeating tradition and ancient wisdom, which made sense in a non-changing society all of that would still be true / valuable
- In industrial times mass schooling as we largely know today arose. It effectively simulated society (group projects matched projects at work) and even simulated going to another place to work (going to school) and likewise the work hierarchy also existed at school (teacher principal etc). School served as an introduction to industrial society
- Many of the criticisms we see about school today match up with not preparing folks for future, accelerating change... but we've started to see changes. There is more of a focus on learning about the present than the

past (modern history, current events, economics, etc)

- We've seen this as things like factory work have stopped and folks have moved into increasingly intellectual jobs. Precision, repetition, following orders, etc, are much less valued in this modern world
- Given the rapid rate of change understanding the past and present is not enough, we need better insight into the future too
- We will need to make predictions about the future and optimize for those, in addition to the ability to adapt. This will take a massive, coordinated effort to make happen. Naturally will not be fast enough.
- Computer-assisted education will allow more to happen outside of the school with more customer modules with customer content. It will become more focused on learning outside the classroom and extracurriculars to broaden experiences. One could have many mentors from many industries.
- Education could be come life long with periodic working breaks.
- All of this will require a radical revamp of schools
- Inclusion in curriculum should be based on applicability in the future
- Courses don't even need to be discipline-based, they could be based on life experiences and stages
- We need to build meta-curriculum to help us build the right courses
- We can even hedge our bets by distributing investments in not all folks learning the same thing, so as a society we are best prepared for the future
- There are meta skills that are useful in any super industrial society that all should be thought:
 - The ability to learn well
 - The ability to relate to others well
 - The ability to choose well and make decisions
- We must learn to constantly think predictively so we can be one step ahead — rehearsing. We need to make children practice this better by having more choice in school and less regimented systems, so they have to plan
- Games, simulations, etc, will be more powerful ways to teach this

Chapter 19 - Taming Technology

- While we should and can't simply stop technology, we need to be more responsible with it
- We are already seeing backlash to going about it in an unrestrained manor, which risks technological progress itself a la Cultural Revolution (think start of Three Body Problem)
- We must be smart to grow it safely, responsibly, and balance power

- Technology naturally shapes culture and we must not just let it happen but be smart about it. Technological questions are thus inherently becoming also political questions
- Much like we test medicines with the FDA, etc, before use we should start doing something similar for technology
- For example, companies could have a review process or doc they need to publish before unleashing new tech

Chapter 20 - The Strategy of Social Futurism

- Our current strategy is weak and borderline non-existent. Planning efforts have failed as they are too short term, often up democratic, purely economically-focused, and generalized. This has led to backlash towards the future, a focus on the past/nostalgia, a rejection of science, etc. Going forward we need a better strategy
- First we need values beyond just economic welfare like self-fulfillment, social responsibility, aesthetics, social justice, etc
 - To do that we'll need new measures equivalent to GDP, etc
 - We'll need a wider dashboard of metrics - including one for transience, choice, and all aspects of future shock
- Perhaps most importantly we need to think over larger time horizons - 5, 10, 15, 25 years in the future (And in some cases far further)
- We want to do more than assess what will happen — we want an understanding of possible futures and probable ones and then plan the work to transform the two sets to work towards preferable futures
- We will need to invest in organization to do both, enumerate what's probable and also all of the vast possibilities. We'll want multi-disciplinary teams to conduct these efforts
- Most attempts at doing this have suffered from some form of technocratic elitism and not sufficient democratization — while they may be efficient they don't track with everyone's goals leading to poor results
- We need to better democratize this practice beyond what has worked in the past, we can use technology to facilitate this better than "old fashioned voting" and politics with term limits that don't work with the timeline of change