



Independent Inquiry

BA Automotive & Transport Design

Independent Project – Task 1 **ACHA6013 - CW1**

By

Thomas Ingell

1900087

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In my relatively short time within the automotive design space, I have found that a number of aspects within my practice have changed vastly. My design process and workflow has undergone many developments, and combined with varying experiences, I have grown an entirely new perspective on not only automotive design, but design all together. Within my inquiry, I will be discussing various topics which, together, formulate my developing personal design values that are set to evolve much further as I gain more experience in the automotive world. I will be discussing questions which have left me with different attitudes towards my practice, outlining my key findings that have helped me to grow as a designer, and explain more about what I personally think creates the best solution to a design problem.

Over the last year or so, as part of my internship, I have been fortunate enough to have been able to spend my time working as a junior designer at CALLUM Designs, an exciting bespoke automotive and product design and engineering studio. This experience has been certainly the most impactful for my personal growth in both skills and mindset, and a key player to what my personal design values are today. It has also made me realise there is so much more to the role of a designer than I first thought, something I will outline throughout the course of my inquiry.

Having spent so much time around a talented team headed up by a car design legend Ian Callum, a car designer with over 40 years of experience (Callum, 2019), I have no doubt adopted the CALLUM philosophy somewhat within my practice. Above the foundations of what creates a strong product, there are key values which Ian has set out personally, and it's these striking pillars of design that filter down through his team, a team I have been so lucky to be a part of. Ian Callum's pillars of design and my explanations of each are as follows:

"Draftmanship/Proportions"

The fundamentals. Without these accounted for, the values to follow cannot be used to full effect. The proportions of a product are what sets the tone, allowing the shapes and features to shine. It's important not to overlook this stage of the design, because the proportions can drastically change the feel and look of a car or product with the smallest of changes.

"Line and form creation that requires no explanation"

Something designed well will tell a story far better than words, so if you need to explain the reasons why something looks a certain way, there is often a better solution with a more striking and meaningful appearance.

“Extremity (if not it will just look boring)”

It's very easy to be safe and stick to familiarity when coming up with new ideas, but the best way to be is striking and bold. Sometimes we can go too far in this field, but there is always room to reign things back to hit that balanced 'sweet spot'.

“Functional; honesty integration, in symphony with form”

We've all heard of 'form follows function' and vice versa. A product should have exceptional functionality as well as form. Honesty in design is important, a product should not visually promise something that is more capable of what it can do.

“Unforgettable; iconic, extraordinary and captivating”

Easier said than done, but this should be the goal for all concepts, something that passes the fly-by test; If you could remember your car's design after it zoomed past in a split second, you're probably onto a concept which is meeting these three descriptions.

(CALLUM Designs, 2019)

With all these boxes ticked, the result should be a visually strong product, whether it's a car or not. There are various ways to go about

this, he says “to be creative, you have to create chaos in the first place” (Callum, 2019). He refers to ‘Order Out of Chaos’, a textbook CALLUM tagline, and the idea that we should almost go over the top with concepts, so that by the time they’re reeled back down to earth slightly, the product is in a happy balance where it is both exciting in design yet conceivable for production considering all the real-world implications of a design project. This is a great way of thinking for me within my practice. It enables me to run wild with my ideation process, making sure no avenue is left unexplored. When there is something with value, it can serve as a starting point to develop thereafter. I have found that usually as the product evolves into something closer to real life, it often becomes something far more interesting. This is a relevant theme in design studios such as Porsche:

Sometimes a project takes an unexpected direction or leads by indirections to a point you would never have expected at the start of the conceptual work.

(Bogner and Baedeker, 2021, p.26)

It's at CALLUM that I have learned most about what the recipe for an effective design is and where I have been able to practice this day in day out. The main thing this has left me with as a staple of my way of

thinking when it comes to designing is the balanced relationship of all design features, creating something cohesive from front to rear, top to bottom. The features within a product's design should be a family, and all of them should talk to each other, all conscious of one another's position in space. With all my learnings from my internship, I have been left with a much wider interest for design, and hopefully a greater understanding that I can put into practice along the course of my ongoing projects.

Another of the mantras of CALLUM is “stories that stir the imagination” (CALLUM Designs, 2022). This directly addresses the way a product designed well should speak volumes for what it stands for and the context of what brought it to life. Designs are a story, and I've learnt that a strong story can sometimes carry a design that is visually weaker than a product with no depth or background. To stir the imagination is a statement of intent, and it refers to the way that design is uninteresting if not pushing the boundaries and stirring the minds of the viewer. Disruption can be a good thing with a design, and often beautiful products are initially ‘marmite’, like Zaha Hadid's Vauxhall Cross island towers proposal, which was approved back in 2018, despite splitting public opinion (Dunton, 2018).



Fig. 1: Vauxhall Cross island

The design process is a very personal affair. Each designer may use similar tools, but most of us have a different way of using them that works for us. To understand my budding design philosophies, it would be key to know my way of tackling a project, or even broader, where I draw inspiration from, and how I get in the best space to be creative.

When it comes to inspiration, it's hard not to look at what's already been done and extract what you like. I'd be lying if I said I didn't go to social media to see what's out there or prompt ideas. Whilst this can help, it's not the best way to get inspired. Porsche Design director Michael Mauer says, "Inspiration can happen every minute, every second" (Rodriguez, 2010). This quote from Mauer resonates with me because I often find my ideas come to me at the least expected of times. It puts value in taking time away from the screen for me, the idea that going for a run, or spending time with friends is not only beneficial for health but

productive in the sense that it recharges the creative batteries. In addition, these types of pauses between creative work can be direct sources of inspiration, whether that's being in an area of natural beauty that can directly feed ideas, or whether it's just a place that you enjoy being, getting your headspace back on track to a place where ideas flow much more easily. Even simply talking to people, sometimes this can be a channel for which ideas finally become unblocked and pour out with ease. The late Virgil Abloh once said, "The amount of random conversations that lead to culture-shifting ideas is insane" (Welch, 2017).

Once I've found my inspiration, much of my personal design identity will be displayed throughout my process, so it's important to explain each of the stages of my method when it comes to tackling projects. Usually I will start on paper, as most of us do. However, it's surprising now how many have left this analogue element of the creative process behind. For me, it's essential to translate my thoughts onto paper before the digital phase, whether it be a single quick doodle, or pages of more polished looking sketches. This is mainly because on paper I feel the least constrained, and usually my best starting points span from this type of sketching. After this point, with an idea set, any time spent continuing the analogue process can be a poor use of time, especially in an industry context. Depending on the product, I may take it into 3D right away and

worry about the visuals later. Sometimes it's most useful to get a solid 3D foundation for which to build upon in the design development, since this foundation has an assumed level of realism and feasibility to it compared with a 2D sketch. Much like the paper-to-digital shift within my process, it's only a matter of time before 2D becomes a less helpful stage of design development. I've come to find a design will stand a better chance if the viewer can imagine it in a real context, and a digital model goes a long way for this.

How key is 3D as a skill for a designer? For someone who just likes drawing and visualising, 3D modelling can present both a daunting and unappealing challenge. Even if you don't aspire to be a digital modeller, it is well-known that having this skill is highly valued in a designer by employers. But why is it so important to my personal design thinking and process and why do I value it within my design philosophy?

Understanding of the 3D space opens, quite literally, a new dimension to not only the work produced, but the thinking involved. Having a wider knowledge in this field can allow you not only to model better, but design better. This is because knowing the way a surface might interact in a certain scenario enables you to explore form more freely and unlock a new set of visual ideas. Not only this, but if your 2D sketches look like they add up in a 3D context, then it instantly adds value to the concept and

strengthens it as a proposal for your design. This is the reason I've relished improving my CAD skills, despite it being my least favourite part of the process, and certainly my weakest tool on my metaphorical designing workbench.

When I do manage to produce a good enough model, I often use 3D visuals as a base and work on top in photoshop, to create variations, and maybe a new idea will spark or the right one will be found. Ultimately, my workflow often feels like one big cycle of micro cycles, which, over time, lead to somewhat of a solution.

Now that I've described my process in a practical sense, I ask myself the key question: what is the general thinking behind my designs? There isn't a short answer, but through a mixture of some of the influences I have already mentioned, along with a few more and my personal feelings towards design work already out in the world, I will piece together my thought-process when it comes to designing.

I would say the most drastic development in my taste style of design is an appreciation for simplicity. We have all heard that good design is simple, better said by the incredible Dieter Rams, who in one of his ten principles of design outlined that "Good design is as little design as possible- less, but better" (the DESIGN MUSEUM, 2022). This is clear

throughout the many staples of industrial design that he has produced over his lifetime, and something I am appreciating more and more by the day. Not only this, but I am also trying to implement this theme in some form within my work, but in an automotive context. There are so many examples of this design guideline being implemented in the automotive world already, take Porsche, Hyundai of late, not to mention icons like the jaguar E-type, and the beautiful Alfa Romeo 33 Stradale of the late 1960s. They may all vary in age, size, shape, performance, and purpose. But they share one distinctive thing, and that is their uncomplicated and unforgettable designs.



Fig. 2: 1962 Jaguar E-Type Series 1 Roadster

For me, I have been trying to practice an approach that gives less emphasis to the features of a car initially, and instead focuses on creating bold and new overall forms. It's a challenge sometimes to think of ideas

that serve for an exciting product without overcomplicating the design in search of a defining, unique quality. But when I do find a starting point that satisfies both those aspects, it often ends up going much further than the others. Simpler products ultimately feel nicer to look at in a peculiarly soothing way. Whenever I find myself in an environment surrounded by a host of simple products and simply designed furniture, it has a significant effect on the way I feel. It's as though there's a direct correlation between clutter in my mind and clutter of that within the design of a product. Whenever this theme is translated within the design of a vehicle, more often than not, I'm a fan. This is not to say that there isn't room for intricacy in my opinion of good design. The legendary Anders Warming has previously raised the point that we find beauty in trees, not for their lack of leaves, but for their immense intricacy and detail in such vast quantities. (Warming, 2020) This begs the question; is there a right and wrong way to push the boundaries in world of design?

Car design and design in general is a practice which progresses by pushing the boat out and challenging the norm. It's the only way it moves forward, and the reason why everything we see day-to-day is interesting and different. Without challenging what we know and trying to disrupt the current, we wouldn't have some of the most loved vehicles and products we are all fond of today. But is pushing the boundaries always a good

thing and is there a correct way to do this? I find that this is a pressing topic for me and my thinking as a designer of late, because you don't want to create something too familiar, but you also want to avoid going overboard, losing sight of the principles of good design and end up with an eye-sore on your paper. The easy answer is there are no rights and wrongs, but I certainly have my own opinions of what I do and don't like. By identifying and discussing the designs of cars that I'm both a fan of and those I dislike, the visual themes that represent my taste and personal design philosophy will become clearer.

So, what am I typically fond of from a design perspective? Here is a short list of brands and models from each that I'm particularly a fan of lately:

Porsche- Vision GT, Mission R, Taycan

Hyundai- IONIQ 5, i20N, N Vision 74

Renault- Renault 5 EV, Renault 5 Turbo 3E, Duo

Alpine- Alpenglow, A4810

Dacia- Manifesto

Citroën- Ami, Oli

Volvo/Polestar- EX90, O₂



Fig. 3: Polestar O₂ Concept

Why do I like these cars? They all share a host of qualities despite being vastly different in lots of other ways. But visually, they capture a bold yet classy solution to push forward their design language. All these cars are extremely well detailed down to the millimetre. What I love most is the confidence they all carry from aesthetic approach, and the bold beauty of not only the features, but overall silhouette. All these cars stand out, showing they challenge the norm as previously mentioned, but in the best way possible, making you stop and stare for the right reasons. Of the models listed here that are in production, it's a joy to see them out on the road, like they are a piece of art amongst a sea of familiarity. And that's what I think it's about; filling the roads not with dreary concepts that blend into one another, but exciting designs that excite not only designers but

people who usually take less notice in the way a car or product looks. Less really is more, and these vehicles embody this in a sophisticated way that inspires me as a designer in my early stages.

In contrast, there are examples of brands and cars I have certainly been less interested in due to their design over recent months. These brands and models are in the list that follows:

BMW- Multiple, notably the XM and latest iteration of M2

Mercedes- EQXX, Vision AMG

Pagani- Utopia

Tesla- Model 3, Model Y



Fig. 4: BMW XM

What is it about these brands that I don't enjoy? Firstly, it is important to say that all these manufacturers are clearly pushing their designs to places they've not been before, which is admirable and what I like to see day to day. The last thing I think we all want is a flow of replicas from one model to the next, that's not what design is about. However, in my opinion, these are a few examples of how trying to innovate and set new design benchmarks haven't been as successful- something the reaction to certain models has alluded to (PistonHeads, 2020). There is no doubt that they have made waves in the car world, they've got people talking and generated a great deal of publicity. Design wise, I think these examples all share an attempt to over-innovate. It feels like many of the brands have lost sight of their brand DNA and have tried too hard to go the other way in a bid to create the next icon within the car world. I look at cars like the BMW XM and the Pagani Utopia and see a cluttered and busy looking vehicle, which looks overdesigned. Another of Dieter Rams' ten principles is that good design is unobtrusive; a quality I feel a lot of these cars lack. A design can excel with complexity, but when complexity is all that there is, I find it hard to get excited and onboard with it.

Only considering both ends of my taste in current car designs, I think my preferred style of car as a designer can be summed up: Bold and striking without over complication. Attention to detail, but without

muddying the graphic and overall selling point of the design. Brand and internal values retained, but a tasteful approach to the future.

A lot of the cars I have mentioned above, feature a distinct product design attitude within their graphics and details. This is a style that has gone in and out of fashion, the with certain cars from the 1960's, 70's and 90's featuring an industrial theme within their form language and details. In recent years, especially within concept cars, this theme is making a resurgence, and I'm excited by it. Over the course of my internship, I was lucky enough to work on a variety of different projects, many of which were examples of product design, compared to the full concept car designs I had become most used to undertaking over the course of my time at university.

This is a challenge I relished and one I am grateful for, because it's broadened my tastes within design, and given me an appreciation for the value of product design themes in automotive contexts. The easiest way to implement product design into a car is of course within the interior. Stripped back to basics, the interior is essentially a room- and like in any room, it's filled with a set of products to enhance user experience. There are many modern examples of unorthodox interior design themes, the number is ever-increasing. The Dacia Manifesto concept features seats that double up as sleeping bags to fit the camping and outdoor ethos of

the car (Dacia, 2020). The interior can set the tone for a car as much as the exterior in some cases.

What I have found most interesting is the use of product-like cues within the exterior design of a car. This is something I have gained an interest for in unison with my increased involvement with product design, and I think it serves as an intriguing and effective way to go about designing a car. Many of the examples I gave for what I like about current car design unsurprisingly have these product design qualities, ranging from minute details to the overall shape and graphics that dominate the exterior. One great example showcasing this theme in overall form language as well as the details is the Hyundai IONIQ 5, a car we are seeing more often on the road today (Barfield, 2022).



Fig. 5: Hyundai IONIQ 5 Taillights

It works the same way as bold product design works, because in its simplest form, a car is a product too. Some of the ways car designers are creating this sleek look from the outside of the vehicle are with clean, uninterrupted lines, primitive shapes, and material splits that carry a refreshing visual contrast. Whilst this isn't a fool proof method to approach a car design, it's one that can be effective if executed well. In terms of why this is all relevant in my practice and values, I am slowly making a conscious effort to introduce this theme where appropriate within my current assignments and personal projects. The product design theme makes me tick when it comes to car design, and it's been the biggest influence on my taste and style over the last year or so.

Expectations versus reality; It's a pressing topic in society, social media takes the stage in our lives presenting an unrealistic standard for all parts of our lives (Scott, 2022). Unavoidably, this doesn't exclude young aspiring car designers. It's easier than ever to become distracted by what Instagram shows you, derailing your motivation and aspiration for a future in an industry that is changing massively as technology continues to push the outlook for the car design scene (BMW, 2018). This has and continues to affect me and everyone I know in the way we perceive our work when really, it shouldn't. It's far too easy to see a pretty picture online and

compare yourself, but I've come to see that there are so many reasons why this is a useless practice.

Sketch quality does not directly correlate to idea quality. To begin with I could not see this, a di Vinci-esque sketch would hide the design for me. Often, I would look at polished photoshop render and see all the value within the style instead of shape. Something I have learned is that when it comes to communicating a sketch, the focus should first be the clarity of the idea, and how this is being read by the viewer, the sketch style is less important. After I saw sketching this way, a lot of the work online that previously disheartened me felt less impactful and didn't make me compare myself negatively as much. This is not to say that having the ability to sketch polished pictures isn't important, it helps a lot with portfolio work and selling a final idea, but in the design process, it's not as much of a requirement as I used to believe. I would see press-sketches I now realise come after design process and instead think that it was the opposite. Within my practice, I now try to focus much more on the quality of design before I worry about the quality of the sketch, whilst taking less notice of the incredible work being pumped out online. If I had to give a first-year student any advice, that would be it.

How much should we consider things like feasibility, cost, materials, and manufacturing upon approaching a design task? This is a question I

have considered a lot throughout my time as a student, and one I have become more educated about over the years I have been studying, and the time I spent in industry. It continues to find its way into my design process and influences my values and philosophies as a growing designer. The basis of the answer to this question comes largely down to context. But should it? The general thinking would be that this is far more important to consider in an industry context, where the products you are designing have the potential to go on and be produced. In a design and engineering company, especially small ones, feasibility has one large implication towering over it: cost.

Generally, most well-thought-out concepts are feasible, if you think to the incredible materials and technology across the globe, there's a way to produce a large portion of the concepts we create; someone, somewhere has the machines, the tools, and the facilities necessary. Therefore, feasibility often comes down to cost rather than appearance because despite a potential route to reality, it's often economically unjustifiable to go the suppliers necessary to create a product which will not yield an overall profit to the business. This has changed the way I design. I've been lucky to be surrounded by talented people at CALLUM who have shown that the best designers can not only create something

that looks exciting but is all within the realms of feasibility from all perspectives.

Recently, I have found that thinking ahead to feasibility doesn't have to be a limiting factor for design work, it can be quite the opposite. It makes you consider things like ergonomics and materials which ultimately strengthen your concept. Materials play a large part in this way of thinking. They are a new dimension to add depth to a concept, and by including them in sketch work, you instantly give the viewer a more complete picture of what the possible outcome of a concept could be. Material choice can aid with aesthetic and functionality, add depth to the design story through the sustainable choices, and set the tone for the user experience aspect of any project (Del Curto, 2009). Ultimately, materials are what an end user will touch and feel and are instrumental in aiding good design shine through.

So, should we be considering all of this as a university student? In my opinion, yes, but not to the level you would need to in a real-world setting. One of the great things about being a design student is the ability to run wild with your concepts, cutting some corners as you don't have the shackles of the real world telling you it won't work or it's not economically viable. This is the stage in our designing journey where we can show off the limits of our creativity and capability as a designer. Despite all this, I

think it's a valuable thing to keep feasibility in mind to some degree. The reason we come to study in the first place is to get to a place where we can design real things, and by showing you consider this to some level, I think it's a characteristic that employers will value. If anything, it's good practice. The day will come when it's time to give lot of thought to this side of design, so by making sure not to neglect it, it will only do any designer favours.

This collection of insight into my inspiration, role models, and personal taste should paint a clearer picture of what my design philosophy would be if I were to have one. As a growing designer in the very early stages of my career I am open to all walks of design and jump at the chance to see how they can help me within automotive context. If my taste and influences within my practice have evolved this much over such a short period of time, I have no doubt they are set to go through countless further changes as time passes by.

The one thing that I hope will not change is my passion and love for design and the arts in general. If I was to ask myself why it is I want to be a designer, I would say it has now become more than to draw cool pictures of cars! To me, the excitement factor of having a say in what the future looks like has never been higher. Regardless of what scale, possessing the skills and platform to shape what we drive and use over the coming

decades will always be a goal and passion for me. I think many people take for granted that their favourite items they use on a day-to-day basis are carefully designed, but this is something that is fascinating me more as time goes on. I love to learn about what it is that goes into designing the most loved hand-held products, right the way up to the most dramatic of cars we see on the roads and on race circuits.

During my time at school, there was a science and an art side to me, I went with my gut to pursue an artistic route and make sure that whatever I do in the future, I keep drawing. In the current automotive design climate, there are so many ways to be a designer, but my one goal if nothing else for the path ahead, is to just keep drawing.

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Thomas Ingell

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