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Interview
Alex Broeckel

Articles
Sketchbook of **Jeffrey Lai**

The Gallery
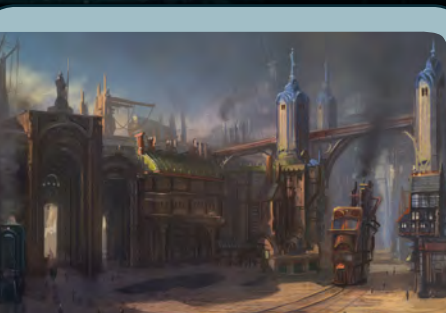**Ruhollah Toghyani, Andrei Pervukhin and Romain Gouzenne**, plus more!

THE
FANTASY ISSUE
CITIES, STEAMPUNK, MONSTERS

Painting Fantasy Medieval Scenes
Jesse van Dijk continues our series on Painting Medieval Scenes, and this month we look at a City on Stilts!
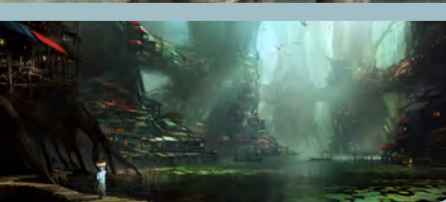
New!!! Painting the Undead
I hope your all armed with silver bullets because this month **Richard Tilbury** will be showing us how to bring a Werewolf to life in the last chapter in the Painting the Undead series.

New!!! Painting Steampunk Environments
Be transported back in time as **Dr. Chee Ming Wong** talks us through making a period specific Steam Punk Environment.

Painting Monsters
I hope you're not afraid of the water! We continue the series this month with **Richard Tilbury**, this month looking at Sea Monsters.

Editorial

Hello and welcome to the 50th edition of 2DArtist! We hope you all enjoyed the January issue and are as excited as we are about this month's issue.

First up this month is an interview with the excellent concept artist **Alex Broekel**! We get a chance to look at some of the brilliant images that he has created and he tells us how his past work doing 3D environment lighting has helped him on the way to success. Also Alex tells us what it was like to work on a massive project like Harry Potter. I would say that is a pretty magical start to our February issue!
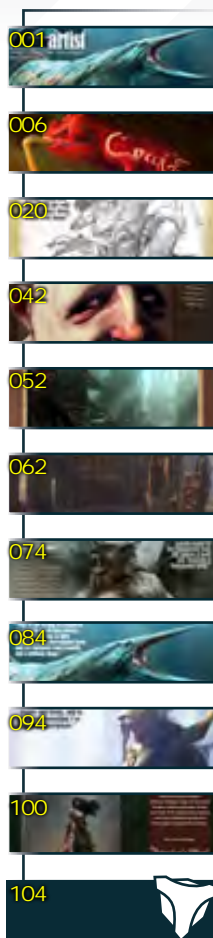
Next up this month we take you into the fantasy world of **Jeffrey Lai**! Jeffrey talks us through putting our imagination down on paper, and shows us how important it is to let your mind wander when creating fantasy artwork. On the subject of fantasy, this month's Project Overview comes from **Jama Jurabaev**, and he talks us through the making of his image The Beast! Jama shows us through his processes and has even kindly donated some custom brushes as a free download with this issue! Also in this issue we have an excellent image gallery bringing you work from **Sergey Kolesov**, **Branko Bistrovic**, **Corrado Ficarelli** and many more.

We are very excited this month as we start a new and gripping series that has been done for us by the fantastically unique **Dr. Chee Ming Wong**. We start this series by setting the scene, as Chee talks us through the 5 ages of steampunk and in this issue we look at the Victorians! We hope you all enjoy this steampunk master class because we think it is great!

We hope that you enjoyed the first instalment of our Painting Fantasy Medieval Scene's tutorial, we continue this month with **Jesse Van Dijk**. We know how tricky it can be to get your scene started and decide on what you want to achieve, so Jesse explains how to tackle this issue, and creates an amazing city on stilts for our enjoyment.

February's issue also presents a monstrous double bill from our very own **Richard Tilbury**. Is that a full moon I see? Arm yourself with silver bullets as Richard talks us through bringing a Werewolf to life! Also this month Richard continues the creating monsters for environments and in this issue we dive into the deep blue and look at sea monsters, beware though it may put you off going for a swim!

What an issue! But don't just take my word for it, read on and enjoy! **Ed**.

Contents

Free Stuff!

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Steampunk Environment by Chee Ming Wong

Get the most out of your Magazine!

If you're having problems viewing the double-page spreads that we feature in this magazine, follow this handy little guide on how to set up your PDF reader!

Setting up your PDF reader

For optimum viewing of the magazine it is recommended that you have the latest Acrobat Reader installed.

You can download it for free here: **DOWNLOAD!**

To view the many double-page spreads featured in 2DArtist magazine, you can set the reader to display 'two-up', which will show double-page spreads as one large landscape image:

1. Open the magazine in Reader;
2. Go to the View menu, then Page display;
3. Select Two-up Continuous, making sure that Show Cover Page is also selected.

Contributors

Contributing Artists

Every month many artists around the world contribute to **3DCreative** and **2DArtist** magazines. Here you can find out a bit more about them! If you would like to be a part of **3DCreative** or **2DArtist** magazine, please contact: simon@3dtotal.com

Jesse van Dijk

Concept Artist and Production Designer from Amsterdam, the Netherlands, with over four years of industry experience. Immediately after receiving his Master's degree in Industrial Design at the Delft University of Technology, he went to work in the games industry. He is currently a senior concept artist at W! Games, Amsterdam, and does freelance work as well.

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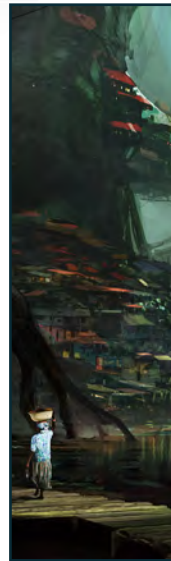
Richard Tilbury

Has had a passion for drawing since being a couple of feet tall. He studied fine art and was eventually led into the realm of computers several years ago. His brushes have slowly been dissolving in white spirit since the late 90s, and now his graphics tablet has become their successor. He still sketches regularly and balances his time between 2D & 3D – although drawing will always be closest to his heart.

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rich@3dtotal.com
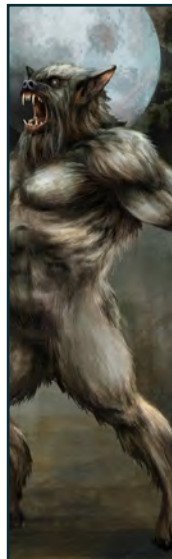
Dr. Chee Ming Wong

Dr. Wong is both a visual imagineer & director of Opus Artz Ltd and has over 10 years of creative visualization and industrial design experience, working with a diverse range of game & animation developers worldwide. His projects have included The Edge of Twilight, External Enviromental Art Consultant on Bioshock 2 and Senior Concept Artist and Visual Lead for the MMO "Infinity: The Quest For Earth".
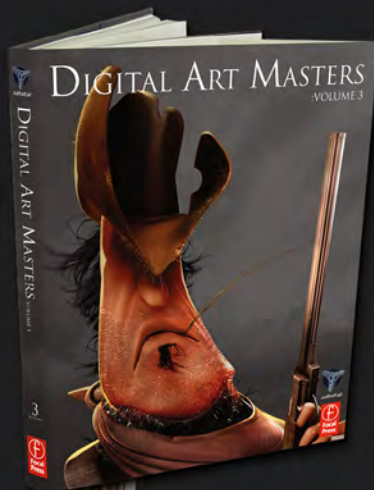
http://www.opusartz.com
chee@opusartz.com

Image by Alex Broeckel

ALEX BROECKEL

"As a 3D artist the render engine takes a lot of work from you. You just need a good sense of the end product and to keep changing parameters until you get the look you want it to have. As a painter you are the render engine, so you have to learn that too; how colors behave when they mix and stuff like that."

As a 3D artist who specialized in building and lighting environments, Alex Broeckel built up an impressive looking CV. Then in 2008 his career took a u-turn. He took a year out, taught himself how paint and remarketed himself as a digital painter – which we think was a great idea considering the standard of work coming up in this interview! Read on to find out what fueled this dramatic change and how life as a digital artist is working out for him.

Interview with Alex Broeckel

Welcome to 2DArtist, Alex! It's great to have you here. Now I've been having a poke around your website and in amongst the amazing images I've found that there's actually very little information about you (I guess you let your art do the talking!) But just to fill in the gaps a bit, could you tell us a little about your background in art and what you're up to nowadays?

Hi Jo, thanks for having me here. Okay... what can I tell you about my background? Somewhere around 1990 I was in school and was totally fascinated by airbrushing techniques. So I bought an airbrush and a compressor and, well, was very bad at what I did [Laughs]! Besides that, airbrushing was expensive (I broke my equipment all the time) so I stopped, but missed it a lot.

One day I was introduced to the world of 3D by a friend. I was totally fascinated because the images shared similarities with the typical airbrush painting I liked so much. So I saved some money, got a used Amiga 4000 and taught myself 3D!

To shorten this: for the next 12 years I worked as a 3D artist, specializing in building and lighting environments. In the end I was working on some nice big projects, but the work also got very boring because of all the technical constraints and problems which had to be solved every day. It was more like 95% solving problems and 5% being creative. I missed being creative a lot.

> ## "I took one year off, lived off my savings and taught myself how to paint in Photoshop."

It was in 2003, when I was working in London at the Moving Picture Company, that I made friends with John Wallon Liberto, an awesome concept artist and matte painter who was working with me on the same movie at that time. I had the workstation next to his, so I was able to watch him paint all day long. I was so fascinated by his work and started to envy his job a lot because it seemed to be the complete opposite of my situation: 5% technical problems and 95% creativity!

John and I stayed friends and in 2008 I was so tired of doing 3D (and solving problems) that I decided I needed a change. I think John was making fun when he said that I should become a digital painter, but I took him seriously. I took one year off, lived off my savings and taught

myself how to paint in Photoshop. John was a great help; he provided serious help and shared his experience with me. It's because of him that I'm giving interviews two years later - thank you so much John!

Sounds like you owe John a lot! I think that's the best thing about working in the artistic industry: how inspirational those around us can be. Anyway, how are you finding life as a digital painter? Was it a difficult transition to make, from 3D environment/lighting artist to digital painter? And what kind of projects are you working on at the moment?

Yes I do! Actually, I think being a 3D environment artist was a great help. Many things you have to know are the same; I already knew how important it is to lead the viewer's eye through your image, about the quality of contrasts and the importance of edges and details to keep the eye moving. This was all stuff I learned during my years as a lighting TD, so it was a big advantage to have this know-how in my bank.

Of course, I learned a lot more when I started to paint. As a 3D artist the render engine takes

www.alexbroeckel.com

a lot of work from you. You just need a good sense of the end product and to keep changing parameters until you get the look you want it to have. As a painter you are the render engine, so you have to learn that too; how colors behave when they mix and stuff like that.

I am currently working on a lot of small projects. I've just finished working on some matte paintings for Pixomondo Images, Berlin, and

I am happy to do some different stuff now. And that's exactly what I like about the job – you never get bored. The topics are always changing.

Now I know you've moved on from working on movies, but as a child of the Harry Potter generation, I just have to ask: what was it like working on a film of the scope of *Harry Potter and the Prisoner of Azkaban*? You were a

lighting TD, I believe – what did that actually involve?
Of course it was fun and exciting to be part of a huge machine. I really enjoyed working in London and the team and my colleagues were great – one day, I even ran into Tim Burton (I am a huge fan), without recognizing him, so that was all exciting! But the work itself wasn't so much. The production pipeline was split into so many different parts and my part as

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a lighting technical director was to help build and light the different shots of the Whomping Willow sequence. Mainly I was working on the environment surrounding the willow, making it look real and atmospheric. But please don't get me wrong; I was one of many people who did exactly the same job on this sequence, so it's really hard to point a finger at the screen and say, "I did that and that and that". And ultimately that's one of the reasons why I stopped working as a 3D artist for movies.

Do you think you'd go back to it if you had a chance to work on a Tim Burton film?
[Thinks] … No. Not for a 3D job. But I would go instantly if I could do concept work for one of his projects. I am totally excited about the look of *Alice in Wonderland* and would have loved to work on that.

Now my spies tell me that your Steam Octopus painting was featured in the first book of our new series, *Digital Painting Techniques*, last year. I have to say that I love that image; what was the concept behind it? Was it created especially for the book, or was it an existing work?
Steampunk Octopus was created for the Myths and Legends Challenge over at CGTalk.com.

I had a lot of fun while creating it, interacting with the community there. The topic was to pick a myth or legend and put it into a Steampunk context. I was not that much into Steampunk before the competition, so it was actually really interesting to research it and get used to the different styles and visual language. I was able to dive into this new world and explore it with my own ideas.

> ## "Every object and every part was a major pain in the ass because I was still learning and had no existing routine."

The idea itself developed over time. I have always liked the myth of a giant octopus attacking ships and I also liked the Captain Nemo stories, so I mixed these up and came up with a giant steel octopus being steered by men.

This painting is something special to me because it's one of the first complex paintings I have ever finished. Around 100 hours of work went into this, and every object and every part was a major pain in the ass because I was still

learning and had no existing routine. My friend John kept motivating me: "Just keep working on it - it will be fine in the end". Nothing else; just that one sentence over and over again. I have those words printed in large scale on my office walls now! It helped so much.

Can you walk us through the typical creation process of one of your artworks? Are there any tricks or techniques that you like to use? And how do you choose your subject matter?
That's hard, just because I am still learning. I am still experimenting with different ways, so I don't think I have a fixed workflow. When doing private paintings, I like to explore the painting while painting it. I start with a rough sketch already in color and keep changing it a lot until I can see something in it.

When doing paid work that workflow is too time consuming, so I start with BW thumbnails to determine basic composition, scale and perspective. Based on these BW sketches, I start adding light (still in BW) and color later.

For really complex perspectives, I do a basic model of my scene in 3D (I guess I am really fast at this part [Laughs]!) and use it as a base,

like I did in one of my tutorials for *2DArtist*. But I never start with linework, simply because I am really bad at lines. I can paint, but I can't draw.

"I can paint, but I can't draw" – that's an interesting thing for an artist to say! I guess it just shows how the technological development of the artistic industry has really helped to open it up. There are so many great pieces of software out there now, that almost anyone can pick up a digital brush and start to paint – although producing a good piece of art is another matter! How about you – what software

programs do you favor? I'm guessing Photoshop will be pretty high up on that list …?
Yeah I know that sounds strange! But maybe it's because I am coming from the 3D area. I am so used to forms, shapes and light that it's really hard for me to think in edges and lines.

For my concept paintings I only use Photoshop. I tried all the others but I simply find Photoshop to be the cleanest and fastest app to work with. When doing matte paintings in 2.5D with camera moves, it's normally Maya that I use.

One quick question to finish: in the future, if you could work on any project in the entertainment industry then what would it be? And why?
Hmm … well I love movies and I love games, so this decision is very hard! But lately I've been really impressed by the game *Uncharted 2* because of the pure atmospheric beauty of its environments (the ice caves are so fantastic), so I think I would really die to provide environment art for a sequel. The second most awesome thing to work on would be my own graphic novel. I would really like to do that someday, a book with my stories told through my paintings...

And we'd love to see it, so make sure you send us a copy when you're done! Well thanks for chatting to me, Alex, and good luck for the future from everyone here at 3DTotal.

Alex Broeckel

For more work by this artist please visit:
http://www.alexbroeckel.com
Or contact them at:
alexbroeckel@gmail.com
Interviewed by: Jo Hargreaves

"To draw such things I think you have to fill up your visual library bank inside your head."

SKETCHBOOK
OF JEFFREY LAI

Welcome to the imagination of Jeffrey Lai. Jeffrey mixes the sci-fi and fantasy genre to give us an out of this world experience that mixes the natural with the mechanical. We have some great sketches of human like trees and an endless supply of robots and mythical creatures, so why don't you join us as we wander through the pages of his imagination in this month's sketchbook.

SKETCHBOOK OF JEFFREY LAI

I use my sketchbook just let my mind wander, practice and capture life. It's a good tool to test and try new approaches. I'm not so concerned if it's a bad drawing or not, if I feel it's not really working, I'll let it be, and move on to the next page and begin a new one!

I carry my sketchbook at all times! It is a valuable resource. I think my drawing is quite an organic process.

I usually have a general idea of what I want to draw, (though if it's just for fun I don't). I begin with light loose gestural lines across the page to warm up, (often done with my left hand because I think something unpredictable can appear) within these lines shapes and forms start to appear, It sort of just pops out in front of me and I develop the image from there.

To draw such things I think you have to fill up your visual library bank inside your head.

So I try to be interested and draw everything!

I tend to draw quite surreal fantastical things.

ZOMBIE PARASITE
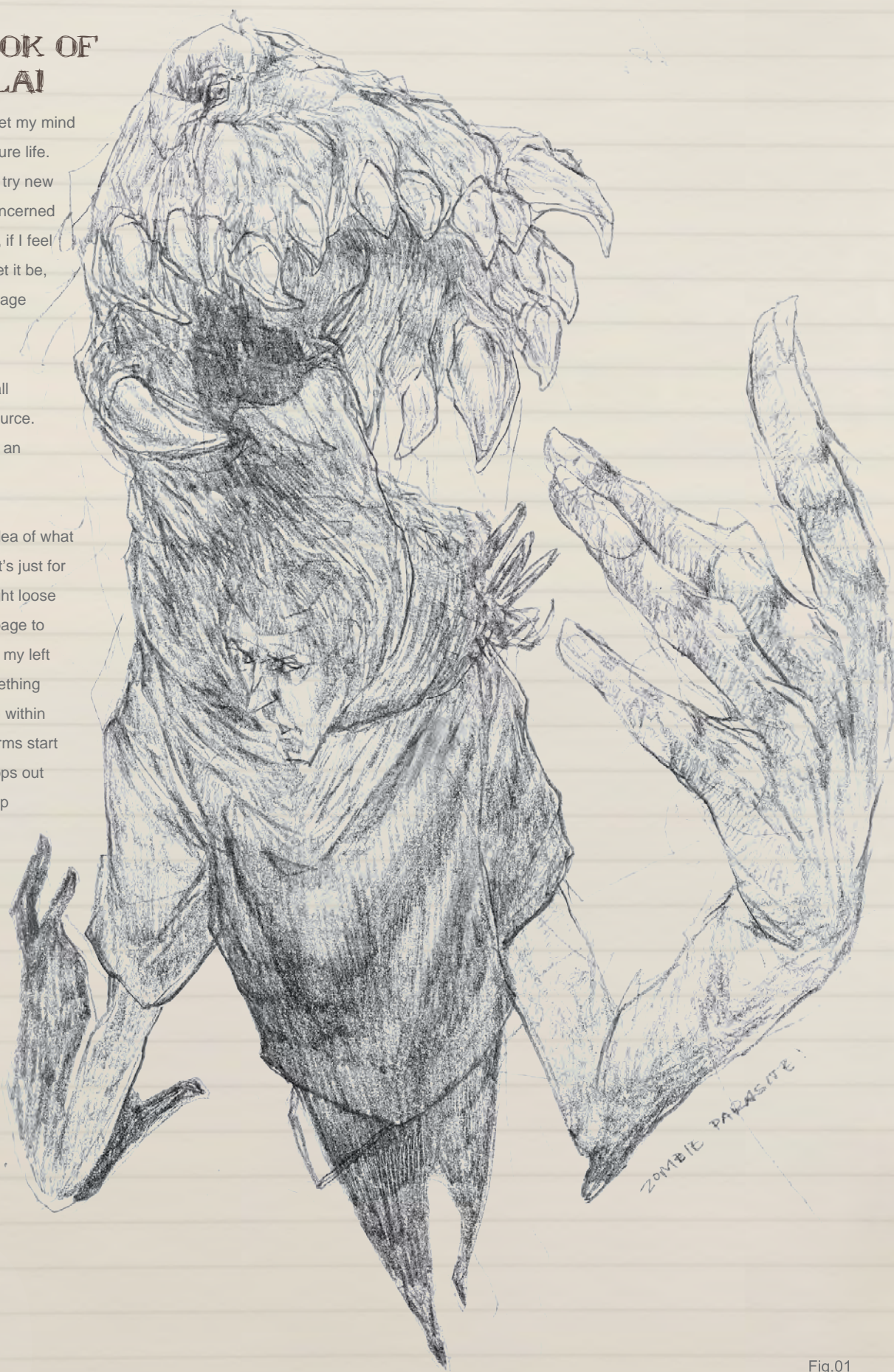
Fig.01

ROBOTS:

These are my initial sketches, I use my left hand to create random shapes, and use right hand to put in details.
(**Fig.02**)

Fig.02
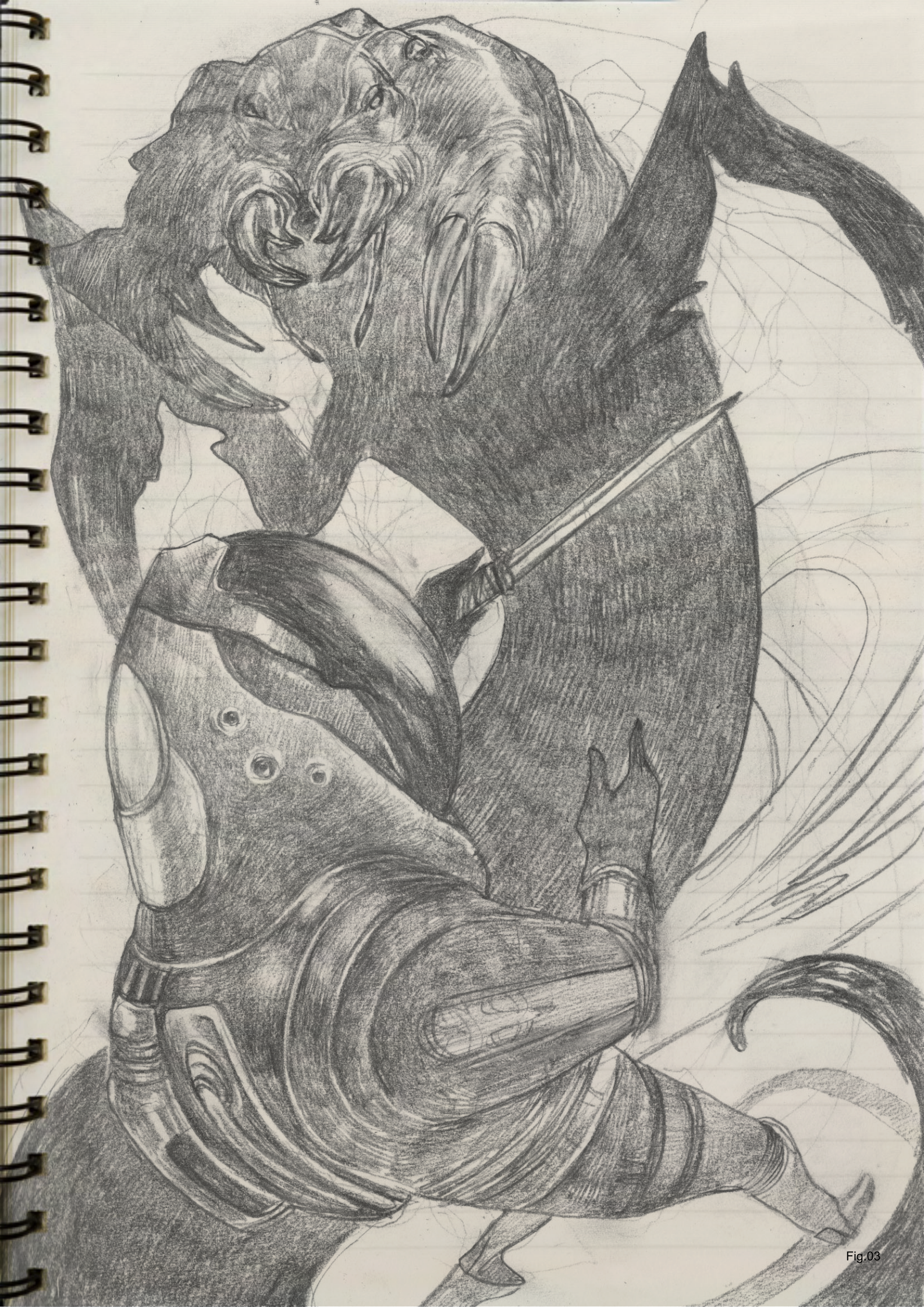
Fig.03

RENDERED ROBOTS:

I think it was a good exercise for me; this was my first attempt at drawing/painting anything mechanical, overall I think the joints could have been handled better. (Still need to work on that) (**Fig.04**)

Fig.04
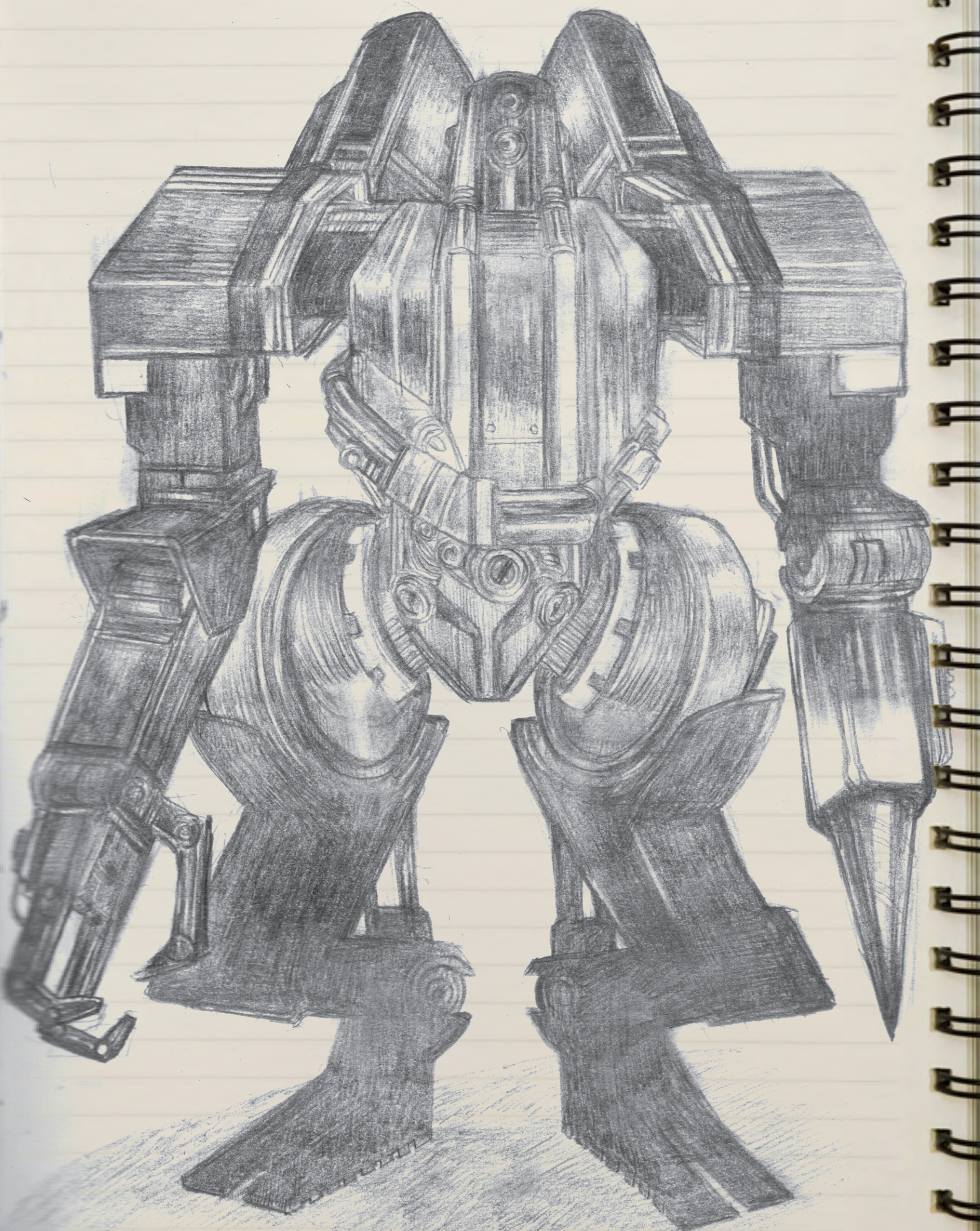
Fig.05

In this pic, I like how the top goblins
face is partially clipped off, I think
it sort of adds to the atmosphere. My
favorite aspect is the point of view. (**Fig.06**)

Fig.06

Fig.07

I quite like how this one came out, mainly because of its composition and how the horizon line is tilted. (**Fig.07**)

Fig.08

ZOMBIES:

zombies are always fun to draw! You can distort

their face and get away with it. (**Fig.09**)
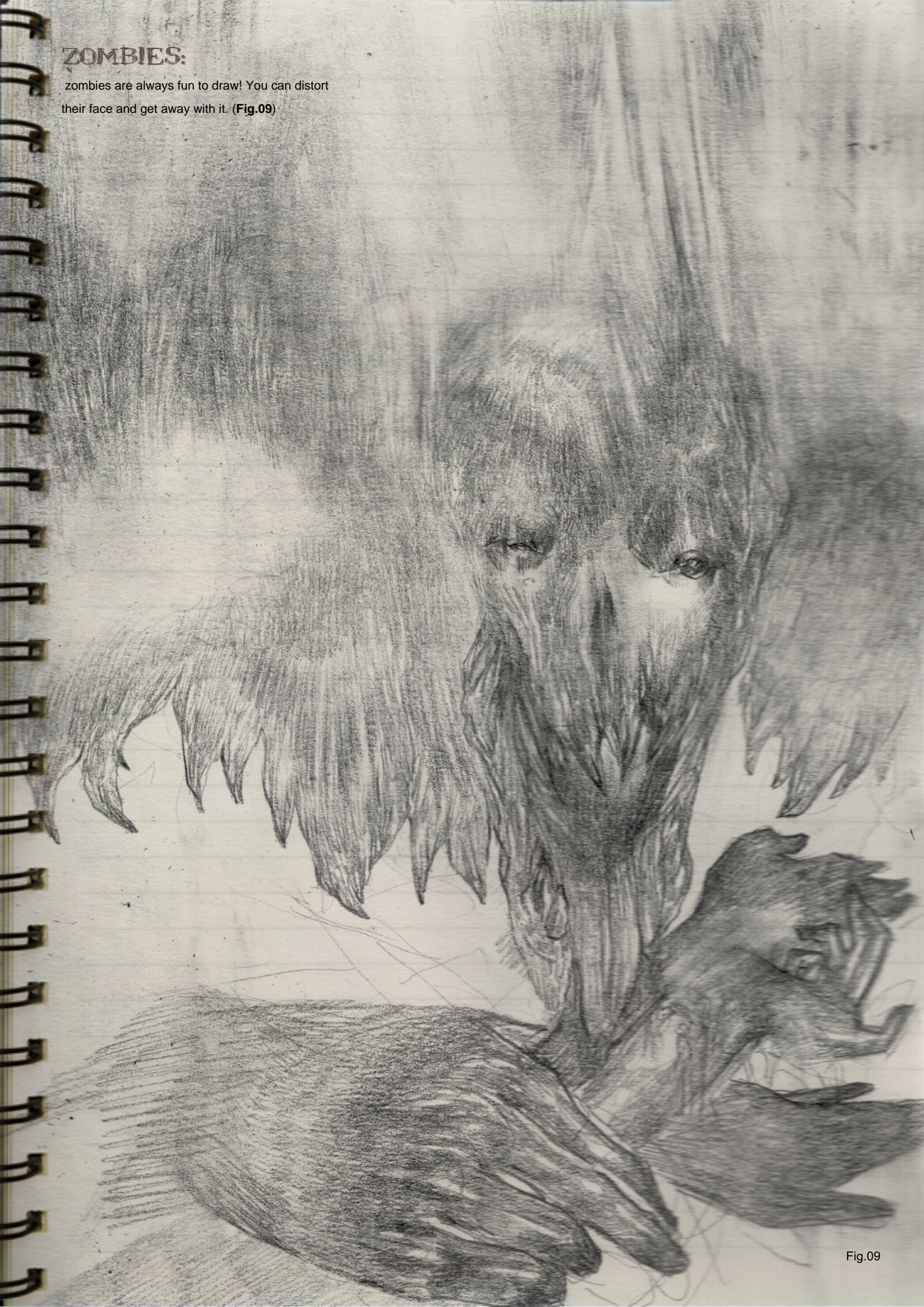
Fig.09

Fig.10

Fig.11
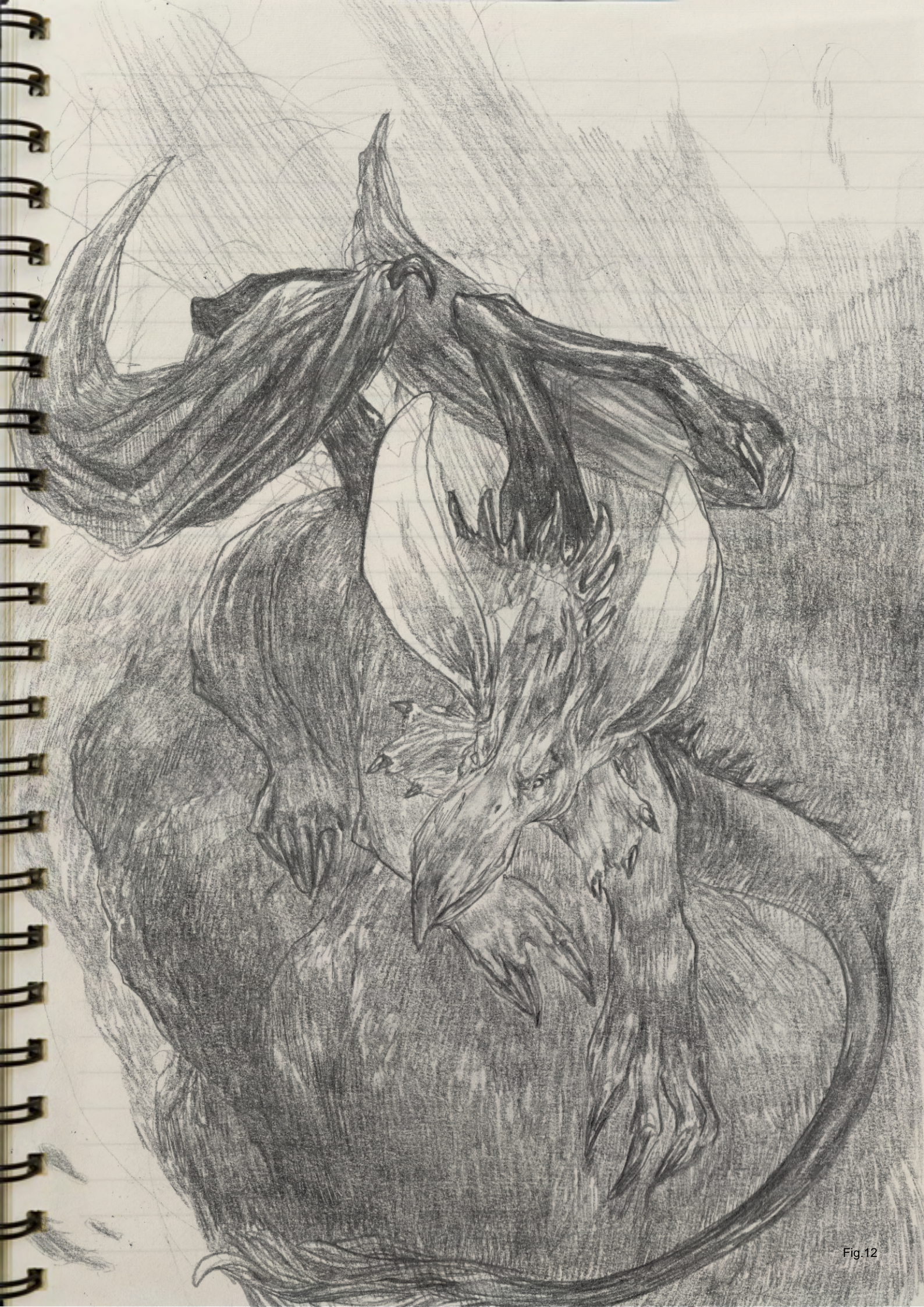
Fig.12
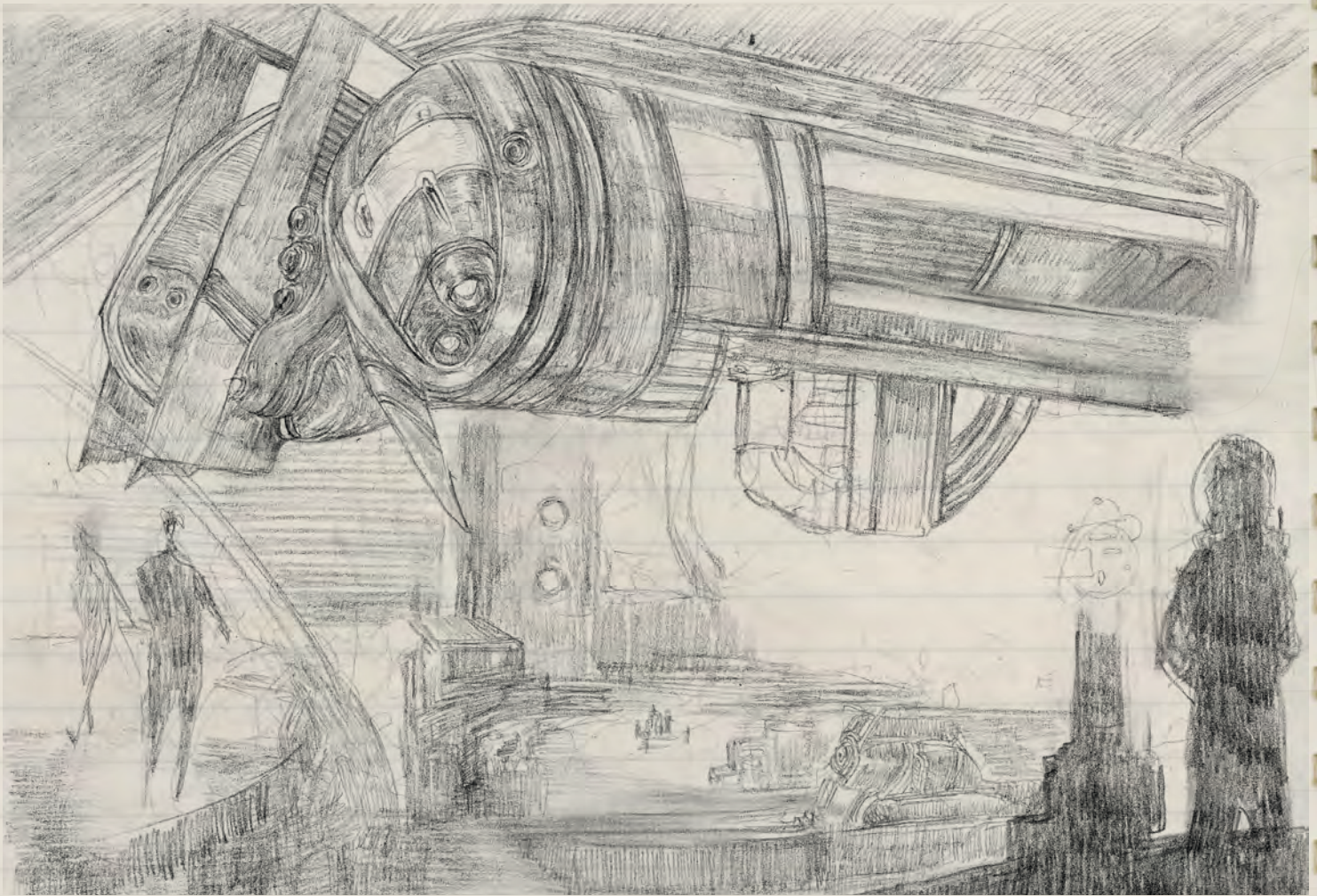
Fig.13

sb15: another attempt at spaceship/transport.

It's fun once you practice a bit more. (**Fig.13**)

Fig.14

Trying to mix up my composition.
I think I could have put something
in the bottom right hand corner
to balance out the weight of the
figure. (**Fig.15**)

I like the flow though.
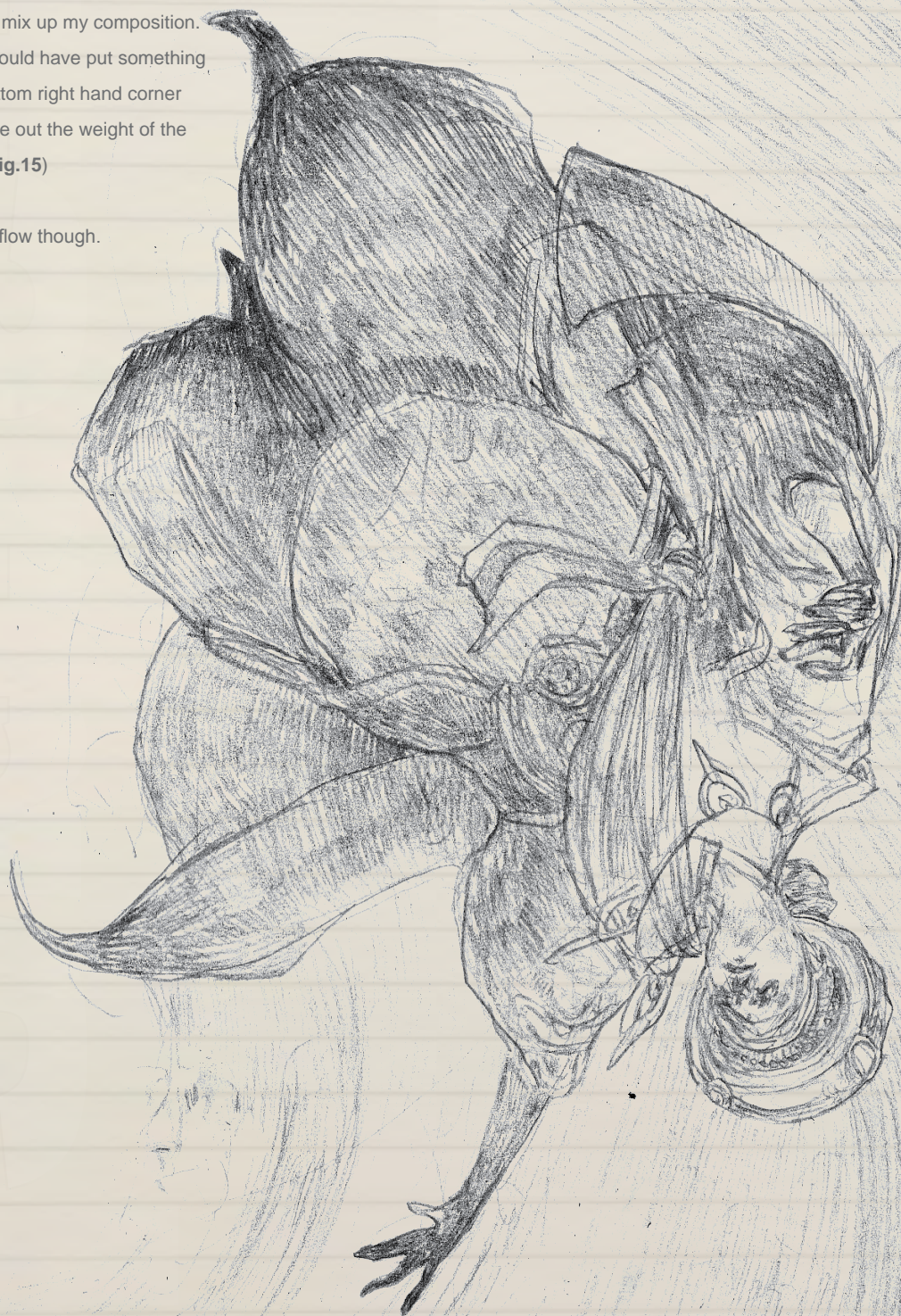
Fig.15

Fig.16
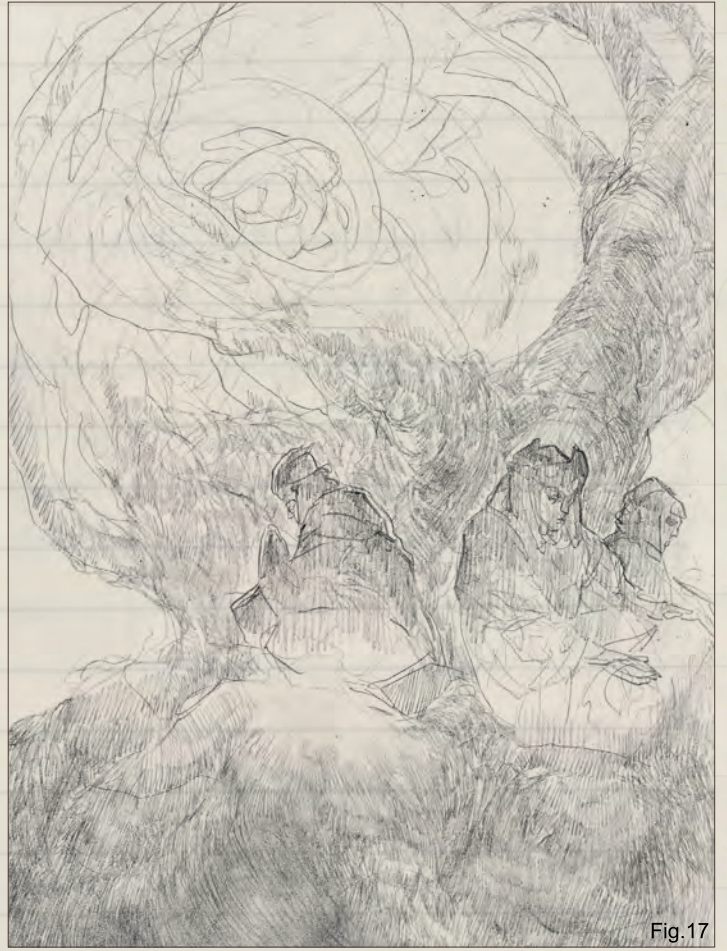
Fig.17
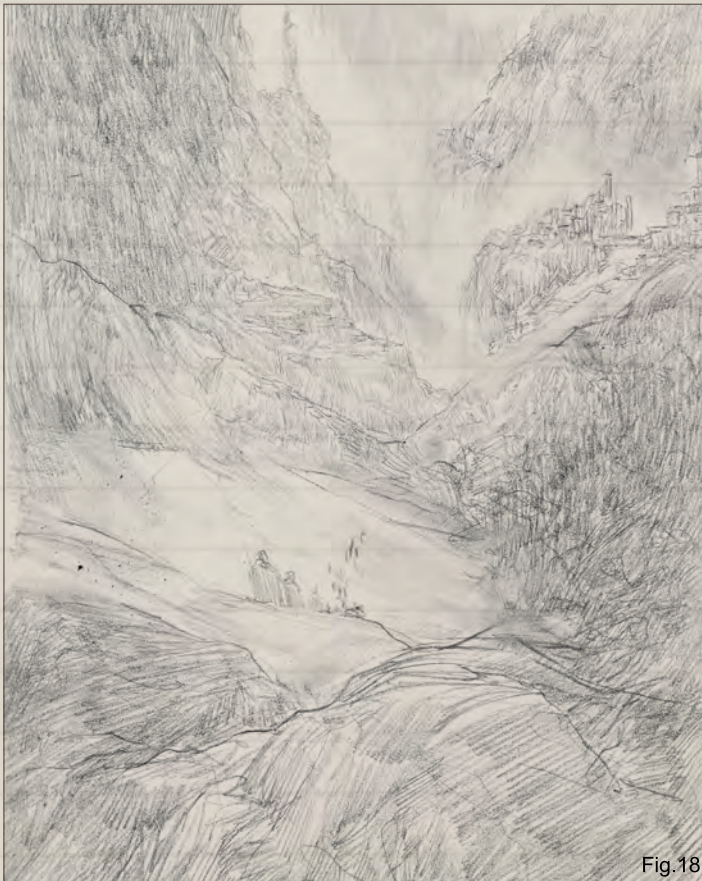
Fig.18

Fig.19

sb27: I like to add little hints of a story going on,
just to add a little something extra to a sketch.
Trees: I love to draw trees! And personifying
them is always cool. (**Fig.20**)

Fig.20
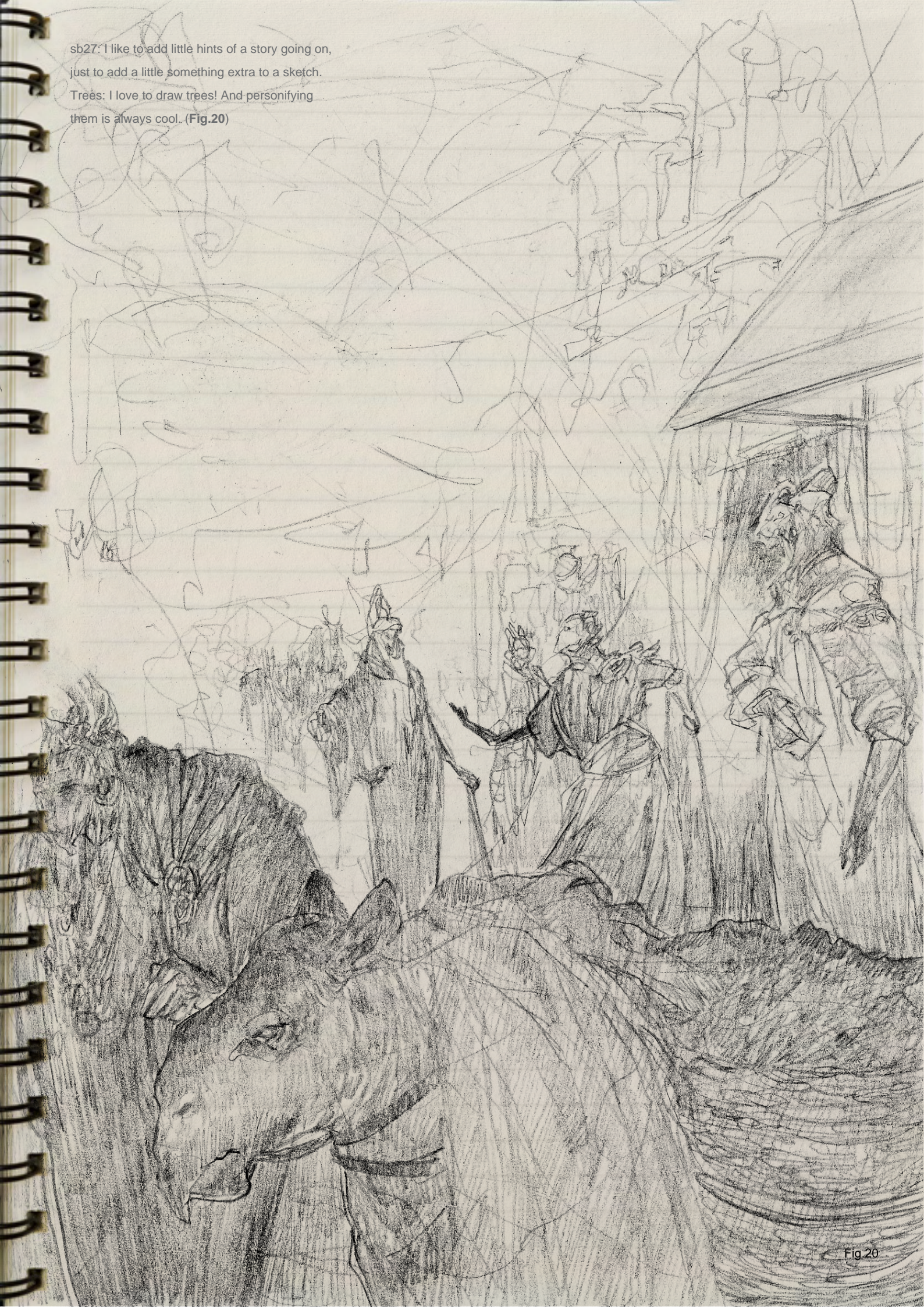
Fig.21

Jeffrey Lai

For more information please visit

http://www.jeffrey-lai.blogspot.com/

http://www.jeffreylai.deviantart.com

or contact

jefflaiart@gmail.com

Fig.22

ZBrush Character Production Training DVD

Michael Pavlovich

www.eat3d.com

THE GALLERY

This Month we Feature:
Martin Carlsson
Andrei Pervukhin
Alex Andreyev
Ruhollah Toghyani
Romain Gouzenne
Gediminas Pranckevičius
Sergey Kolesov
Branko Bistrovic
Corrado Ficarelli
Giorgio Grecu

KUKUTIS

Gediminas Pranckevičius

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Medusa

Alex Andreyev

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(Right)

Jungle Village

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Old Man Win

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What is This?

Andrei Pervukhin

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(Below)

Mullah

Ruhollah Toghyani

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The Downhill Racers

Corrado Ficarelli

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(Right)

Diaper Faerie

Branko Bistrovic

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(Below)

Rubia

Giorgio Grecu

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Urban Bana

Martin Carlsson

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"This process can take a long time, sometimes even weeks or longer. During such a period I just do a quick series of thumbnails and sketches for 15 minutes before I proceed with the rest of the paintings I'm doing that day."

PAINTING FANTASY
MEDIEVAL SCENES

This series of tutorials will be split over six separate chapters, all sharing the common theme of a fantasy inspired medieval scene at its heart. Each will be undertaken by a different artist and draw upon a wealth of experience and skills perfected over years of industry practice. The authors will discuss their approach to digital /concept painting, the tools and brushes they employ and treat us to a valuable look into their artistic process. The six installments will cover a different environment each month based upon the above theme and encompass a multitude of professional tips and techniques.

The importance of researching topics through to sketching and exploring ideas will feature alongside methods used to build and refine detail. These will form an integral part of the series and through comparison we shall be afforded a comprehensive insight into the world of the digital artist.

Painting Fantasy Medieval Scenes Chapter 2: City on Stilts

Software Used: Photoshop

In the following article I'll document some the decisions I made during the process of creating this image. Initially all I started off with in terms of an idea was to create a 'city on stilts'.

When the time schedules allow for it, I like to take a bit of time for creating my first rough sketches. I prefer to work in various, very short (<15 min) sketch sessions to put some ideas on paper, making sure I don't start detailing anything and just getting down the essence of an idea I might have.

Also, I prefer to do these both digitally and analogue - again, when time allows for it. I usually find that doing analogue sketches provides me with different solutions than sketching in Photoshop does. Not necessarily better ones, just different ones. It's partly because I can't do line drawings in Photoshop very well. When I sketch on the pc I use shades of grey and surfaces mostly, but with pen and paper I primarily draw.

Fig.01

Fig.02

Fig.03

This process can take a long time, sometimes even weeks or longer. During such a period I just do a quick series of thumbnails and sketches for 15 minutes before I proceed with the rest of the paintings I'm doing that day. The combination of sketching for one theme/ image and then detailing another is one I find particularly comfortable.

Shown in **Fig.01** - **Fig.08** is a collection of images I did during my sketch phase for the 'city on stilts' paint.

I very soon discover that I've got some conflicting requirements for my final image. These usually result in compromises and subtleties, and therefore I want to avoid them. In my paintings, subtleties are badly solved problems 99% of the time.

In the case of this image, I wanted the scene to show an extensive part of the environment, which on the whole should feel huge and epic, but I also wanted it to suggest some sort of 'homeliness' – if that's the word – even a bit of coziness. My first ideas for solutions for these two aspects were each other's direct opposites – for the first I would use a very large scale, but for the other a much smaller scale would be better. And there were other conflicts like that as well. I wanted the scene to be in daylight, but I also wanted to show light behind windows.

Back to my collection of sketches: So far, these aren't really blueprints of what my final image should look like – but I've gathered some interesting ideas through them. Particularly, I feel the combination of up-scaled vegetation with the concept of a city on stilts works very well. I end up choosing a very rough thumbnail

Fig.04
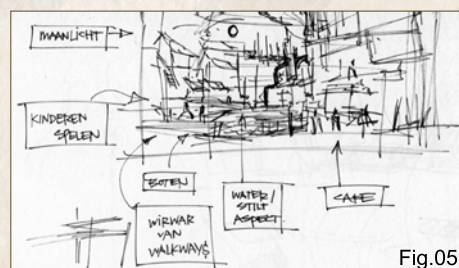
Fig.05

Fig.06
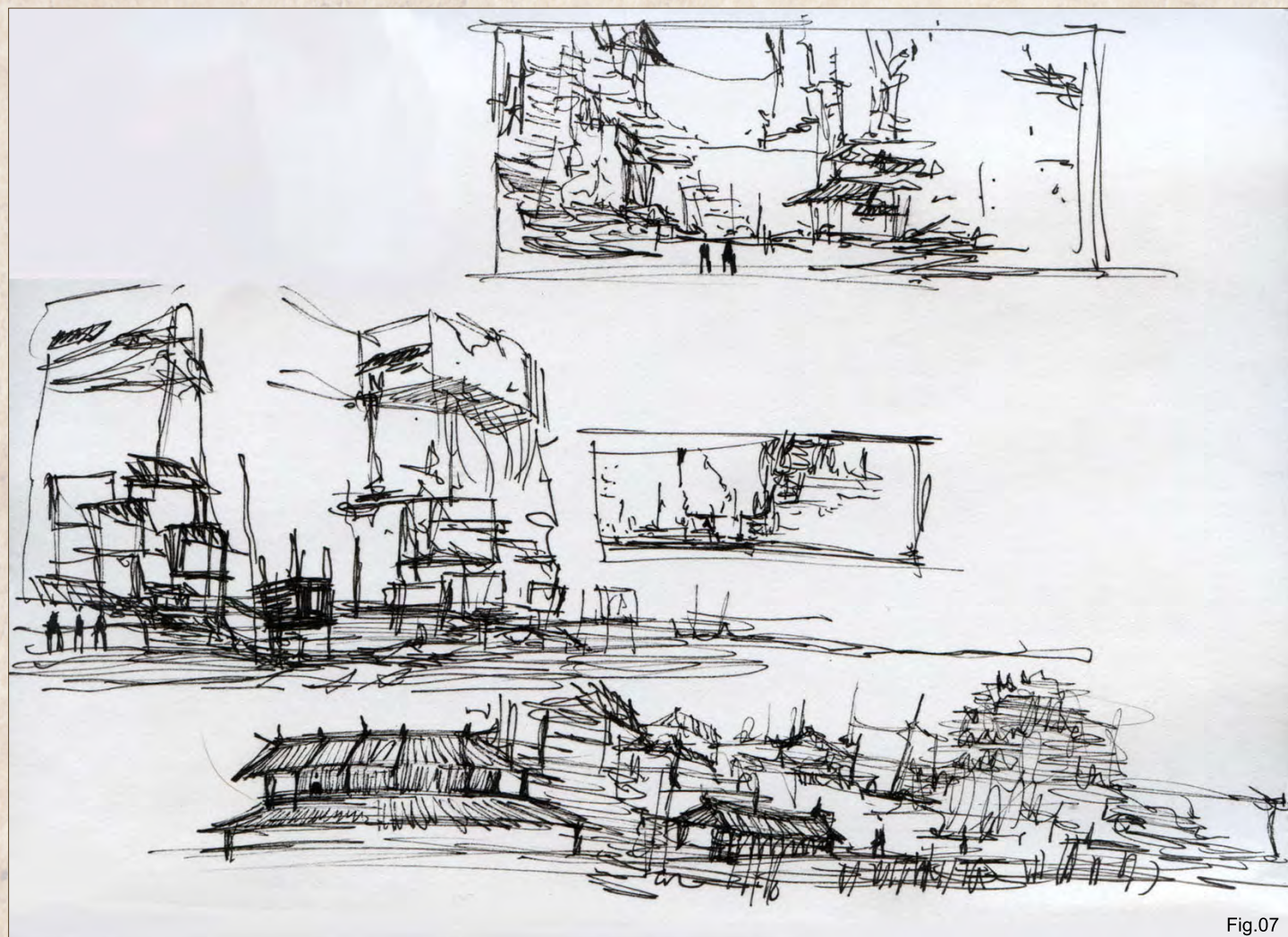
Fig.07

to go ahead with (**Fig.08**). I know beforehand that what I'll end up with will bear very little similarities to what I've just started with, but I'm not too bothered by it. I consider this sketch primarily to be a means to get the process started – I'm not really fussed about changing things around 180 degrees if needed. I find there's an upside to this approach, but also a downside; it allows you to really hone and idea, but it also takes quite long.

The first thing I do once I've selected my line art thumbnail is to put some value in there. This is done very simply by making sure the sketch layer doesn't have any grey areas any more, setting it to multiply and start to paint underneath it. (**Fig.09**)

In **Fig.10** I try to get some idea of scale by suggestion of some human activity. I want the place to feel populated, not deserted. The scale of the world can use some attention too; I stretch the image vertically to increase the height of the trees.

Before I worry about color, I tweak my environment one last time to give the trees even

Fig.08

Fig.09

Fig.10

Fig.11

more height (**Fig.11**), and I also make a bit more elaborate suggestion of some prominent tree roots on the left. During this process I also cut and paste bits of my sketch here and there - all I care about at this point is macro composition. I can sense that I'm not absolutely certain about which aspect of this scene I intend to highlight - and I will come to regret that later on.

"I try a lot of different things, and in the end I resort to a rather generic but failsafe method."

The first implementation of some color (**Fig.12**) features a prominently blue/greenish haze. Light is shining on the canopy, but is also emitted by artificial light sources from the population.

This is a point where I really have to wrestle with the image (**Fig.13**). The values are affected by my rather brute force color implementation (overlay layers and color balance adjustments) and I just can't read the image properly.
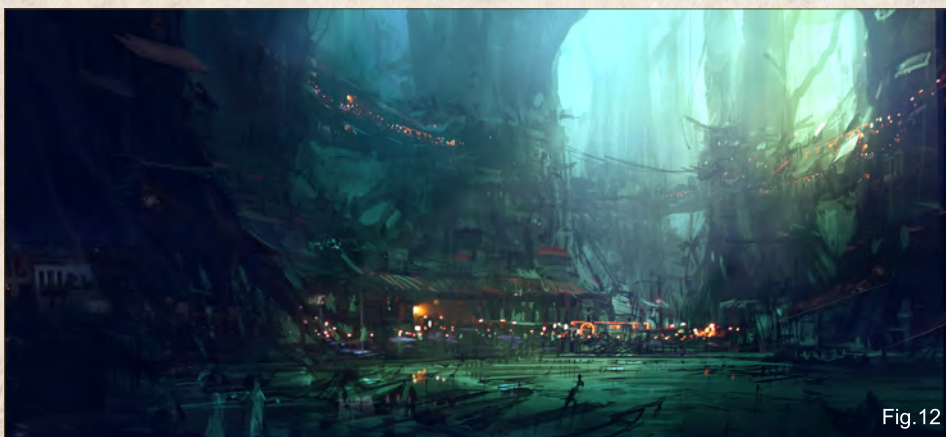
Fig.12
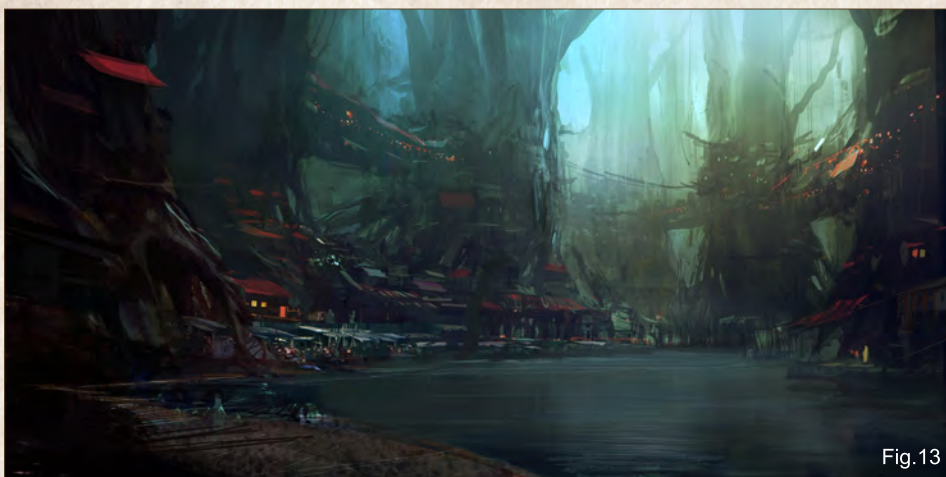
Fig.13
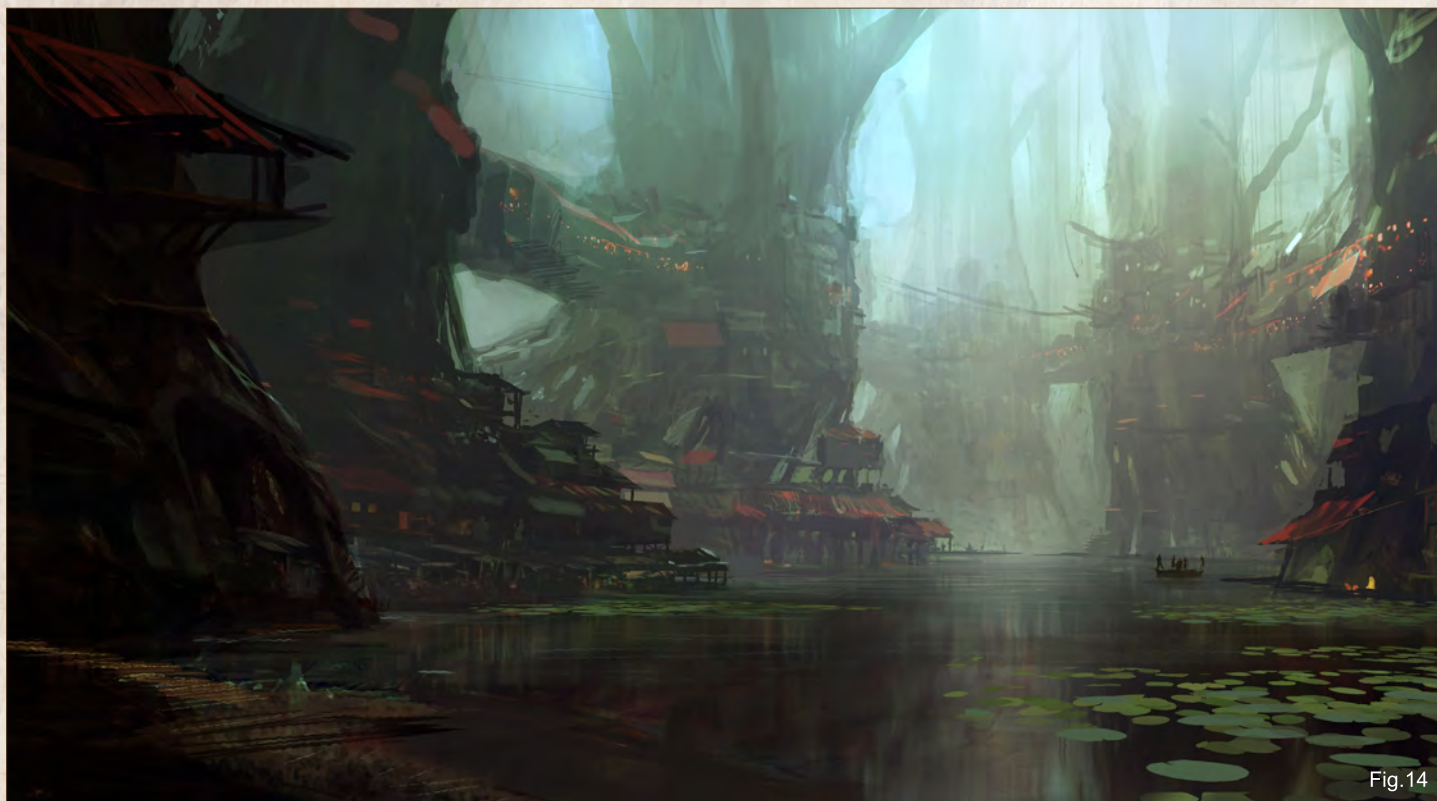
Fig.14

I try a lot of different things, and in the end I resort to a rather generic but failsafe method - structure the image by means of atmospheric perspective (**Fig.14**). It works to a degree - I can now finally tell what is supposed to go where - but the lighting has become incredibly boring. I decide to build on this base - flattening the image. I do that a lot during my process, at (mostly) sensible points. However, things like the borders of the tree bases, or actually, the shape of their silhouettes) are typically things that are useful to keep in saved selections or channels. For example, should you want to paint

fog behind a tree, having the shape selection stored can save you a lot of time.

Nearly at the point where I'm going to have to call it done (**Fig.15**). I provide some light from above on the rooftops, and add birds to liven up the scene. Particles are used to much the same effect. Also, quite a good bit of detail is inserted in the scene once more - and stuff painted at this stage is typically a task that 90% of your audience will overlook - so be aware of that. If things aren't working now, detail isn't going to save you. It's amazing how easy it is to write

this, but how hard it is to implement it while painting!

Still not quite satisfied! For my final pass (**Fig.16**), I beef up the lighting once more, possibly overdoing it now, but again, I don't really do subtleties very well.

Having now done my final pass, I look back at my process critically, and I can't help but feel I've thrown overboard too much potential in from **Fig.12** to **Fig.13**. My final image suffers from conflicting interest points - something I often struggle with.

That is not to say I didn't have a good time painting it. It's just not the end of this design - I'll revisit this world at a later time to set things straight. Stay tuned.

Fig.15

Jesse van Dijk

For more from this artist visit
http://www.jessevandijk.net
or contact
jesse@jessevandijk.net

Fig.16

ANIMATION & VISUAL EFFECTS
IN 2009

A VFS RETROSPECTIVE

2009 represents a special milestone for graduates of Vancouver Film School's Animation & Visual Effects programs.

They contributed to 9 of the 10 highest grossing films of the year. For 10 straight weeks during this summer's blockbuster season, audiences saw their talents on the big screen. Dozens worked on *Invictus* and *Night at the Museum: Battle of the Smithsonian*, and 20 more served on the long-anticipated *Watchmen*.

Then there was *District 9*. Over 40 alumni – including Director-Writer Neill Blomkamp and Visual Effects Executive Producer Shawn Walsh – crafted this sci-fi masterpiece. The release of James Cameron's *Avatar* capped the year in style, with a number of grads working to achieve a new standard in feature film animation.

VFS

For stories, interviews, and highlights, visit **vfs.com/highlights**.

painting
steampunk
environments
the 5 ages of steampunk

Five Ages of Steamworld encompasses the five interconnected districts of

Chapter 1: D'Automobilis

Neo-Victorian Era - epitomised by Victorian transport - railways, architecture, culture, way of life

Chapter 2: D'Vinci

High Middle Age/Rennaisance Era - epitomised by the early discoveries of Da Vincis inventions/sketches, discovery of the gas laws & advanced European Chemistry by Boyle (1661), rediscovery of advanced scientific Persian mathematics,chemistry and subsequent experiments - especially in Alchemy (everyone was seeking the Elixir of life/Philosophers stone and various collected treatises from Egypt (5000 BC), Greek (332 BC), Persian (70-1400AD) filtered into Europe - culminating in works by Albertus Magnus (1300)

Chapter 3: D'Metronomus

Epitomised by Clockwork Steampunk as the main visual theme - including musical instruments

Chapter 4: Diesel

Epitomised by late Industrial Revolution where diesel powers everything

Chapter 5: D'Inginis

Final leg of tour looks at both the heart of realm of D'Machinis & Inginis - meaning Machines & engines respectively.

Five Ages of SteamWorld Painting Steampunk Environments: Chapter 1 - Period Specific

Software Used: Photoshop

D'Tour

Welcome to these series of workshops, encompassing the Five Ages of SteamPunk within the alternate Realm of "Steam PanGloria Globus the 3rd" (SteamWorld for short).

Over the course of the next few months, our tour will encompass different eras and themes within the five interconnected districts of SteamWorld (D'Inginis , D'Vinci, D'Metronomus, D'Automobilis & Diesel). The central hub of D'Machinis serves as both the administrative sector & self machine engines of the Steamworld, and it's through here that the various travels between the five districts/ transitions occurs, via the convenient and yet unrealised Automobilis publik-transport featuring steam trains & various automaton.

Thus, let us begin our tour of the arts, science & practical application of the sub genre of steampunk, via the exploration of the brilliant inventions, and great feats of engineering this realm, has to offer (and where all things though improbable, are possible).

D'Automobilis: Essence of Victorian Steampunk

Our first stop of the tour, we will be taking a glimpse at the basic transportation manufacture & design at the heart of the various districts of the Realm. In essence, the main thrust of the SteamWorld transport is inspired by the discovery, utilization and subsequent daily use of steam technology epitomised by the scientific

and global influence of the Neo-Victorians, Britannica. For here, at the D'Automobilis TCEECT Workshops: (The Centre for Extraordinary & Everyday Conventional Transport), we can freely share in the basic principles of steampunk transport design. Victorian England 19th Century represented the height of a technological, cultural, worldwide revolution that helped herald society into the modern age. Amongst one of the technological advancements, was the refinement and advancement of steampower in all sort of mechanical, industrial & scientific endeavours, that improved the quality of their overall life.

But first, let us look briefly into the history of the steam engine.

Steam Engine

Hero (Heron) of Alexandria (10-70AD), invented the first known steam (Hero's) engine recorded as the **Aeoliphile** (Reaction Steam turbine) i.e a steam pressurised sphere/vessel with opposing curved nozzles that spins on its axis due to opposing perpendicular jet streams. He also invented, the first force pump

(fire engine), first windmill machine (powering an organ), the syringe, vending machine and wrote books on Pneumatics, Mechanics & Automatons.

Two millenia later, in the 16 to 17th century, steam power was initially utilized to help pump water from flooded mines as the main priority. **Thomas Savery**, was the first to commercially produced a practical steam pump for continous use to help pump water up to 20 feet. However lack of a safety valve meant at high pressure it was frequently unsafe and tended to explode.

Subsequently, **Thomas Newcomen** & **James Watt** developed and iterated upon their atmospheric engines which utilized a weighted piston to create vacuum & thus condense steam. Watts, improved on Newcomen's engine via a separate condenser & applied rotary motion, to thus build the first commercial successful/patented steam engine.

However, it was not till **1799** when **Richard Trevithick** refined and built his "high pressure" steam engines that meant one could do away

with a condenser, and thus build smaller compact engines for everyday use. Thus in **1804**, Trevithick accomplished the worlds first locomotive journey in an unnamed full scale locomotive near the **Penydarren Ironworks**, Wales.

Atmospheric Pressure & Gas Laws

One has to appreciate, that to finally reach this breakthrough various scientific and technological advances would have had to be achieved. Namely:

1. Understanding Boyles Law

2. Development of materials able to withstand high pressures of steam

3. Understanding of Vaccum & Atmospheric Pressure

Crucially, the appreciation of the effects of Atmopsheric pressure & vacuum (Boyle's Law) led to the fundamental development of the modern steam engine.

Boyles Law states the volume of a given mass of gas (V) varies inversely with its pressure (p) when its temperature remains constant.

$$pV = k$$

where:

p denotes the pressure of the system.

V is the volume of the gas.

k is a constant value representative of the pressure and volume of the system.

Design & Sketching your own Steam Transport (Visual Art Direction)

Now that we have had a brief look at the history of the steam engine, let us consider modifications and improvements upon the conventional horse bound carriage.

A good way to approach this is a "mash" approach as a primer towards thinking/exploring about the design aspects of the horseless carriage. On one hand, over analyzing/thinking the design may produce a stilted design without

much exploration and in contrast, sometimes it is worth exploring the existing design & its variations without worrying about the technical (eg. technological limitations - gameplay, texture budget, VFX budget) aspects of it all.
Afterall, the main end objective would be to reach your "high concept" design and then adjust/tailor accordingly towards the required situation.

Thus, in that regards, one should look at the steampunk genre as a unlimited delightful exercise at realization of the realms imaginative, and unbounded.

The Horseless Carriage - HC

So, let us consider the Carriage (**Fig.01**)

From a visual artistic development point of view, one should initially consider its method of propulsion. Assume, for a moment that transport had reached a state whereby, the steam

engines were sufficiently compact enough to be partly integrated within a carriage.

Visually, this has positive ramifications and immediately allows us to develop a personal one to two seater transport that can be supplied with a discreet steam engine attached, including various attachments and paraphernalia to various gears/ pistons and belts to power itself.

Next, to consider the functional aesthetics and overall form.

With reference to the **(Fig.01)**, the designer has considered approaching the HC design with a tri wheeled and duo wheeled approach. For access, the operator would enter via a frontal hatchway system which self folds/ unfurls ingeniously using slats and hinged joints to provide good reliable access into the HC transport.

HC TRI-WHEEL BASE - R1   HC DUO-WHEELED BASE - R2   HC COMPOSITE - R3
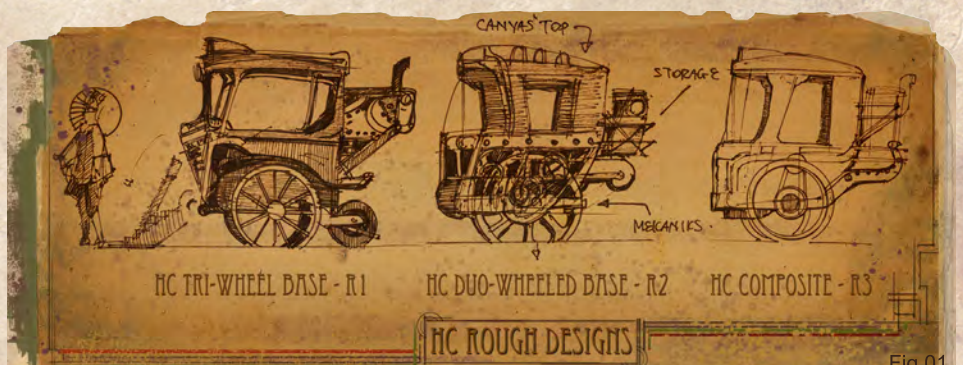
HC ROUGH DESIGNS

Fig.01

The final aspect, would be to combine the elements that best fit a working design of both, and subsequently experiment using this composite clean-up design as a base.

HC - Schematics

Once a clean-line base design is decided upon, the next aspect is to consider how the HC transport design would appear from various angles. These can be achieved via a set of plan drawings - featuring commonly the orthographic front and side views (**Fig.02**)

During this stage, various opportunities to explore the inner mechanics/workings of a steam engine are worked out. This can range from exploring different wheeled spokes, the application of a small fly wheel/gear belt pulley system or even a partial exposure of a miniature boiler/engine system. In addition, exposure of a simple (fishbone) suspension system can help lend towards its functionality.

Additional Details to consider:
- **Hand Crank:** Once the general shapes are determined, it is the tiny attention to details such as the use of a detachable hand crank, to help start ignition of a external pressurised starter motor, that would subsequently release a burst of highly pressurised gas into the compact steam boilers.
- **Luggage Rack:** Further thought went into consideration of a foldaway luggage rack system. Initially, this was located towards the rear of the overall apparatus where the external boiler and exhaust pipes are housed. Upon the 3rd and 4th trial, it was felt that a roof based rack system, would adhere better towards an overall vertical design.
- **Alarm/Lighting Rig:** To further reflect an
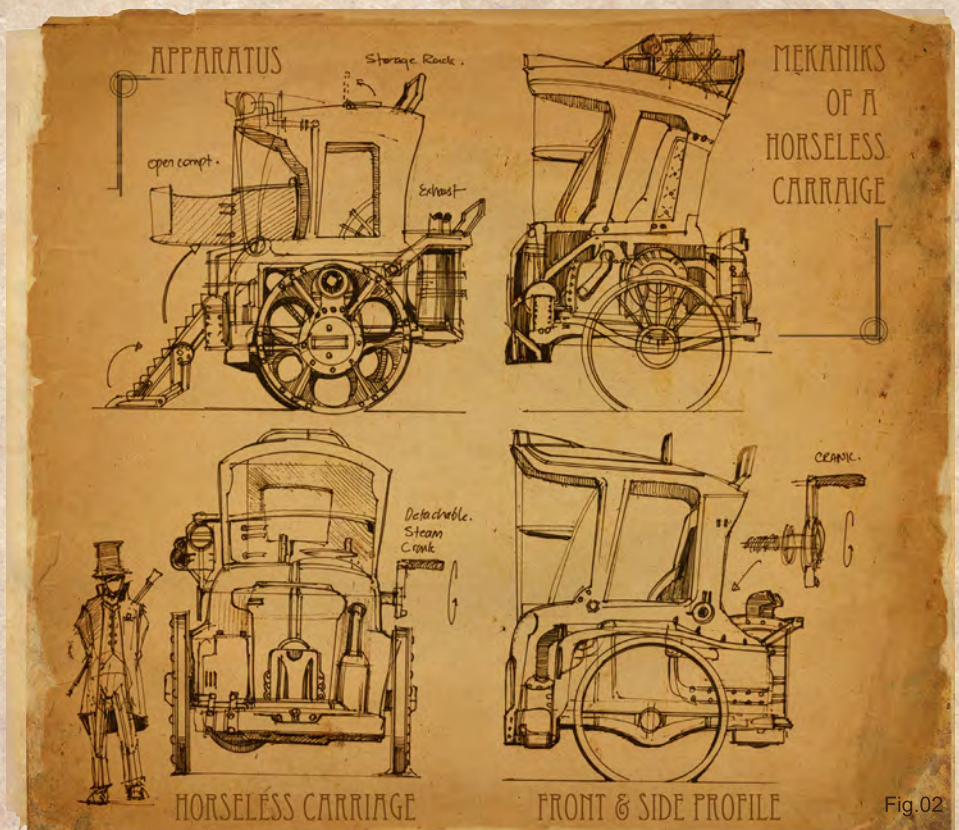
Fig.02

unconventional bolted on look, it was felt that a combo Klaxon-Lantern amalgamation mounted asymetrically towards the side of the HC apparatus would fit well (as opposed to conventional forward mounted lamps)

The Steampunk Look

The thing to appreciate is, a steampunk look works best when there are two or more layered pieces joined together by bolts & rivets. Elements of brass, copper and wood are a marked difference from worked aluminium and steel. Even the type of rivets determine greatly the overall final look.

"A fine balance of sufficient believability, aesthetics and functionality offers the best marriage of the trio."

Eg. Up to the 1950s, great seaships of the Admiralty utilized "clench bolts", whereas a set of flushed rivets (vs normal solid bolts) - such as those seen on a WW2 Supermarine Spitfire required skilled training & advanced

production techniques such as that used for mass production of cars, to fit onto elliptical wings (another advanced design that resulted in such slow production results, it almost resulted in cancellation of this 60 year old legendary fighter).

In contrast, a modern streamline look would feature a more minimalist art direction and aesthetic in consideration.

HC - Motion

Once a set of orthographic plans are produced, the next aspect is to imagine the HC transport in a more 3-Dimensional representation within a 2D drawing i.e via a 3/4 perspective view (**Fig.03**). In this instance, the HC apparatus in motion is likened to a self-propelled rickshaw, and thus would only work if there were gyroscopic elements factored into the equation. In contrast, one should also consider how this transport would appear at rest - perhaps a 3rd rear wheels pops out, or the forward aspect of the transport detaches and provides some rudimentary support/stabilization.

Fig.03

By utilizing a ¾ perspective view, the designer is able to thus help visualize the design as if it were to be produced as a miniature model or 3D object. In terms visual troubleshooting, now is a opportune time to explore various functional shapes that may have appeared promising in a planer/side profile but may cause various teething issues in a solid 3D form. Lastly, whilst it is useful and well commended to take into consideration all these aspects of rigorous industrial design and functionality, perhaps a fine balance of sufficient believability, aesthetics and functionality offers the best marriage of the trio.

We will get the opportunity to realise this design further within the tour of the Diesel district.

Steam Wagon - Sketch & Cleanup

Returning once again towards the Horse & Carriage concept, the designer hits upon the idea of replacing the Horse with a steamhorse instead (**Fig.04**).

STEAM WAGON DESIGNS
steam engine — Refurbished Horse drawn Carriage
SKETCHES & DESIGNS OF A STEAM WAGON
ORIGINAL SKETCH - INK PEN & WASH
Digital Cleanup Sketch
STEAM WAGON: CARRIAGE SIDE PROFILE
Fig.04

The initial ink sketch features a carriage piloted by a driver sitting high at the rear of the carriage. In contrast to the horseless carriage approach, this concept features a wagon that has no combustion/mechanical aspects and in all intents and purposes merely a simple carriage. This is linked up towards a small compact steam engine consisting of a boiler, piping and exposed gear shafts/pulleys and belts.

A mid set of support iron wheels are attached in the middle to afford more stability and fine control. These are relayed via a set of pulleys and controls that afforded manoeuvrability to the driver in the rear.

Cleanup: Subsequently the initial impetus of these designs are used as a template to provide a cleanline sketch.

Steam Wagon - Workup

The cleanline sketches of the Steam Wagon (see **Fig.04**) are utilized as a base from which to work it up further. In this instance, we will only focus on a side profile iteration.

These can be blocked out to accentuate areas of demarkation (**Fig.05**) - allowing one to focus on the textural aspect of materials. For example, a transport that utilizes wood and metal, can expect to have a level of matte finish vs specularity.

STEAM WAGON DESIGNS
Areas of demarkation
blocked in base values
Fig.05

Being able to denote and show these material differences eg. leather, polished wood, exposed steel, riveted boilers - using just pure values can often be a (welcome) challenge and offer a high value concept from which to derive other designs.

Values: (Fig.06) The next challenge is to transform a line drawing into a semi 3Dimensional image using just pure greyscale values. Popular car magazines can help with regards to lighting approaches - and quite simplistically a top down lighting situation is often sufficient to provide some believability in a side profile view.

Additional design elements: To continue the aspect of believability, the designer can add further designed elements such as a exposed steering system.

Touchup: (Fig.07). Once the general lighting issues are sorted, the final aspect to consider is improving readability, bounced lighting and material texture and feel. This image, should

Modelling of Values

Steering mechanism installed

Fig.06
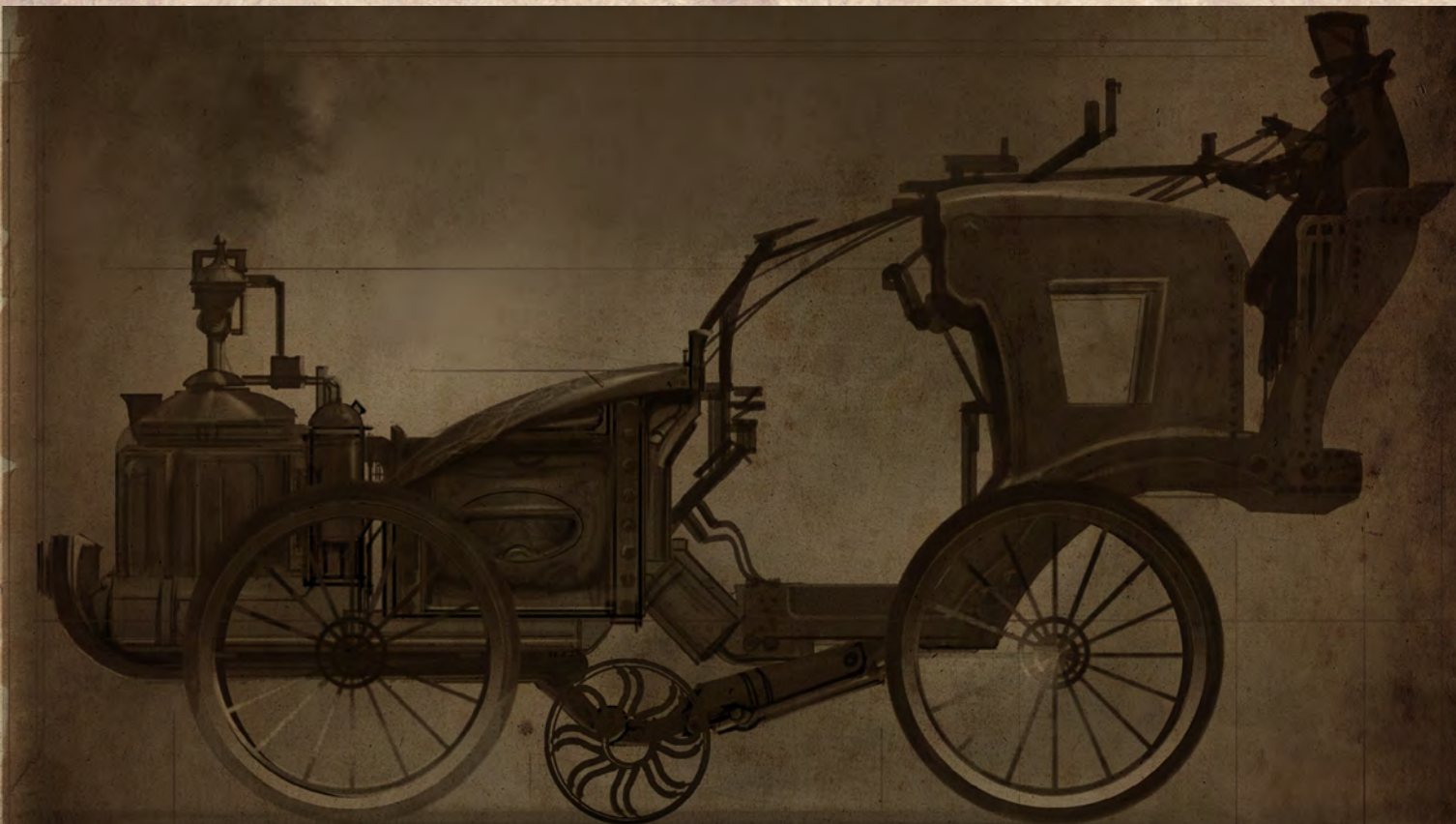
STEAM WAGON - PROFILE DESIGN

Fig.07

serve as a good starting sketch from which to work up a more refined painting/illustration at a later junction.

Steampunk Reference - Visual Art Direction
This next segment deals with visual art direction and reference.

A good artist & illustrator has a reasonably well developed methodology of collecting, classification, analysis and application of reference. Well... (you would expect) at least the more successful artists would have had developed and coherent system to help bring realism and authenticity into their work.

> "One can explore various elements of construction to simple small thumbnails - featuring basic composition, readability and layering of objects."

Victorian-esque: Thus to develop a steampunk universe, the designer set about analyzing and collecting various bits, aspects and forms of victorian-esque objects. (**Fig.08**). These tend to comprise of jointed shapes featuring L-shapes or D-shapes (perpendicular 90 degree joints). These can subsequently be applied towards lighting, joins, geometrical supports and arches.
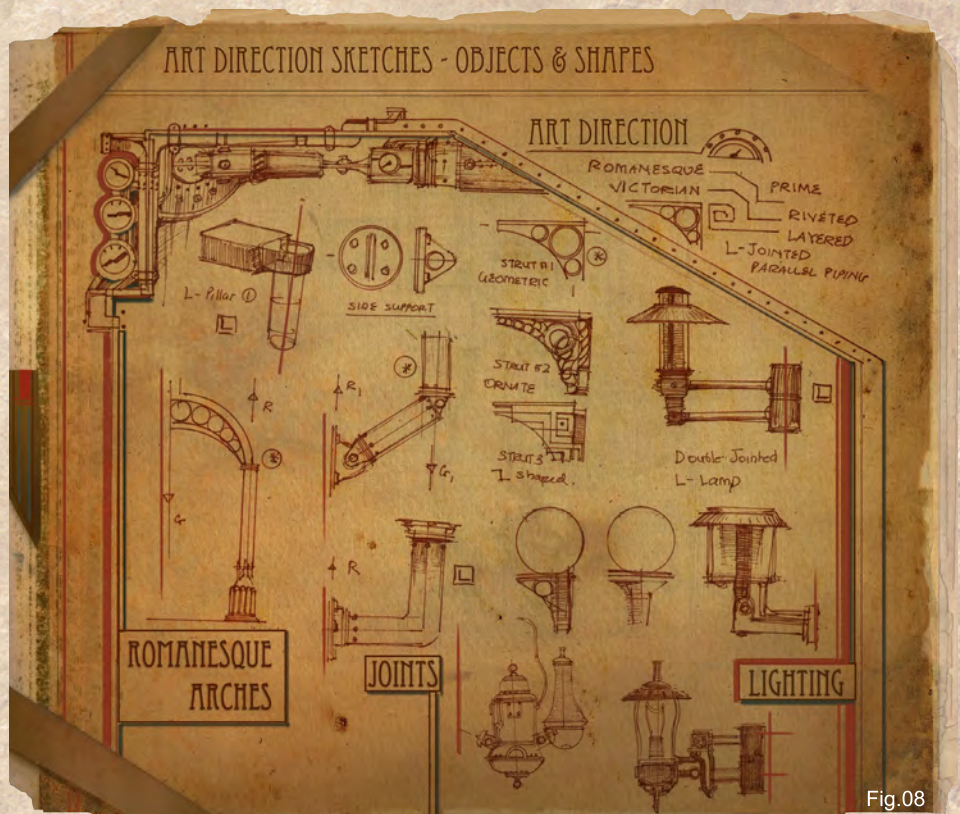
Fig.08

A particular characteristic of British arches are the leftover aspect of the Romanesque period. Unlike Europe which tends to favour a more gothic and art deco/nouveau flavourings .

Industrial Exploratory Sketches: (**Fig.09**). Applying this approach, one can explore various elements of construction to simple small thumbnails - featuring basic composition, readability and layering of objects. In this

instance, these sketches feature elements of a train turntable, tram & fuelling station and lastly a pumping station. We will later apply some of these sketches into a pen & ink wash collage.

Townhouse Exploratory Sketches: (**Fig.10**) Lastly, we can zoom in and consider even more minute aspects of a set of buildings by considering a building, eg. townhouse. On the far left, are various elements of victorian

Fig.09

Fig.10

Liverpool Street Station London

Leadenhall Market London

VICTORIAN STEAMPUNK STATION - COLLAGE

Fig.11

townhouses such as a Romanesque doorway, window and triple storied flat. Extrapolating this, one can outline the overall form and accentuate this further to create your own unique steampunk townhouses at will.

Steampunk D'Automobilis Transit Centre - Digi Ink & Wash
Collage: In this last segment of the tour, we will look at a quick digi ink and wash approach towards our onsite sketching of various steampunk buildings. (**Fig.11**) By amalgamating the various sketches and unifying the various vanishing points into an overall whole, this can provide a rapid and satisfying collage of sketchwork provided as a joint sketch collage.

As an accompaniment, various photograph depictions from olde markethalls and rail stations in Victorian London are researched to provide a believable reference point.

DigiWash: (**Fig.12**) The first instance upon completion of the sketch collage is to apply a weak unifying wash. This allows one to explore various shapes and structures with similar values and distances from the viewer. Areas and foreground objects that may have potential core shadows can also be rapidly marked out (**Fig.13**).

Background Plate: (**Fig.14**) For this particular image, we can now work in a methodical stepwise fashion. Starting from back to front. We

Upper Viaduct
Steam Trams
Lower street
√ apply a thin weak wash
VICTORIAN STEAMPUNK STATION - WASH Fig.12

2/ block in core shadows & shapes
VICTORIAN STEAMPUNK STATION Fig.13

3 / BACKGROUND CLOUDS & LAYOUT

Apply a wash of a colour complementary

Block in the Horizon Line & Bulk up Clouds

Fade & Smear In A warm light source

Build up more Layers of warm & cool Clouds accordingly
Fig.14

can firstly work out the main colour of the image which features a roil of warm yellow clouds on a backdrop of grey blue ambient skies. This particular approach will allow us to paint contre-jour (against daylight) as favoured by plain air artists when sketching/painting on site.

"Even the best laid plans may have to be abandoned for a simpler approach."

Steampunk D'Automobilis Transit Centre - Block In & Wash
The next aspect is to bring these separate image together in a layered format, whilst observing the various value relationships of one another. (**Fig.15**)

Starting from constructing a multi-arched viaduct in the rear, this is followed by the midground

elements of central arched buildings and foreground elements. The various elements are separated on different layers to be composited together.

However, there is a large problem that tends to occur. Namely, the overall image may become too diluted or overwhelmed by the various separate elements.

Fig.15

A quick composite of the various element quickly prove (**Fig.16**) that the overall composition is flawed in terms of composition, elements and rendering. Thus, one has to decide at this point on the next course of action.

Murder or Persevere.
About one and a half hours later, there are just too many issue to tackle. Far better to have had chosen the "murder your darlins" approach. In that regard, the crop tool can be a handy aide - allowing us to split the overall image into a portrait view (A) or a landscape format (B).

It is these decisions and being able to develop various strategies that present much of the everyday challenges as a artist and illustrator. Even the best laid plans may have to be abandoned for a simpler approach.

Ultimately, the designer opts for the Landscape format of B - which allows for a more intimate crop that focuses on the buildings, town life and transports.

End of D'Automobilis Tour

Welcome back to the D'Automobilis transit centre, and I hope you have enjoyed our brief tour of the steam transport design workshop. If you would any further information, advice or additional reading, please find out more below, or contact us at workshops@opusartz.com

For our next tour, let us next meet within Transit centre for the D'Vinci leg of the journey whereby the remnants of our partially built TramMetro will

Fig.16

need to be modified and built to take us onwards into the High Middle Ages & Renaissance birth of the various elements of steam. Due to the current instability of the various elements, participants are advised to please be prepared to face extreme aberration in weather & low visibility.(**Fig.17**)

Authors Notes

As a primer & introduction to steampunk, there is a wealth of knowledge & resources abundant on the interweb, popular fiction, art, sculpture & movies. Here are some additional recommendations to immerse yourself thoroughly into your own Steampunk worlds, in no particular order.

Recommended Websites
　• darkroastedblend.com
　• steampunkmagazine.com
　• gizmodo.com/gadgets/steampunk/

Popular Media
　• Sherlock Holmes (2010)
　• League of Extraodinary Gentlemen (2003)
　• Steamboy (2004)

STEAMPUNK - Museum of the History of Science, OXFORD
www.mhs.ox.ac.uk
13 October 2009 to 21 February 2010

"Steampunk is rooted in the aesthetics of Victorian technology. Yet it is not a nostalgic recreation of a vanished past: its devices are both imaginative and contemporary. This exhibition reveals the many possible resposes to Steampunk's characteristic preoccupation with the historical and the contemporary, the mechanical and the fanciful."

If you do happen to drop by Oxford for a day visit, I would thoroughly recommend visiting the Museum of History of Science, to visit its vast and handsome collection of celestial globes, sextants, astrolabes and the world's first steampunk exhibition (basement) - curated by

Art Donovan. Here, sculptures from some of the worlds best steampunk imaginist are on display until late Feb 2010.

Workshop Objectives - How to use these workshops.
When initially suggesting these workshops to 3DTotal, I had in mind the sharing/glimpse into a fictional steampunk world that I have been working upon, and to integrate the viewer via an explorer that both explores and sketches their journey within these realms. Such an undertaking however is currently too vast, and thus I had to be realistic and scale such an experience that was both fictional and yet informative.

I was particularly inspired by the charm and obsessive development of James Gurney's Dinotopia series; the lovely and informative aspect of cut-out books and illustrations, and finally the more rigorous responsibility of the more academic, and technical aspect of explainging this genre of steampunk and art.

Thus, let me briefly explain how these workshops are intended to be applied/experienced. These workshops are targeted towards a wide range of audience encompassing:

　• **Visual Art Direction:**
　For budding art directors and senior concept artists, these series hope to share the

challenges of establishing a visual direction, from which to develop an existing or new Intellectual Property/Franchise.
　• **Technical & Troubleshooting:**
　These share the various frameworks and approaches of developing a reliable repeatable pipeline when working towards a set art direction
　• **Elemental:**
　Lastly, within each segment there will be an aspect of the various elements, mood, atmosphere and time of day to consider.

The challenges of designing visual assets is sometimes best approached in a holistic manner. As such, each workshop will tackle the asset generation via the creation of themed worlds.

Dr. Wong is both a visual imagineer & director of Opus Artz Ltd and has over 10 years of creative visualization and industrial design experience, working with a diverse range of game & animation developers worldwide such as Visceral Games, Sucker Punch productions, 2K Marin & 2K Australia.

His roles have included being the External Creative Director on The Edge of Twilight, External Enviromental Art Consultant on Bioshock 2 and Senior Concept Artist and Visual Lead for the MMO "Infinity: The Quest For Earth"

Fig.17

Chapter 3 | Werewolf

The last chapter in this series is perhaps the most controversial in the sense that it could be argued that it does not fit into the category of undead. However it is often paired with vampires in film and literature and is a unique and fascinating topic, hence its inclusion. As with the previous two installments it will take a more traditional stance on the werewolf in humanoid form with the head of an animal.

"One thing that was common across many of the references was the fusion a wolf like head on a humanoid body"

PAINTING THE UNDEAD

This series of tutorials focuses on mythological and legendary characters and in particular the theme of the undead. It includes the two classic examples, most notably the vampire and zombie but also incorporates a werewolf which does occupy a very popular and unique place in modern myth. All of the above characters have featured heavily in both book and film contexts over the years as such have cemented themselves in history.

The tutorials cover the process of creating digital characters from the concept stage through to the final refinements. The value of thumbnail sketches and exploring variations on a theme will be covered as well as touching upon custom brushes and the power of Photoshop's blending modes which offer flexibility and freedom to edit the image throughout the design process. Each individual tutorial will take a slightly varied approach with regards to blocking in and color schemes and aim to show how Layers and blending modes can be manipulated to suit different attitudes.

Chapter 3 - Werewolf

Software Used: Photoshop

Introduction

As with the Vampire I began by looking into the various interpretations of this myth, from old ink drawings through to the different film representations over the years. It was similarly clear how varied the designs were, with no single iconic version that stood out as perfectly representing the character in question. One thing that was common across many of the references was the fusion a wolf like head on a humanoid body. This rule off course was broken by the film, "American werewolf in London", where the beast walked on all fours. I did consider this notion and liked the idea as it seems a little more unusual but an upright stance was also appealing. The main problem posed by designing a werewolf compared to a vampire is that it is a combination of two very different animals. A wolf's skeleton is dissimilar to a humans and there is also the problem of how the joints would be arranged. In the case

Fig.01

of a wolf it has a very long metatarsus and so has a kink in the lower leg that is absent from a human which means that when a dog is standing on its back legs it assumes a very different posture. By adopting a human upper body and substituting human legs for that of a wolf is something many designs have incorporated in the past and it seemed like a successful formula.

I was quite keen to maybe reverse the common designs and give him a human head with some twisted features and maybe give him a stance more like a chimpanzee, being able to stand upright as well as walk on all four limbs.

However I decided to choose the more classic route for the purposes of the tutorial – I will probably reserve a more inventive design for any future projects .

Thumbnail Sketches

I made some thumbnail sketches to try and decide on the style and look of my werewolf and instead of beginning with silhouettes I made a few head studies (**Fig.01**). I thought that a powerful upper body would make him seem more formidable and hence gave him a muscular neck. The first sketch I made far left was too dog like with the elongated skull and long snout and so went for a more human shape (middle). I liked this a lot more and so experimented by giving him more of a frown, a less human nose and a few more teeth (right). The more aggressive expression was appropriate but the nose resembled that of a proboscis monkey which was wholly inappropriate and somehow comical!

As the vampire evolved somewhat during the painting process I decided not to fully resolve the head design and let the process suggest a direction as I already had a vague notion of how I thought he would look. Instead I started on some postures and proportions in silhouette form (**Fig.02**).

I experimented with different fusions of human and wolf anatomy to varying degrees. Sketch 1 has a human body shape but with hands and feet that resemble paws whilst 2 and 4 have legs more like that of a dog. Sketch 3 is somewhere in between but has much longer
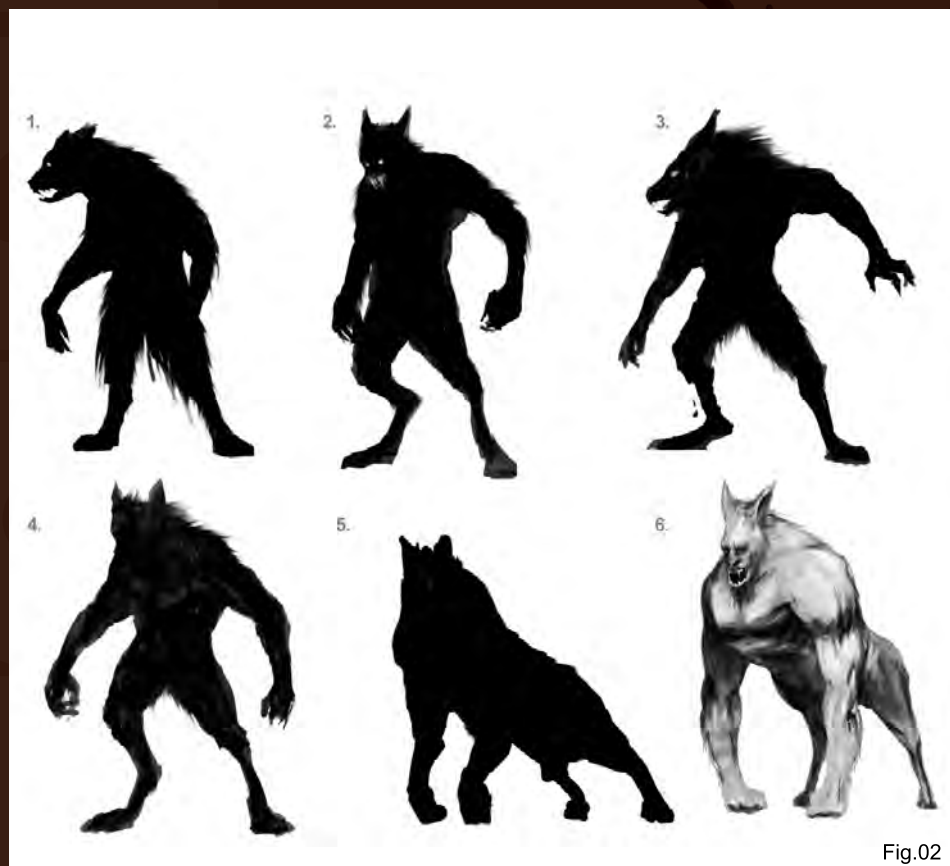

Fig.02

feet and a larger head. The bottom right sketches (5-6) assume a more dog like posture but still retaining a more human upper body but with the ability to walk on all four limbs. The postures I liked most were sketches 2 and 4 as 1 and 3 suggested a more docile and surprised stance, plus their heads are in profile which didn't look as interesting. With a reasonable idea about how he would look I began refining some further details (**Fig.03**).

I took the basic posture and made some variations to the arm and head positions and also tried using human legs on one version (4). I liked sketch 5 but the vampire was facing the viewer and so I didn't want to repeat this format

Fig.03

Fig.04

for the werewolf. In the end I decided on sketch 3 and so was ready to start work on the final design.

Blocking In

I followed a similar procedure for this painting as I did with the vampire and filled the canvas with a neutral grey colour and then started to rough in the character on a separate layer (**Fig.04**). As the werewolf would be predominantly made up of one color, albeit with subtle variations, I chose to block him in using greyscale tones only. This meant I could focus on the shading and light and dark passages to describe the anatomy and then use a separate layer set to Overlay to convey the color scheme. I used this same method on the vampire skin which enables the opportunity to experiment during the process and change the color at any time without altering the tonal range. There are some artists who prefer to work in greyscale to begin with and then add color in this fashion further down the line when they have the light and dark structure established whilst others work in color from the offset. It is entirely subjective in the end and depends on which approach feels more comfortable but it is good to try both techniques and see which feels more natural.

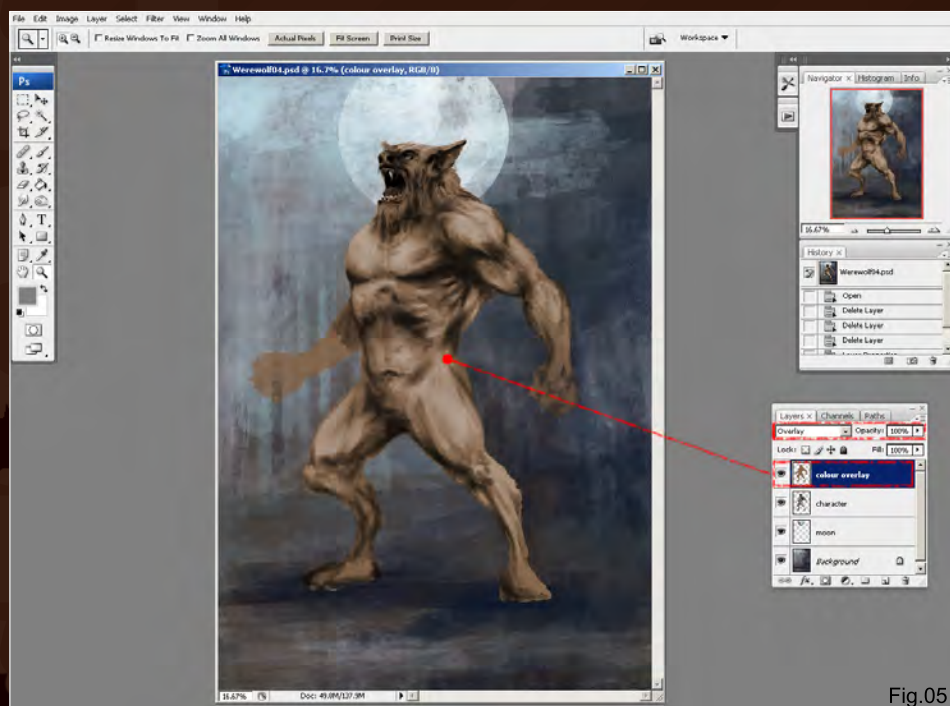After elaborating on the anatomy a little more I apply the initial colour overlay on a separate

Fig.05

Fig.06

layer (red highlights in **Fig.05**). You can see here that I have also added to the background using one of my standard textured bushes and painted in a shape representing the moon.

The two principal brushes I use for blocking in and for much of the painting are shown in **Fig.06**. The top brush is the custom brush I use to paint the background and the lower one is a standard Chalk brush. You will notice that the Dual Brush function is enabled in both cases and within Other Dynamics I turn the opacity to pen pressure as I am using a graphics tablet.

I added in some hue variations to the color overlay to break up the skin tones and lightened

the top of the background using a grey color set to Soft Light (**Fig.07**). This layer used the Foreground to Transparent Gradient which was dragged from the top of the canvas to about chest height to only affect the upper region of the image.

Because the character was blocked in quite roughly to begin with there are a few problems with the anatomy being somewhat inaccurate. First and foremost are the rib cage and chest which seem misaligned as we can see from the red line on the left in **Fig.08**. You will notice how the sternum is too far to the right and so I made some adjustments to this section along with the chest section (right). Another area which did not

work was the eye which again was very roughly blocked in. As the head is tilted back slightly so must the angle of the eye which has been corrected on the right.

This method of slowly refining the details and modifying aspects of the anatomy forms part of the process as the image evolves. I find it is best to get something down on the canvas even if it looks wrong as it is far easier to change a part of the painting when it is in front of your eyes as opposed to just existing in your head.

With the key layers established it is time to start adding detail to the character and build on the foundations of what we have. On the left in

Fig.07

Fig.08

Fig.09 is a stage further in the process but as this creature is part wolf he needs some hair which at the moment is only around his head. I created a custom brush to add some hair which you can see on the right (inset). I also used a standard hard round airbrush to paint on individual hairs randomly across the body and to give the shadowed areas a more furry profile e.g. left arm and leg.

Building the Detail

I continued to add more hair across the body on a separate layer which I named refinements (see top of layer palette in **Fig.10**). As the character is backlight by the moon I thought it would be good to have a lighter shade of fur tracing his outline to reflect this. To do this I selected a dark orange grey and set the blending mode to Linear Dodge (Add).

One thing I noticed was that the upper fangs were being camouflaged by the light coloured backdrop and so I darkened this part of the image and then emphasized the teeth as these are a key feature of its threatening nature (**Fig.11**). I also heightened the skull and gave it a little more curvature as it seemed a touch flat, although this could quite easily be an interesting aspect in itself.

Fig.09

Fig.10

Fig.11

Fig.12

Whilst focusing on the head I got around to fixing the nose and shape of the upper lip. I knew the nose looked wrong but decided to leave it for a while as I was unsure as to what it should look like. At this point I thought that one resembling a dog would seem most fitting and so made the necessary alterations (**Fig.12**). You will also notice that I have also tried an alternative eye as part of the ongoing process.

It is good practice to intermittently flip your canvas horizontally and even vertically to try and see problem areas that have become disguised through a familiarity with the image. It is a common technique among artists and replaces

a mirror in traditional painting. In this case I realised that my creature was "top heavy". What I mean by this is that his torso seemed too large and bulky in proportion to his legs. The best way to fix this is to use the Lasso tool and select a part of the picture encompassing the area in question. Then go to Edit – Transform – Warp and manipulate the grid to distort the image (**Fig.13**). You can see in the Layers palette that Layer 1 is the duplicated section that incorporates the waist. I have pulled the hips upward to lengthen the legs. Remember that to do this successfully you will need to have the character on a single layer unless you wish to manipulate multiple layers, i.e. color overlay and refinements.

Once the character layers had been flattened I took the opportunity to fix another area that looked wrong, namely the chest area. In **Fig.14** you can see the before (left) and after stages of using the Warp tool with the different positions of the chest and pelvis.

It is a good practice to flatten layers at certain stages when you feel content with your progress
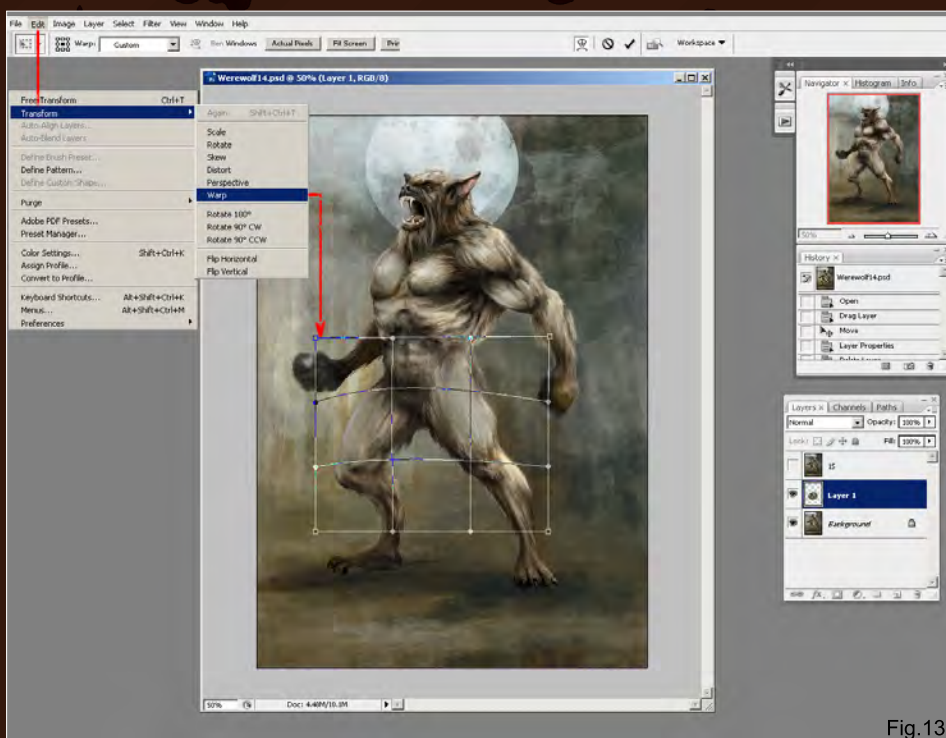
Fig.13

to keep the file size as small as possible and to keep your PSD's from becoming too complicated.

Final Stages

The overall character was looking on track at this stage, especially after the changes to the general proportions and shape of the nose. The teeth and jaw however were still not right and needed some attention as these are a focal point on a werewolf.

I shortened the mouth cavity as it seemed to extend back too much into the head and also

Fig.14

Fig.15

re-set the upper canines, reducing their number and giving them a more yellow color (**Fig.15**). I also modified the background at the same time to make them stand out more which is something I do on and off as the character develops.

To help bind the character to his surroundings I duplicated him and then added a layer Style – Gradient Overlay (**Fig.16**). To mimic the moonlight I used a bluish green color similar to the top of the picture which corresponded to the top half of the character.

I then placed this layer below the original and used a soft Eraser to reveal some bluish highlights across the upper body and head section area on the duplicate. With some definition added to the hands the werewolf reached its final state (**Fig.17**).

Conclusion

As with the vampire beforehand, this was my first attempt at a werewolf and as such was an interesting challenge. I allowed this character to develop somewhat during the process of painting it but ended up with something similar to the sketch in **Fig.03**.
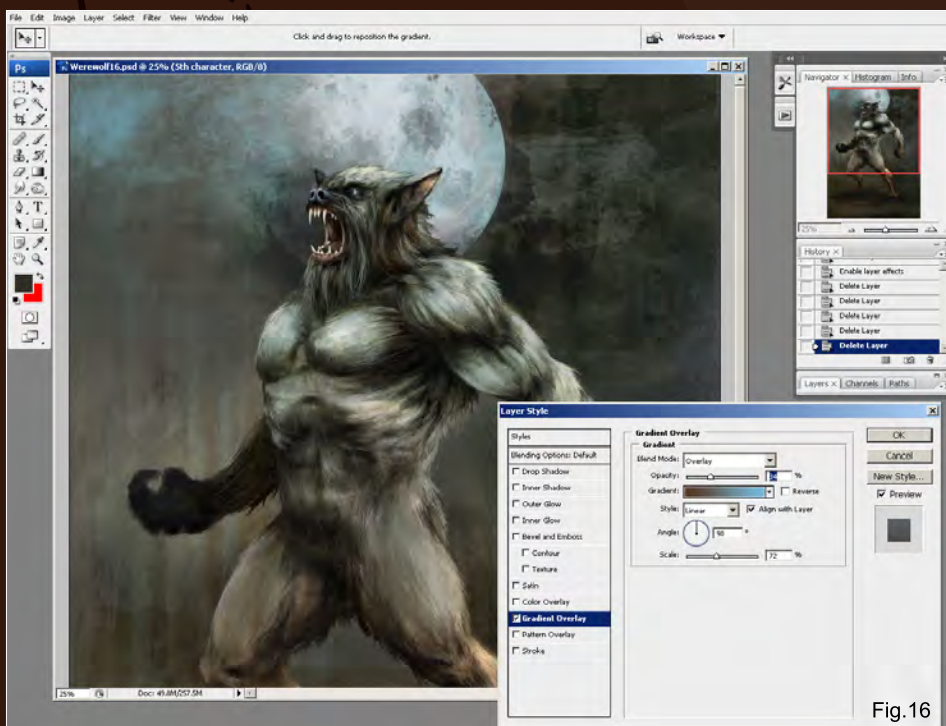
Fig.16

I feel he has human characteristics in his anatomy but has enough modifications to lend him a more animal nature even when you discount the head. Maybe if I were to paint another version I would try and give the head a more human quality whilst integrating wolf like features and give him a more twisted and agonised look. Probably the most significant part of this project is the problem posed by creating a hybrid character but this is also perhaps the most interesting aspect.

Richard Tilbury

For more from this artist visit

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or contact

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Fig,17

PAINTING MONSTERS

"Part of the design was inspired by jellyfish which have always fascinated me due to their strange and unconventional form and so I included some tendrils and a bulbous shape."

This series of tutorials will be split over six separate chapters all of which will be dedicated to painting monsters suited to a range of habitats spanning jungle and aquatic to mountainous and subterranean. Each will be covered by a different author and will discuss their approach to digital /concept painting, the tools and brushes they employ and culminating in a final image. We shall gain an insight into the thought processes of each of our industry professionals and the ways in which they develop an idea from concept sketches through to a finished work. In particular we will be shown some of the considerations that are necessary to designing both imaginative and fantastic creatures that still remain plausible and abide by anatomical and evolutionary laws observed in nature.

Each tutorial will focus on a specific environment as its theme and therefore result in a varied collection of monster designs, providing a well rounded look into the world of the digital artist and the numerous tips and techniques used by proven individuals.

Chapter 2 - Aquatic

Software Used: Photoshop

Introduction

For this series I decided that whatever topic I settled on, it would focus on the actual creature itself and not on any environment or context. As this tutorial would concentrate on the design of the monster it made sense to place it against a simple background.

From the available list I chose the aquatic theme as this is a subject I have had little opportunity to explore in the past and hence would make an interesting challenge. The fortunate aspect of this particular creature also meant that I could place it in its natural, underwater context and still keep the background simple due to the habitat. This certainly was not my motive for choosing the sea monster but it sure is nice when things work out like this sometimes!

As per usual I started to look at some reference pictures on the internet but mainly for how light interacts with the sea and illuminates submerged objects. As opposed to having a plain blue background I thought it would be more interesting to show the creature near the surface with evidence of the waves above.

Creating an Underwater Habitat

To start to create a very simple underwater
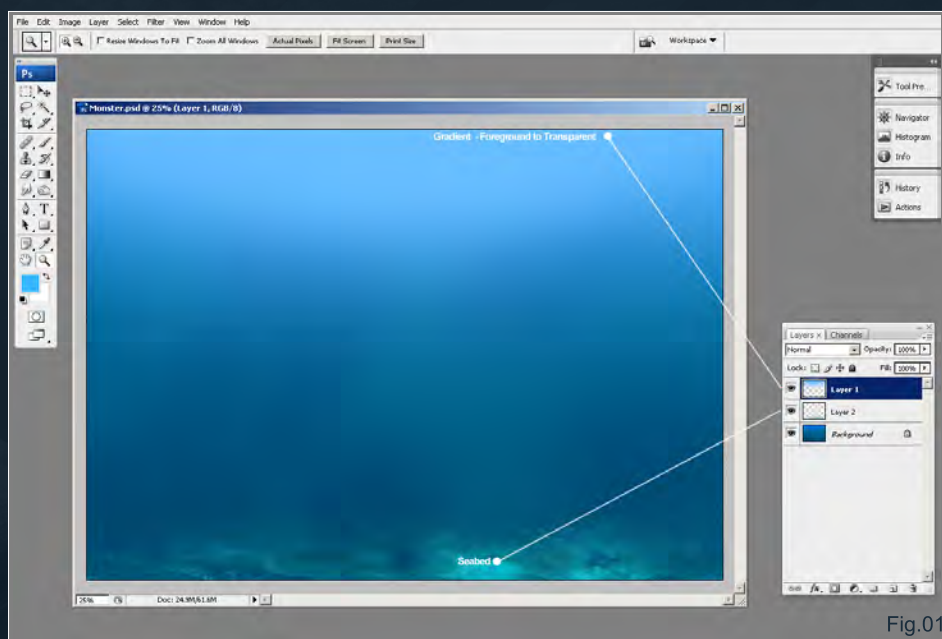
Fig.01

environment I first of all filled the canvas using a blue color with a little variation (**Fig.01**).

You will notice that the scenery composes of three layers, the first of which is a lightly modulated blue which you can just make out in the thumbnail. Above this background layer is the seabed which is simply a band of abstract shapes along the bottom edge (Layer 2). The final layer represents the light filtering downwards from the sun and has been created using a Linear Gradient with a Foreground to Transparent Preset (Layer 1).

I opted to remove the seabed as this implied a shallow section of water and hence a smaller sea monster. On separate layers I then painted

in the surface along with some light beams filtering downward. The sunbeams were painted using a Soft Round Airbrush and then had the opacity reduced to around 40% (**Fig.02**).

The creature was then blocked in on a separate layer in case I wanted to change the color scheme or lighting at any point. Keeping elements separate like this can ease experimentation which is something I like to do throughout the painting process.

You can see on the right how the file is currently structured into five layers. The lighter gradient along the upper section of the canvas has been set to Screen mode at 89% opacity. The reason for this can be seen more clearly in **Fig.03**
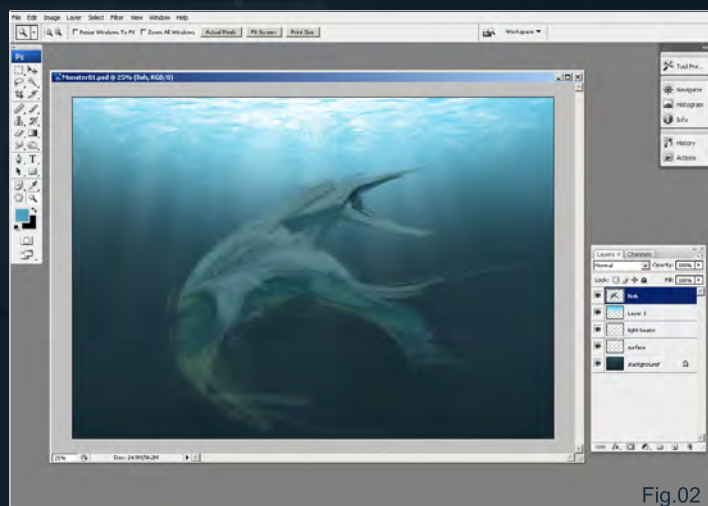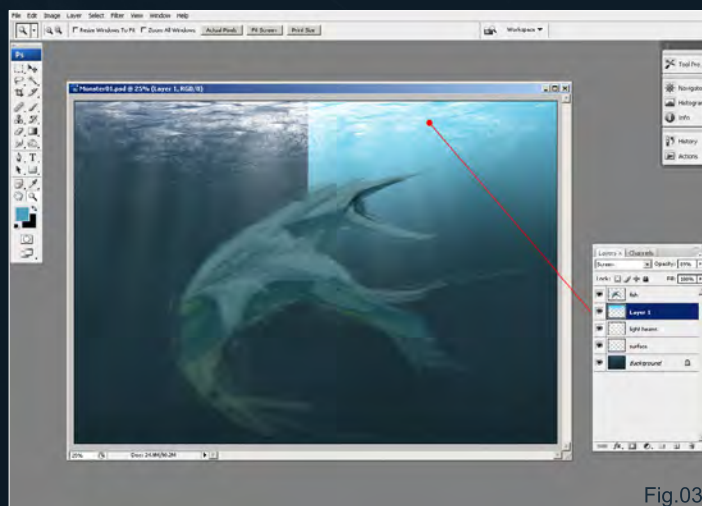

Fig.02

Fig.03

where it serves to create a smooth transition from the surface to the mid depth.

Creature Evolution

You have seen the initial creature sketch in **Fig03** and with the basic environment underway it was time to focus on developing the animal. I often start this process with some thumbnail drawings but in this case I was happy to start doodling and see what developed.

I began with some random shapes and non-descript brushstrokes and started to develop these into a more fish like form as shown in **Fig.02 and Fig.03**.

I quite liked the beak like shape in the upper right and thought this may make a good mouth and so decided to keep this feature. The curved body reminded me of a seal or dolphin which was not alien enough for my taste and so I moulded this into a more amorphous shape (**Fig.04**).

Part of the design was inspired by jellyfish which have always fascinated me due to their strange and unconventional form and so I included some tendrils and a bulbous shape. I then married these ideas with the tentacles of an octopus (**Fig.04**).

I liked the idea that this creature was quite slow moving but used its tendrils and tentacles to sting and trap prey similar to a jellyfish. I added in some long tendrils disappearing into the distance to suggest that this beast could catch its prey even if it were not within close proximity.
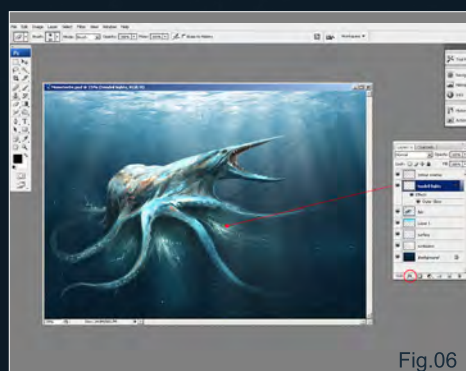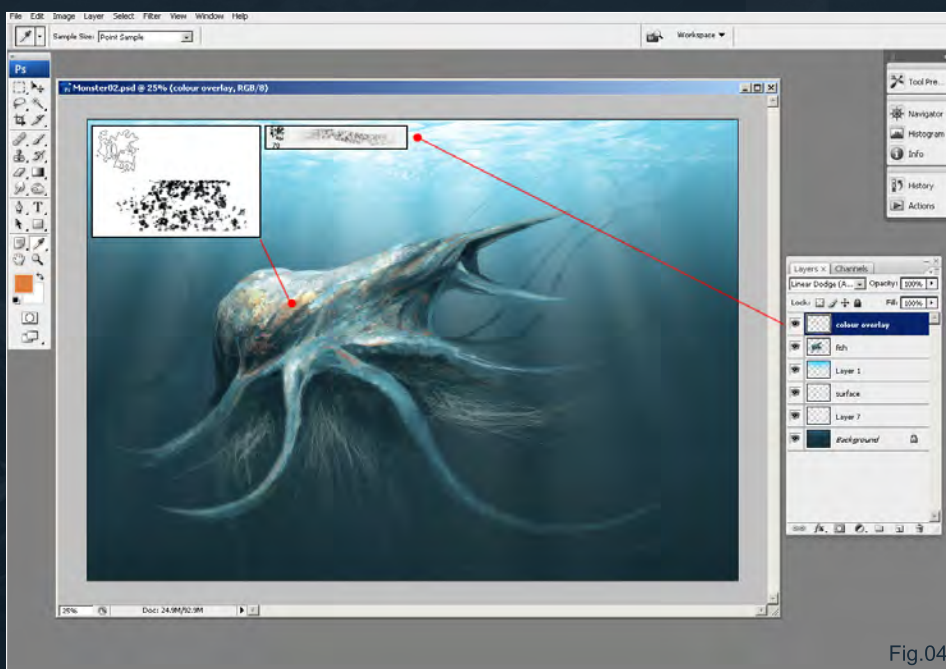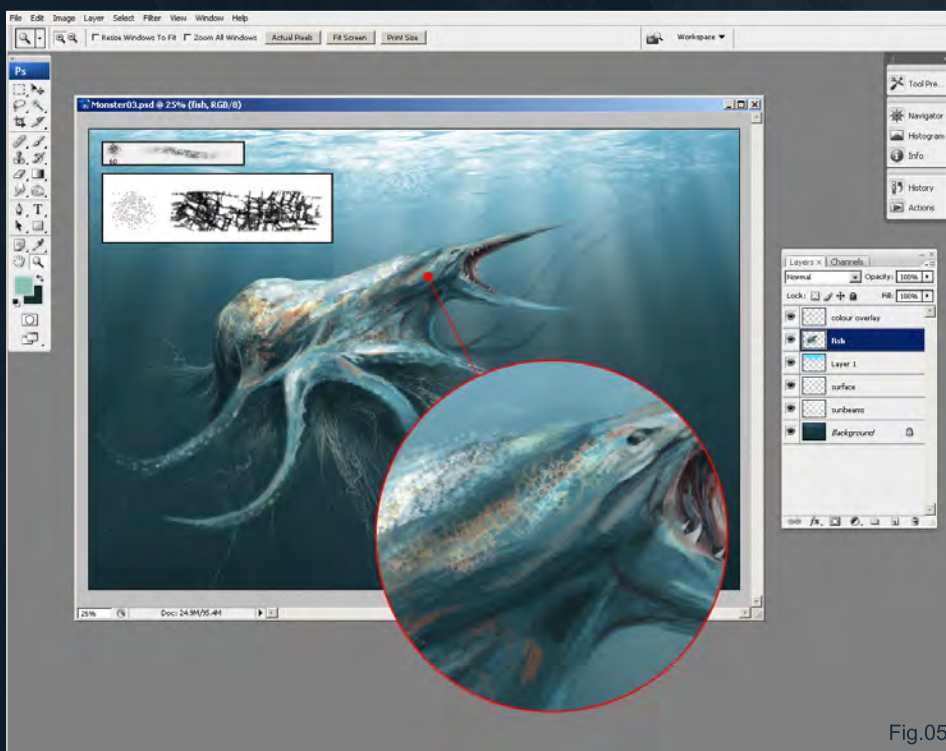

Fig.04

Fig.05

Fig.06

I used a custom brush to create a pattern across its body which was done on a separate layer set to Linear Dodge.

I then began developing the head by adding in the eye and teeth along with some detailing around the jaw. I also used another custom brush which incorporated an image of broken glass to create a variation to the skin pattern (**Fig.05**).

Because the creature is quite near the surface I decided to add some more contrast to the caustics across its body as it was looking a little flat. To create another dimension I opted to add some luminescent lights below its body which it would use in similar fashion to the Angler fish. The glow from these would attract smaller fish towards its tendrils and keep it fed in between feeding on larger prey (**Fig.06**).
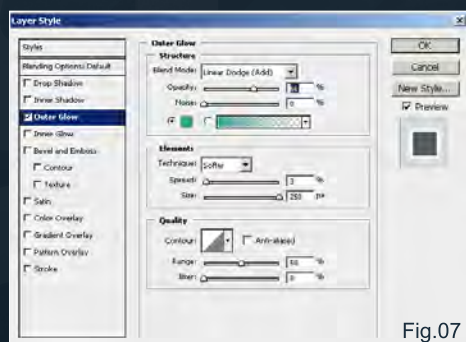
Fig.07

To create the glow I used the Outer Glow Layer Style which can be accessed by clicking on the fx icon at the base of the Layers palette (highlighted in red). This brings up a dialogue box similar to **Fig.07** where you can see the settings I have used.

As this creature now uses glowing tendrils I thought it would be both interesting and weird to give it a second mouth through which smaller prey could be digested. An Octopus has a body integrated into its head with no distinct difference and likewise I thought that a mouth section as part of the body would make this creature look even more unusual. I decided to add a membrane that connected the tentacles as well as form a mouth cavity (**Fig.08**).

This could now be used to engulf potential food. I also experimented with a different head and body shape, giving it a crest and a more pronounced neck section.

One other aspect that was missing was some evidence of scales, plankton and some general particles in the water. The best way to create this is through a custom brush which can be based upon a range of different sources. In this
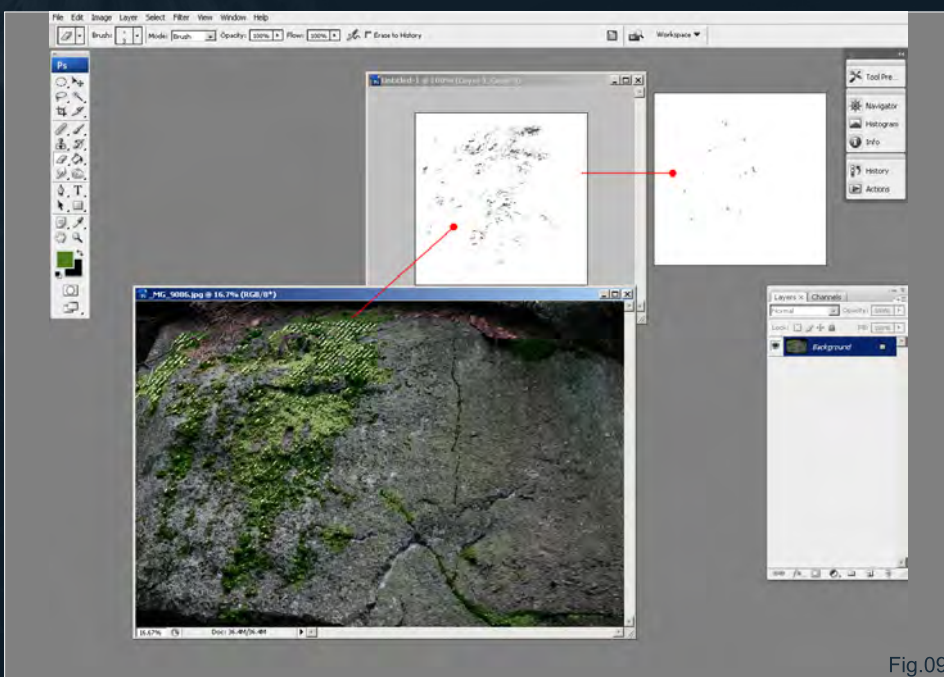

Fig.10
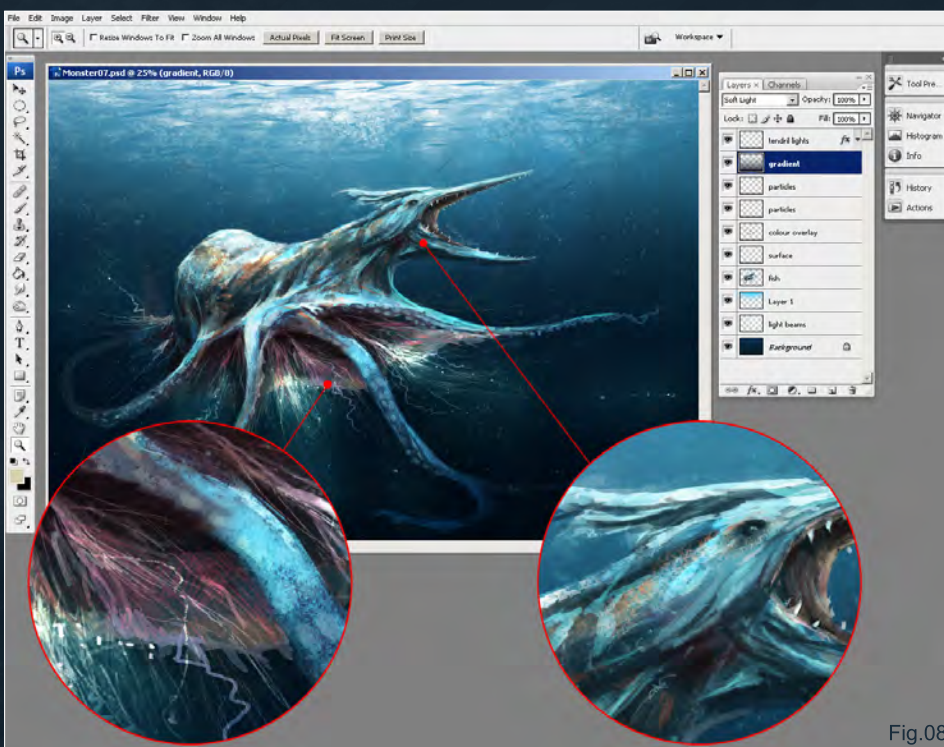
Fig.08

Fig.09

case I used an image from the free online photo library at 3DTotal.com, in this case a picture of a moss coated rock.
http://freetextures.3dtotal.com/ preview.php?imi=8119&s=c:Mountain Forest&p=2&cid=17

I first made a color range selection of part of the moss and then copied this into a new file with a white background. Once desaturated, I then

scaled it down and used an eraser to reshape it into a few sparse dots which became my eventual particle brush (**Fig.09**).

As I looked through some of the earlier versions of the creature which I had saved in order to write this tutorial it struck me that the original shape from **Fig.04** was somewhat more unusual than its current state and so I resorted back to this design (**Fig.10**).
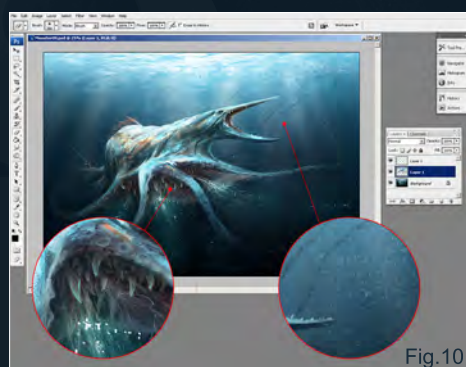
You can also see how the particle brush has helped add some detail in the water (inset). Because the creature has a second mouth I felt it needed some teeth reminiscent of squid or octopus and so created a series spanning the underside, which also helped lend it a more menacing aspect.

Adding Final details

Usually once the painting has reached a reasonable stage I flatten it and then begin adding some of the refinements on a new layer. In this instance I added two new layers: one set to Overlay mode in order to add some passages of color to certain sections such as those highlighted in red in **Fig.11**.

These comprised of a red tint along the jaw and tail fins along with a blue shadow added beneath the lower jaw. The remaining layer was used to add the segmented sections along the
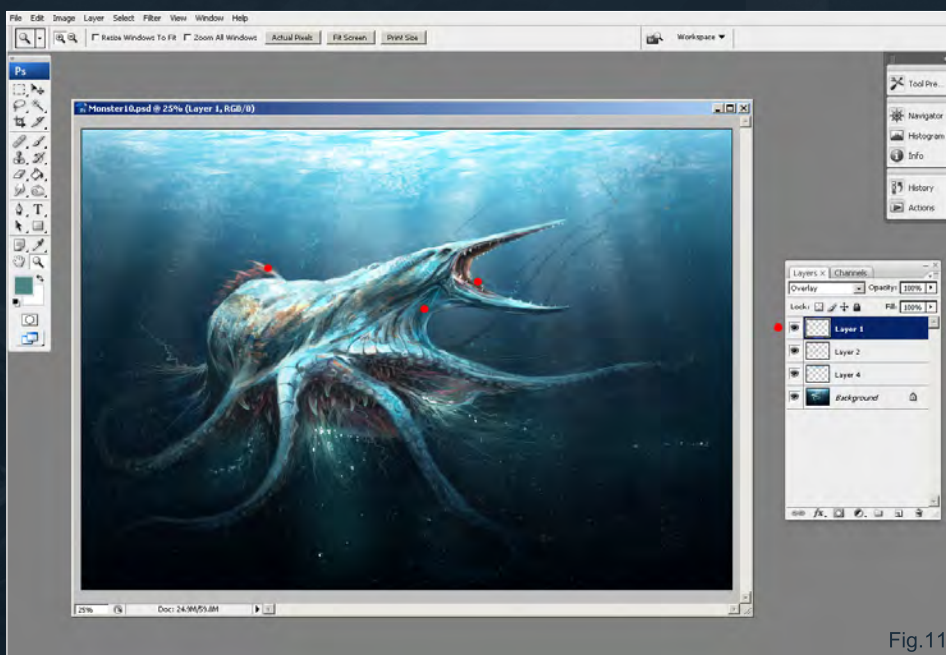
Fig.11

tentacles. The picture is almost complete now but a few Adjustment Layers will further help tie the image together once all layers have been flattened.

The first one I apply is Curves by going to Layer – New Adjustment Layer (**Fig.12**). I use this layer to darken the overall tonal range by adding the two points and dragging the line down
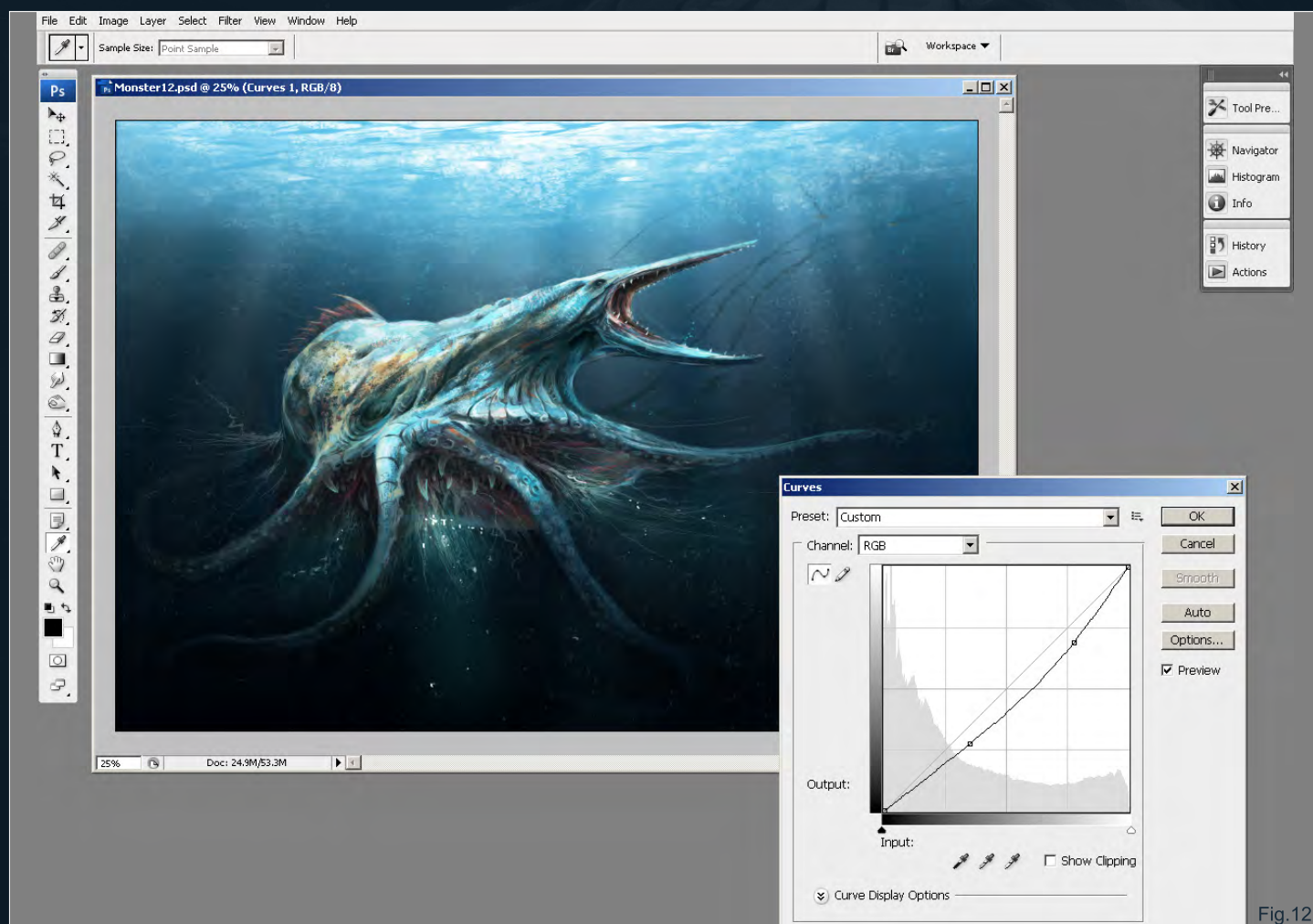

Fig.12

slightly. Once done you can use black to paint into the mask and reveal the original stage if need be.

The next Adjustment Layer is Levels – again this is used to darken the image so that I can then paint into the mask and reveal a few bright highlights in specific areas as shown by Quick mask in **Fig.13**. The red areas in the image correspond with the black areas in the small thumbnail at the top of the Layers palette.

The next Adjustment Layer I use is Levels; again to darken the overall image before once again painting into the mask **Fig.14**.

The last and final Adjustment will be Color Balance and is where I add a greenish tint (**Fig.15**).

The final image can be seen in **Fig.16**

Conclusion

This has been an interesting tutorial and has certainly been fun to do as it is not a subject I have tackled before. I try to vary my approach to painting and apply different techniques each time I start a new piece. Sometimes I work in greyscale to begin with and then add color later in the process and at other times I make a series of thumbnail sketches beforehand. In this case I jumped straight in without any preconception of where the journey would take me, developing the design along the way.
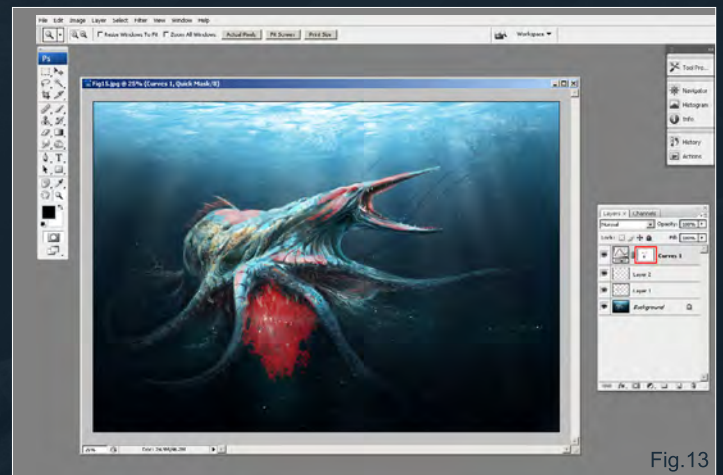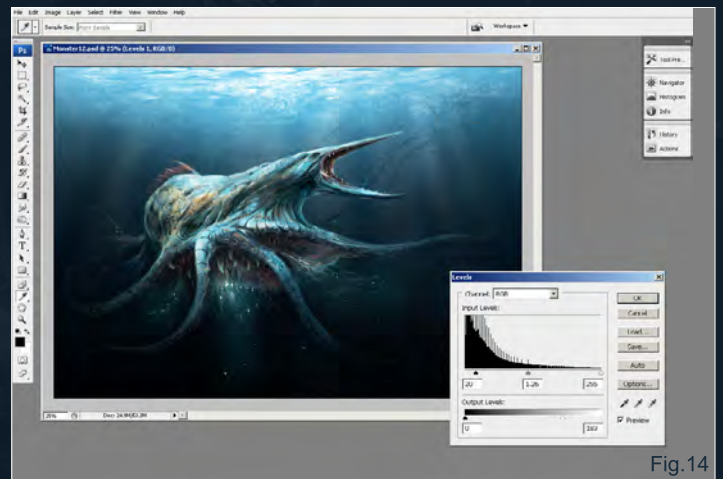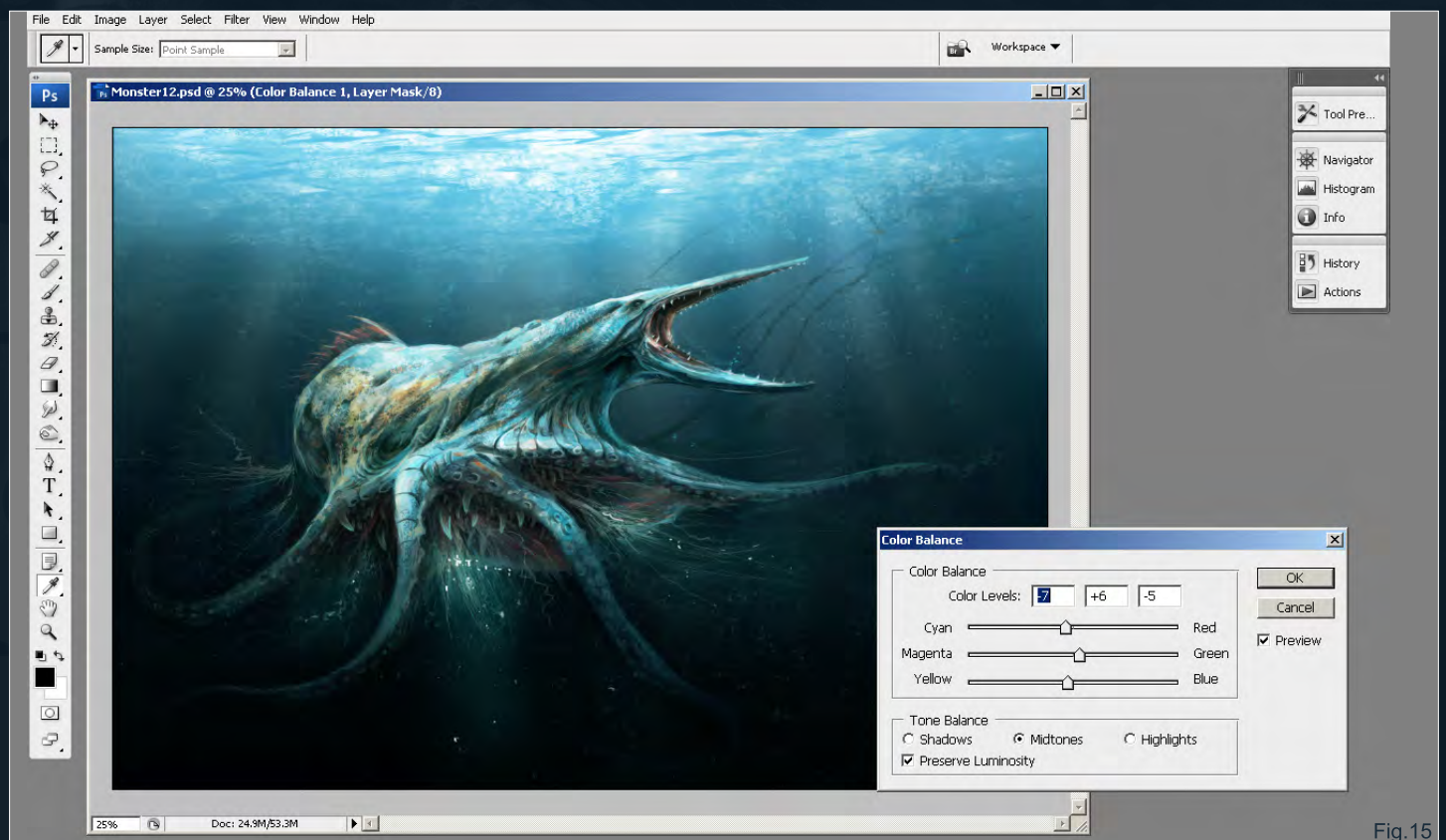

Fig.13

Fig.14

Fig.15

Fig.16

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Here is what's in the next issue of 2DArtist

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IMAGE BY SOHIEL DANESH ESHRAGHI

"I like to explore new shapes and forms, and to generate something I've never created before."

The Beast

Making of by Jama Jurabaev

We are very pleased to present Jama Jarubaev and his image The Beast. Take a journey with us as Jama tells us how he uses thumbnails and silhouettes to create the backbone of his image, and talks us through how he developed his ideas to create The Beast! Jama also talks us through his tool choices and even gives some of his own brushes away as a download with this issue!

The Beast

Software Used: Photoshop

Overview

During one of those ordinary after work evenings, I was sketching some of the character thumbnails, just one after another.

I like to explore new shapes and forms, and to generate something I've never created before. Speaking in general, I manage to capture interesting ideas when I don't restrict myself to anything specific. So I have no idea what I am going to create at all.

Frankly speaking, the characters were the most difficult part for me to draw in the past.
I feel much more confident in drawing environments, but I knew that if I struggle on with the characters I would develop my concept art skills.

And I hardly ever give up))

Production

So usually, I quickly drop some silhouettes on a blank canvas. (**Fig.01**) I like to work with the silhouettes, because silhouettes allow me
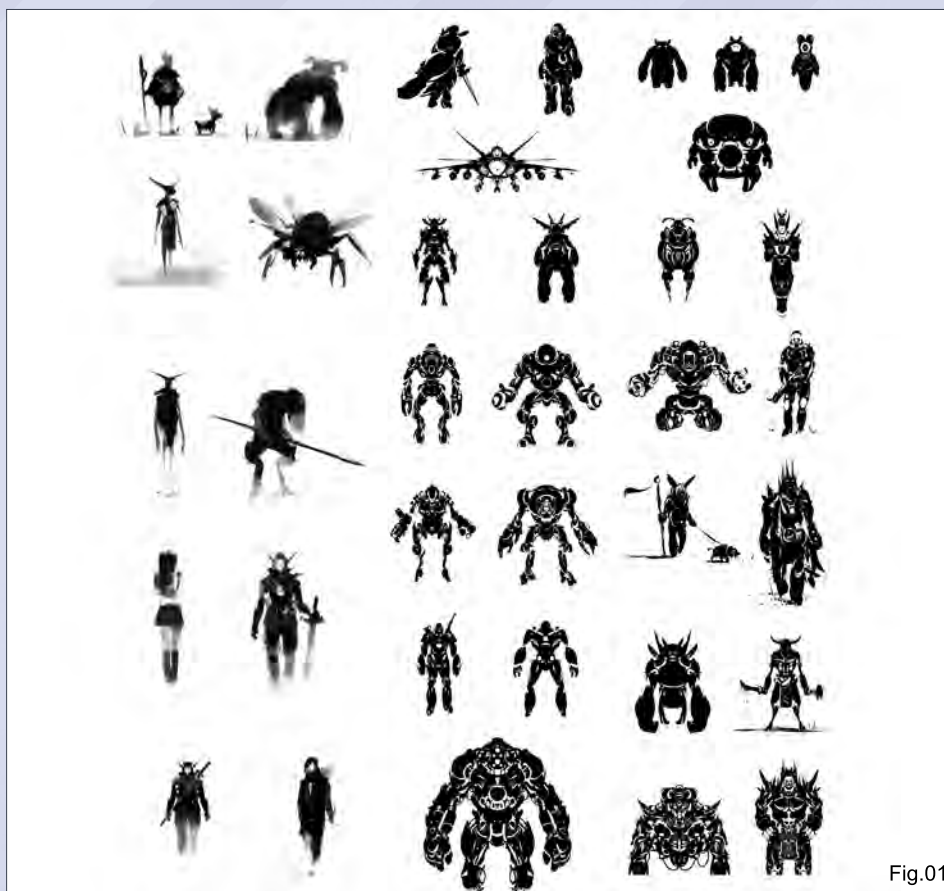
Fig.01

to concentrate more on the design, than on technical issues such as a shadows, highlights, color and etc.

My main production tool is Photoshop, but I would advise Alchemy to those who are

interested in concept-art. It is excellent software for producing interesting shapes that could be used in order to create characters, landscapes, vehicles or whatever one needs.

I have my own set of brushes for Photoshop, though I only use few of them during thumbnailing. You can download them. (**Download link**)

Actually there is no best brush for painting it is all up to the artist. In this painting I used only one brush. I would suggest using the brush that suits your style and your needs.

Some people create masterpieces with one pixel round brush, and some spend too much time searching for magical brushes in Photoshop. Don`t waste your time, just draw more and more.

Whilst working in Photoshop I find that the tool preset menu is more useful than the right-click brush menu. (**Fig.02**) Right-click menu only
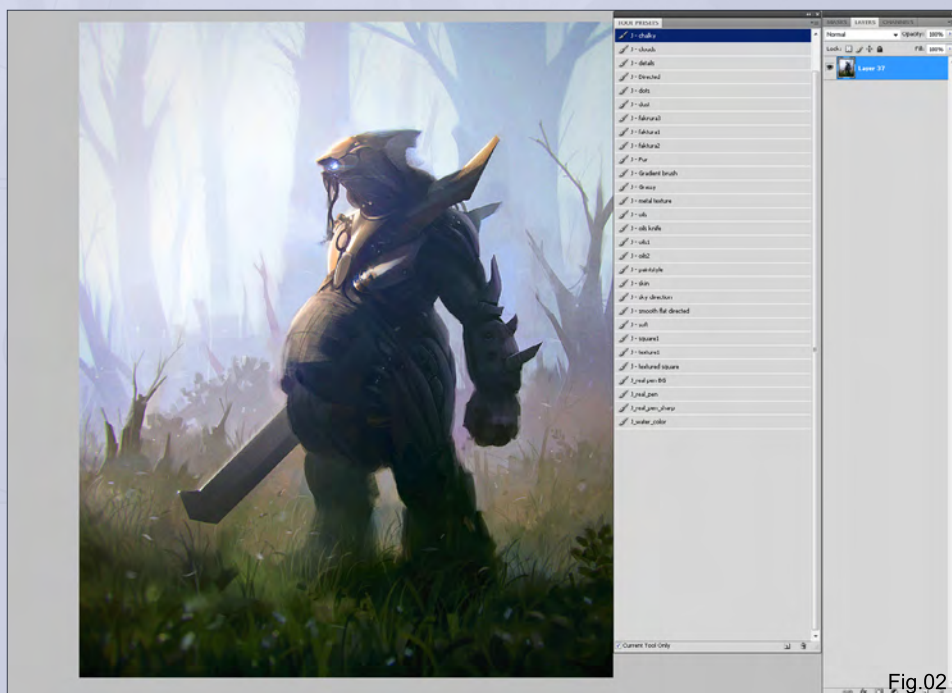
Fig.02

saves the brushes, but the tool preset menu allows me to save the presets of that specific tool, such as painting mode, opacity and flow. Also tool preset simply saves my time, instead of right-clicking and searching the brushes on the list, I simply select them from the tool preset menu that is constantly open on the right side of screen.

"My personal preference lays in a realistic style of painting."

Using a chalky brush I created a dozen of quick thumbnails (**Fig.03**), the beast with the belly looked interesting to me, so I decided to detail it. Before detailing the character I wanted to set-up the composition of the whole picture, So using the wide brush stokes I defined the composition and the space around the character. I wanted a simple fogy environment around the character in order to concentrate more on designing the beast itself. (**Fig.04**)

After setting up the whole scene, I created a layer in an overlay mode and just introduced some of the colors. **(Fig. 05)**

My personal preference lays in a realistic style of painting. Moreover, I love cinematic scenes. To check if my colors are consistent, I constantly squint my eyes in order to check if color works or not.
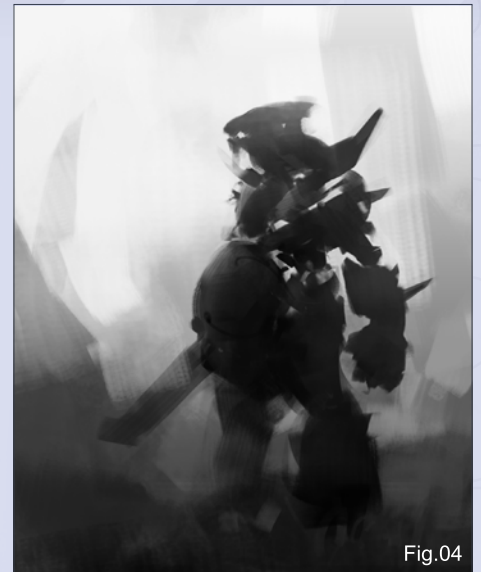

Fig.03

Fig.04

After I've finished laying down main colors, I started to detail the character. I wanted him to look semi-organic. It seems I am still under the influence of my Quake II adventures, so I created some sort of armor around his chest and head. (**Fig. 06**)

It may sound weird, but I enjoyed working on grass more than detailing the character itself. I also added some particles flying in the air in order to reinforce the atmosphere.

Fig.05

Fig.06

Post – production

As I stated before, I love photorealistic and cinematic stuff, so I can't help myself but add some cinematic effects after the painting is done.

It is important to understand the main principles of photography. Most of the time one can notice that blurring occurs as you go away from a focal point. So in order to provide that, I use the 1 px radial (zoom) blur.

Another trick is in my use of a chromatic aberration. It looks like a shift of RGB channels and adds a bit more of the realism to my pictures. Chromatic aberration is widely used by 3D artists in order to simulate photorealistic effects. I use the Digital Film Effects plug-in for Photoshop for this. (**Fig. 07**)

And the last thing I widely use in my art is grain. To fake the photography grain, I created a grey layer, applied noise to it, and then blurred the noise (Gaussian blur – 1px) I then set it up to overlay mode.

And here it goes. (**Fig.08**)

Conclusion

Being self-taught, it was a very serious challenge for me to grow as an artist.
I live and work in Tajikistan, a country that has no CG art schools, no cinemas and no modern entertainment. But I never gave up. Because what I need for painting is in my head and heart.

Fig.07

Fig.08

Fig.09

I love painting - that is where my heart is. The rest is in my head, so watch movies, play games, read books, travel and enjoy life. Everything can be inspiration for you drawings.

Let the force be with you.

If you have any questions, feel free to contact me!

My characters say "thanks" for your attention. (**Fig.09**)

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DIGITAL ART MASTERS
VOLUME 4

With the release of 3DTotal's latest book, *Digital Art Masters: Volume 4*, we have some exclusive chapters for you...

This book is more than just an artwork book. Not only does it feature full-colour, full-page images, but each artist has given a detailed description, in their own words, of the creation process behind each piece of published artwork. And they've done it especially for this book!

This month we feature:

"Detective's Office"
Craig Sellars

Detective's Office
By Craig Sellars

SOFTWARE USED: Photoshop CS2

INTRODUCTION

The principal inspiration for this image was derived from the subject matter and moody compositions of film noir and the period settings of the paintings of Edward Hopper. With these influences in mind, I set out to create an image which would also contain a juxtaposition of some sort that would provide an interesting twist and imply all sorts of story to the finished image.

I had the idea to create a scene depicting a staple of the film noir genre, the detective's office. I figured there were a lot of rich cues from this type of location I could use, such as the warm hues and period items like telephones and horizontal window blinds. Now, because I wanted to

blend imagery to make this scene seem a little more fantastic, I started to think about what else I could place in this scene. I began bouncing around the idea of a 40s pulp style robot, perhaps standing by the window with light streaming through the blinds casting lines of shadow across his body. This would be a very heavy handed mixing of visual cues and I began to think about what, or whom, else I could incorporate into this scene.

I decided I wanted to have a group of figures interacting in this environment and use their staging to help tell the story. Thinking back to a lot of pulp illustrations, there was often a detective and the woman he was working for portrayed in precarious situations. I decided this was the

route to follow: focus on the man and woman and let the robot fall into the background and be 'discovered' by the viewer.

PROCESS

With my core idea of the illustration figured out I began to sketch. I was going for a cinematic feel so I used a canvas with a screen proportion. Because I wanted

to create dramatic lighting, I started in grayscale. This method is beneficial when you really want to have strong lighting and composition because you can focus on the graphic shapes and the values without being concerned with hue and texture yet. I started by filling the canvas with a mid-tone gray to use as my ground to paint into. Using the Airbrush hard round brush (from the default Photoshop brush set), I began sketching out the staging of the man, woman and the robot (Fig.01).

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The following shots of the "Detective's Office" book pages are featured here in full-resolution and can be read by zooming in...

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through them as I wanted to rely only on the single modest light to illuminate my scene.

Working around the image as a whole, I started to rough in other elements, such as the desk, and loosely imply period architectural elements on the left, behind the characters. At this point I knew that this illustration was about the interaction of the characters, therefore most of the background was only loosely implied. I also moved back to the robot to make him a little more imposing, in both scale and design (Fig.04).

Next I started to add color. This was done quickly by creating an Overlay layer and painting in a warm overall hue, sort of keying the painting to a particular color. I knew that I wanted to keep the color range pretty narrow, so at this point I added most of the local color, which was the men's suit and the woman's dress (Fig.05a).

I liked the idea of a bit of an upshot. (Old films often used what were, at the time, unorthodox camera angles such as a tilt or an upshot showing the ceiling. These angles would put what were ordinary situations, such as two characters talking, into a new context for the viewer.)

As I blocked in the characters I very quickly started to imply the lighting for the scene (Fig.02). In the spirit of film noir, I really wanted to let things fall into shadow, so I started to establish a single light source

above the characters, yet slightly behind them so they catch a nice rim light. As a result, the foreground figures are dimly lit only by reflected light from the rest of the room.

Next, I turned my attention to the poor neglected robot in the back of the room. I begin refining his shape and defining the window casing behind him, which I used as a compositional framing element (Fig.03). I implied the horizontal blinds, though I decided against having light stream

Also at this stage, I knocked the upper part of the robot into shadow. This tends to make the robot feel backed up against the wall and as if he is hiding in the shadows (Fig.05b). Lighting compositions like this were used widely in film noir and add a lot of subtle narrative to an image.

Once the color was in place I quickly went in to better define all the characters. I then used a couple of custom brushes to add texture and a little more interest to the scene (Fig.06). At this point I made sure that the values were working well, paying particular attention to the primary focus of the scene – the sitting woman. In addition to tweaking the drawing and cleaning up her silhouette, I made sure the highlights were falling in a realistic way and the play of light was interesting and convincing. The robot was pretty lonely back there, so I added a vague figure next to him. What is he doing there? Well, that is up to the viewer to decide.

Next, I worked the finishing touches. I added some highlights here and there (Fig.07a – c), and then painted on an Overlay layer a golden hue to warm the image up, particularly in the areas of light. Finally, using the Levels editor in Photoshop to adjust the overall values of the

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Digital Art Masters: Volume 1, 2, 3 & 4

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# Digital Art Masters

: VOLUME 1

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The 'Digital Art Masters: volume 1' book, is a collection of work from artists which have featured in the gallery of 3DTotal. Spread over 192 pages, the book features some of the finest digital 2D and 3D artwork that you can see today, from artist as Natascha Roeoesli, Philip Straub, Rob Chang, Jesse Sandifer, PiSONG, Meny Hilsenrad and Ryan Lim and many more. More than just any other gallery book, each artist has written a breakdown overview, each with supporting imagery of how they made there piece of work.

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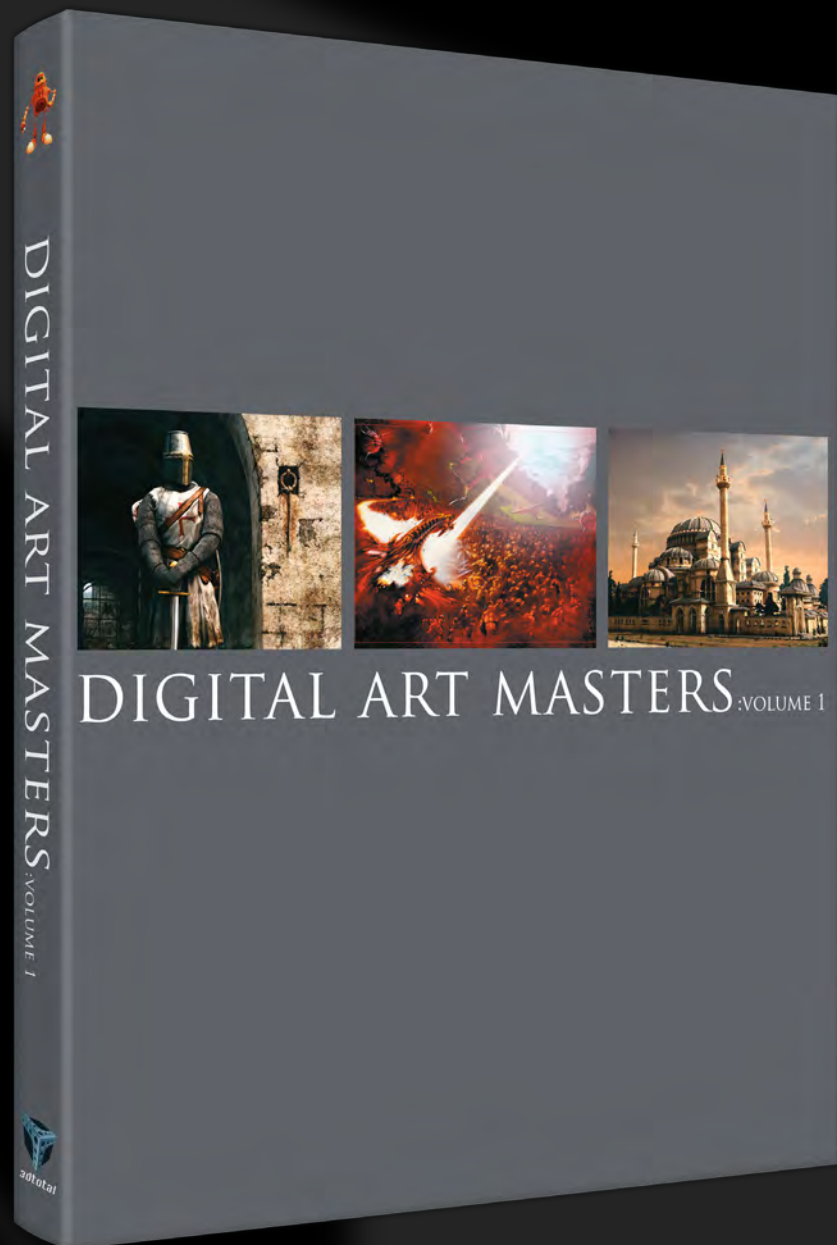
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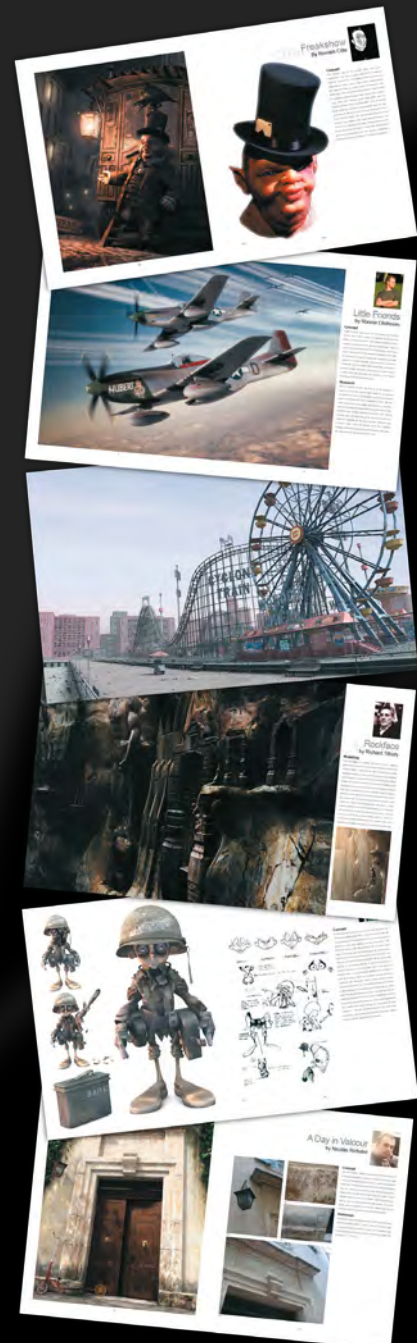
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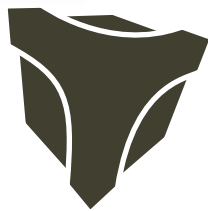
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