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COMPETITIVE ADVANTAGE NEW ZEALAND

## **Weta Ltd: A case study**

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## Competitive Advantage New Zealand (CANZ)

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## PREFACE MARCH 2006

This case study follows Weta Ltd until June 2003. It is based on publicly available resources and an interview with Richard Taylor of Weta Ltd. carried out by Colin Campbell-Hunt and Steven Finlay (Campbell-Hunt and Finlay, 2002). The case has been checked by Richard Taylor. After further copy-editing and bibliographic work, it has now been edited for publication on the CANZ website.

Since June 2003, a number of industry and government studies have been completed that are relevant to the Weta case. The most significant are listed below. (Note that some versions of documents originally sourced from the Industry New Zealand website are no longer available in the original web format since Industry New Zealand became [New Zealand Trade and Enterprise](#) in July 2003).

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## Introducing Weta

The contribution of Richard Taylor and Tania Rodger and their Weta Workshop has been essential in putting the film together. They truly understood my desire to make every inch of this production feel real. Right down to the pitted, greasy, dirty armour, Weta has gone the extra distance to get the details right.

- Peter Jackson (*TLOTR*, 2002)

Weta Workshop is like some wild fantasy land. It's like Willy Wonka's chocolate factory, but without the candy.

- Elijah Wood, 'Frodo' in *The Lord of the Rings* (Walsh and Jackson, 2002).

There's no one better than Weta

- Sir Ian McKellan. (Sibley, 2002)

Back when Richard Taylor began creating sculptures from the clay in Franklin County in the 1970s, he seemed to know where he was going, and what he was going to do, although this vision required some creative use of limited resources to realise:

I decided from the age of about 11, I was going to do art for a living, but the school I went to didn't have an art class, so I started to turn the clay of the creek into some fairly big sculptures - we couldn't just grab a blister pack toy where we were living, so you therefore had to be willing to build your own fun (Campbell-Hunt and Finlay, 2002).

Having won four Oscars and three BAFTA's for Make-up, Wardrobe and Visual Effects on Peter Jackson's *The Lord of the Rings* (*TLOTR*) trilogy, as well as numerous other awards, Taylor and his partner, Tania Rodger, have justifiable claim to having fulfilled their vision in creating one of the best special effects companies in the world, based in Miramar, Wellington. Getting the detail right, for Taylor, is what it is all about.

Weta Ltd. comprises two entities, Weta Workshop and Weta Digital. Both were formed in partnership in 1993, for Jackson's film *Heavenly Creatures*, with New Zealand film-maker Peter Jackson, digital effects guru George Port, Jamie Selkirk (*TLOTR* editor), Jim Booth (*TLOTR* producer), Richard Taylor and Tania Rodger. Weta formerly began as RT Effects in the backroom of Roger and Taylor's Wellington flat. However Weta Workshop and Weta Digital now live in a 60000-square-foot facility at Camperdown Road, in Miramar. Jackson relocated his post-production facility, the New Zealand Film Unit (now Park Road Post), near to Weta.

## Weta Workshop

Weta Workshop provides the design, fabrication and on set operation of Miniatures, Armour, Weapons, Props, Prosthetics, Creatures, Costumes, Special Make-up and Suit effects to the screen industry. Weta Workshop is comprised of a group of artists united in their love of art and film. The workshop is unique because of its great variety of disciplines - from armourers to leatherworkers, skilled prosthetic technicians, miniature makers, painters to wigmakers, casting and moulding experts, articulation engineers and swordsmiths (Weta Workshop, 2002).

With the exception of pyrotechnics, Weta Workshop services all the physical aspects of the film industry, with a staff of 58, expanding to 170 and beyond for project workflow. Before we explore in detail what capabilities are required to build and sustain a world class film facility in Wellington, a quick take is required on the original Weta, an insect native to New Zealand, to shed light on some of these qualities. Taylor likes the Weta. To him it is ‘a cool little beast. We like to think that the product we produce aspires to the complexity, beauty, and occasionally, even the monstrosity of the Weta’ (Sibley, 2002). Like the Weta carved into Taylor’s office door, Taylor and the team come armed with a certain indestructibility - the Weta is an ancient insect which has learned toughness and an ability to survive, or even thrive, in hostile terrain. How have such rugged determination, complexity and a love of the monstrous in Weta helped to produce the biggest film trilogy in film history - itself a monster project?

When Jackson secured the rights to make *TLOTR* film series, the biggest trilogy yet produced, he had a vision of delivering the most ‘transporting brand of realism’ (*TLOTR*, 2002) to take viewers into the film. Given that lack of authenticity had hampered every other effort to produce the film, Jackson’s vision required extraordinary creativity and attention to detail to be realised for the success of the trilogy: ‘I started with one goal: to take moviegoers into the fantastical world of Middle-earth in a way that is believable and powerful’ (*TLOTR*, 2002). Jackson immediately turned to friend and long-time collaborator Taylor, placing a huge amount of trust and faith in the partnership. Taylor (and other departmental heads) were required to create a believable world, from fantasy, with a level of cultural investment to convince the viewer that not only did this world exist, but that it had also existed for over 1000 years.

The size of such a task would be naturally daunting for anyone. What Jackson was trusting in was the Weta indestructibility: ‘At no time did we consider it an impossibility - but if we brought together a collective of like minded young artisans and technicians and we actually started the journey, taking one step at a time, it was possible’ (Hill, 2001). With the magic and wizardry of Gandalf and the innocence of Frodo the biggest of challenges could be overcome: ‘We really felt that one job at a time - each time to perfection, take each day as it comes - we would eventually reach the end and be able to deliver a worthwhile product to the world’s audience’ (Hill, 2001).

Deliver they did. Their level of detail and love of their work was exemplified by the fact that inside the costumes created for the film, were inscriptions in Elvish, which would never even be seen by the camera. As Liv Tyler (the actress who played Arwen) said, ‘When you realise this level of detail, in the costumes, it just brings Middle-earth to life’ (Te Papa Exhibition, 2003). At the height of the making of *TLOTR*, Weta Workshop was making more than 1200 suits of hand-made armour, more than 2,000 rubber and safety weapons, more than 100 special, hand-made weapons, more than 10,000 body and facial prosthetics and more than 1,600 pairs of prosthetic feet and ears, individually sized and shaped, all handmade by artisans. To produce such numbers Weta had created, amongst other things, an armoury forging blades using similar technology to that used in the 14<sup>th</sup> Century and a full time purpose built foam latexing oven which was running 24 hours a day, seven days a week for three-and-a-

half years to produce Hobbit ears and feet, Uruk-Hai arms and legs, itself a monstrous task (*TLOTR*, 2002).

### **Weta Digital**

Physical effects were not all that were required to bring this world to life. For Taylor and his team do indeed share the complexity of the Weta, not least in a mastery of the art of blending the human and the digital in a way that very few others could do:

Weta Digital provides multidisciplinary expertise in conceptualisation, creation and technical know-how. Weta Digital also provide compositing, blue screen and background plates, miniature stop motion footage, motion control sequencing, 35mm film scanning, recording and screenings, full design maquette and 3D scanning services. With our unique relationship with Weta Workshop, we can offer a complete in house service from design right through to 3D design and digital animation (Weta Digital, 2002).

*TLOTR* demanded extraordinary visual requirements. As Jackson stated: ‘I wanted to take all the great moments from the books and use modern technology to give audiences nights at the movies unlike anything they’ve experienced before’ (Te Papa Exhibition, 2003). Taylor reflected on this goal: ‘how could we bring the extraordinary vision, and world of Tolkien, to the screen, with the highest levels of integrity?’ (Te Papa Exhibition, 2003). This vision included 10,000-strong battle scenes within enormous mountainous caverns, creating the need to produce new levels of human realism within digitally animated characters, rendering lifelike walking trees, and all the time competing against the most powerful opposition to the believability of the film - the reader’s own imagination:

The world already has a preconceived idea of what Middle-earth looks like and we realised we would never fulfil this prerequisite. The written word is as big as the human imagination, while the image on the screen is as big as the film’s budget. We may never fulfil what everyone thinks it should look like but we could capture what everyone felt it should feel like (Hill, 2001).

To capture that feel, Weta Digital created world leading digital animation for Gollum and the unparalleled crowd scenes of Helm’s Deep, using custom programmed software, whose name reflects the visual impact created onscreen, and summarises Weta Digital’s impact as a whole – ‘Massive’. Weta Digital has come a long way from the solo computer held in a backroom in a small Wellington house in 1993, and works harmoniously with the physical effects department. Indeed, like the mysteries of the neocortex, one can only understand each side of Weta by reference to the other, as the whole really does become more than the sum of the parts. How has one company, in such a remote, resource-scarce location as New Zealand, been able to generate such award-winning creativity and embellish this to rise to such world leading levels? Before we answer this we briefly sketch the New Zealand film industry and consider some of the challenges such an industry environment places on Weta. We then look at how the creative and technical genius of Taylor has managed to turn, Hobbit-like, every seemingly insurmountable hurdle into a source of capability. As we will see, delivering *TLOTR* and other film and television projects requires technical and personal mastery of a range of disciplines, and the ability to craft everything from polyfoam and margarine, to the culture able to attract international experts, into a team able to produce art carrying the highest levels of detail and thought.

### **The New Zealand Film Industry – Feast or Famine**

The local film industry is renowned for its lack of consistent work. (For background on the New Zealand film industry, see Jones et al., 2003). Indeed it is remarkable that within such a fickle industry Taylor and Weta have managed to sustain the workflow to allow them to build the technical and creative skills which have ultimately enabled the biggest consecutive film shoot in history to be made. As Taylor himself says, with such small budgets available to New Zealand film makers, the cost of special effects isn't insignificant:

The highest-budget film made in New Zealand on New Zealand money to date was *Frighteners* for \$14 million, but *Heavenly Creatures* cost \$2.5 million, *Meet the Feebles* cost \$750 000... the Kahukura model [is] this no-budget film making where they're making films for a million New Zealand dollars a pop. Now within that million dollars New Zealand a pop, can they really afford special effects? Because of this we fluctuate between feast or famine, it puts you on a knife-edge some of the time (Campbell-Hunt and Finlay, 2002).

In such an environment, how has Taylor managed to maintain and develop Weta's skillset?

### **The Weta story - feast in the midst of famine**

According to Brian Osborne, Producer, *TLOTR*, Taylor 'has built this workshop which is world class in every respect. (Walsh and Jackson, 2002). With a combination of Kiwi ingenuity, skilled technicians, and talented artists, Weta Workshop has been providing high-level physical effects to the film and television industry for 16 years (Weta Workshop, 2002). The success of *TLOTR* is testament to the ability of Weta to go the extra mile in making Tolkien's world feel real, seamlessly blending the artistic and the technical, the human and the digital, the ancient and current. Weta have achieved a level of subtlety of effects and management of the logistics, unparalleled in film history. How have they managed to achieve this?

Firstly by understanding their clients and what their own value-adding proposition is. Since Weta survive and succeed largely on their ability to add value to a series of (primarily) film projects, their business model is one of creating a consistent flow of short term partnerships with film or documentary production companies. Hence both Taylor and Rodger seek to understand the creative needs of the film, commercial or documentary producer to attract funds at the earliest stage in forming a film project: An investor will invest in creative content (Campbell-Hunt and Finlay, 2002). Weta add value, from the first pre- production contact onwards, through their creativity. This dimension for Taylor, is to offer something almost intangible, to: 'create an enigma out of the company that the investors will invest in the uniqueness, in the desire to be aligned with a level of creativity and uniqueness' (Campbell-Hunt and Finlay, 2002).

Clearly the reputations of the individuals coming together provide a critical factor in assessing the risk and return to the investor: 'What we are trying to trade on in the initial part, is the kudos and the mana of the collection of individuals that are forming this company' (Campbell-Hunt and Finlay, 2002). If the investment is made, the film project as a whole begins in earnest, with Weta specifically can ply their trade within that project, and begin the Herculean task of delivering what they promise. Taylor maintains that what Weta are selling is a creative process, rather than just the outcome



or product of that process: ‘So what they are giving you is money to be inventive, not as much as the product of that inventiveness’ (Campbell-Hunt and Finlay, 2002).

Ultimately, then Weta is a service agency, where they take a script, an idea or a concept, and apply the Weta magic to it: ‘we service the product that comes to us, we actively pursue product, but it’s the instigation of other people concepts that we’re servicing’ (Campbell-Hunt and Finlay, 2002). So clearly Weta sell processes of creativity that ultimately add much value to someone else’s story. However servicing other people’s concepts does not come without costs, no matter how well it is understood: ‘[Clients] want to know what the show is, the problem with that is that the moment they do they’ve got invested interest in the creative process, so your freedom to control the creative process, as you know, is lost to some level’ (Campbell-Hunt and Finlay, 2002).

As we shall see later on, the ability of Weta to maintain as much creative control as possible over the value-adding activity, which ultimately benefits themselves as well as their client, becomes a critical issue for funding the sustainability of Weta. What about other sources of funding? Weta have found that investment houses and banks operate with an impoverished knowledge of the creative industries, and the opportunities that exist with these industries, which hampers investment. In countries with a larger film making community, project capital is more widely available for projects. However, before we seek to understand how Taylor seeks the Holy Grail of sustainability, what is the recipe of the Weta magic - the creative process - which investors and producers alike have bought into and enjoyed, for over 16 years?

### **The Weta special effect**

John Howe, the Conceptual Designer for *TLOTR*, has commented that ‘the Weta Workshop is very much a physical and spiritual extension of Richard Taylor - because it embodies the every molecule of the philosophy of Richard’s work ethic’ (Walsh and Jackson, 2002). Weta’s strengths lie in their ability to create cutting edge effects using a complex interplay between the artistic and the technical, the human and the digital, delivering an attention to detail which renders the most lifelike and realistic action on screen. Weta’s ability to deliver unparalleled effects comes from a mixture of elements, built up over time and based, among other things, on Taylor’s ability to put something almost spiritual of himself and the broader cultural context, into his work: all things have to be invested with a level of soul (Hill, 2001). Talking of *TLOTR*, Taylor doubts whether such a film could be made with the same anywhere else: ‘it has got to be questioned whether the same level of heart could have been brought by anyone else, that this incredible journey has been undertaken - with such a purity and a beauty as it has - by the New Zealand film-making group’ (Hill, 2001). With such levels of passion and commitment, Weta - and indeed the New Zealand film-making group as a whole - clearly put much into their work. Before addressing the different aspects which combine for the Weta effect, we first look at what Weta itself is, and the different departments which collectively make up Weta Workshop.

### **The Weta Workshop – in detail**

What are the key areas which Weta are able to service? As Taylor explains, a theme which pervades Weta is their multidimensionality:

One of our most unique features is that we're set up to operate and cover a wide range of different disciplines. Our primary disciplines include the design,

fabrication and on-set operation of special make-up and prosthetic effects, armour and weaponry, miniatures of all scales, and creatures, which includes all suit and animatronic work as well as scannable maquettes. (These are becoming increasingly required nowadays as computers are evolving to play such an important role in the effects industry). On top of all that, we cover the range of prop effects, physical effects gags, rigging, and gore or injury rigs, and so on and so forth (Grant, 2002).

Each department of Weta workshop focuses on one functional component of service delivery, often in tandem with another department, and uses a variety of creative methods to achieve their goals. Below Taylor describes each department in detail: (from Campbell-Hunt and Finlay, 2002; Grant 2002).

#### *Special Make-up and Effects*

This department covers anything that gets glued to the actors' bodies or faces to alter their appearance. Preparation for each actor requires a real attention to detail; we have to body cast, or face cast or head cast the actor, sculpt and then produce the foam. For one actor in *TLOTR* this meant spending 10.5 hours overnight in the make-up seat being transformed into an Uruk-Hai. Other body parts had the same attention to detail: We had ten people working for three and a half years just making wigs, that's one hair at a time, 10 thousand hairs per head, three and half weeks per wig. The management of this aspect alone, just the logistical problem of bring the yak hair here from America is an issue in its own right and that's one requiring huge amounts of negotiation and is one tiny little element. 2000 Hobbit feet were made for 4 Hobbits, 10,000 prosthetics for the orcs, and 2000 full bodysuits.

#### *Armour*

This department includes the original design and then the fabrication of steel out of the blacksmithing shop and then the silicon moulding, the replication with the spray guns and so on, in total we made over 10 different cultures and 1,200 suits of armour. The armour was rendered so life-like that actors would pick up a sword expecting it to be steel, only to find it was polyfoam: Now that requires a level of chemical technology to make things that physics takes over. How do you make something that's not floppy, but still soft enough that will still not kill someone? Very difficult.

#### *Weapons Department*

This department produces everything from a simple dagger to a fully operating crossbow or shield or spear. Taylor has created an equivalent of a 14<sup>th</sup> century smelter with blacksmiths like Stuart Johnson and Peter Lyon creating weapons using authentic technology for authentic weaponry.

#### *Miniatures Department*

Miniatures are any environment that needs to be created on the smaller scale because of budgetary restraints or the fact that it just doesn't exist. This section includes creating scannable realistic models which become the basis for scanning into digital form.

#### *Creature Department*

This department is responsible for the design and development of animatronics creatures, scannable maquettes, digital interaction.

## **The Weta culture - the Weta people**

How do Weta manage such demands? Where does the training come from to manage such complexity? Taylor comments:

At the beginning I had to ask myself, how can one individual look after five departments (and these are massive departments - we made 48 thousand separate props, one of those props is equally as complex as a Jurassic Park dinosaur, for instance), not on one film, but arguably three of the most complex films ever made in over five years, running 148 people in the workshop, 38 people on set, 68 thousand square feet workshop, under tight budgetary and political control issues? (Campbell-Hunt and Finlay, 2002).

How that is done is by Taylor relying on something bigger than himself, the team that he had been nurturing for over 12 years:

It is possible that no company has looked after so many departments on a single film, never mind three of the biggest films ever made, but we'd been working with an amazing team for 12 years already so this was more of the same for them, except on a much grander scale (Hill, 2001).

Producer Barry Osborne says of Taylor that 'he's a very charismatic guy, a great leader. People are very devoted to him and their task and their work shows it' (Walsh and Jackson, 2002). Taylor himself says that 'we are only as good as the environment in which we work in and the people in which we hire' (Campbell-Hunt and Finlay, 2002). For a company to have the confidence to take on the digital and physical effects of the biggest trilogy ever made means relying on something you can trust will deliver. Taylor and Rodger have been nurturing something trustworthy for a few years prior to *TLOTR*. In a little known Wellington suburb there has been a hidden garden growing, a secret seedbed of creativity where seemingly paradoxical opposites are held in perfect balance: creativity and control; technical expertise and artistic energy; Kiwi ingenuity and an ability to reach world-leading levels with what's found close at hand.

Taylor explains the Weta culture in terms of the unique rural culture of New Zealand:

At times, over half the workshop come from the South Island, so they're coming from rural New Zealand, coming from the most intimate levels, coming from the Richard Pearce's of New Zealand... What is so unique about this? It is an almost intangible innocence, unhindered by what the rest of the world thinks: it is the necessity to make your own fun and, therefore the cotton reels and the wax candle and the nail and the rubber bands - it is that level of tinkering that we love so much as kids (Super-modeller, 2002).

Replicating this culture inside Weta workshop requires just as much care and attention to detail as creating a 500-year-old Middle-earth set: understand the component parts, then apply your craft in putting them together. For Taylor this means, first, understanding himself as a passionate and dedicated artist and technician, and then seeking similar qualities in those around him: 'a big thing is that you originally hire young and enthusiastic people like yourself. What we find in the people around us is that they have one rare quality, which is, the love of making. They want to make things, they just want to have things grow' (Campbell-Hunt and Finlay, 2002). This

quality is pretty close to Taylor's own heart, and the source from which his inspirational leadership can nurture, without limitations:

This is what it's about, and that's exactly where I came from. I wanted to constantly be creating clay, and then margarine, and then building on that and these people are operating at the most incredible level of inspiration because they have nothing to dictate over them, or telling them that they shouldn't be inspired (Campbell-Hunt and Finlay, 2002).

So what seems like an insurmountable hurdle - geographic distance - becomes, in effect, the greatest source of competitive advantage - pure and distinctive creativity: 'we pride ourselves on a unique creativity that comes from our geographic location - because we're so far from most of the other effects houses in the world, there's very little cross-pollination' (Grant, 2002). How does this creativity support the making - and final feel - of *TLOTR*? Creating the feel for *TLOTR* has been described by Taylor in almost holy terms: 'People have said it's almost like a religious experience. It's a holy experience' (Hill, 2001). For Taylor, it is blending of something uniquely human, and Kiwi: 'It's through the love and the energy and the enthusiasm that is still so apparent in the New Zealand psyche that comes through the film and captures you while you're watching the film' (Hill, 2001).

Combine this energy, passion and enthusiasm with something uniquely New Zealand - ingenuity - and you have a recipe for success not just for Weta and *TLOTR* but the film industry as a whole:

I'm adamant that the New Zealand Kiwi ingenuity is not only a culture - it's actually the backbone of our industry - where you have to think on your feet, invent as you work and all with no great ability to put huge amounts into research and development (Campbell-Hunt and Finlay, 2002).

Inventing as you work means being incredibly dexterous with all materials; physical, digital and cultural, and trusting the ability of the people to add something unique and new to them, every time

### **Kiwi-style creative leadership?**

With a vision of the potential creativity that lies untapped in the Kiwi psyche, Taylor has spent his life showing what can be done, blending his own energy and passion with technical expertise and creativity. Managing and nurturing this dream within his partnership has taken years of ceaseless dedication and discipline, despite overwhelming odds. How do Taylor and Rodger manage such innovation and creativity within a team? Taylor says that 'the culture of Weta is our locomotion - 16 years have gone past, I've had the pleasure of never having to raise my voice in the workshop, I've never had to be angry to the point that I've lost my cool with anyone' (Campbell-Hunt and Finlay, 2002). He exemplifies the brainstorming process at Weta in this way:

Normally if you have a brain-storming meeting, someone would go, 'Wow imagine if we strapped some toast on the back of a cat and dropped it out of the window', everyone in the room would be roll their eyes and go 'gawd'. But at Weta - having a brain-storming meeting here goes like this: 'Let's put roller skates on a giraffe and send it down, rolling the film at high speed', and everyone's 'Wow what a great idea', you know and from that would come some

derivation that indeed will end up being made (Campbell-Hunt and Finlay, 2002).

This means trusting that the culture of the team that you draw from, will ultimately deliver more than any individual:

Never put down ideas but find derivations of those ideas, so how we work it is that I very loosely drive the meeting and then the team can free-flow ideas for a good seven or eight hours if needed. I only prompt the ideas because invariably the group have got better ideas (Campbell-Hunt and Finlay, 2002).

Creative and supportive leadership has been critical then, to the success of Weta, and indeed *TLOTR*. Inspiring their team to perform beyond their previous best is something that Taylor and Rodger are characteristically humble about. As this speech delivered to the team before the making of *TLOTR* shows, Taylor could be a writer for some of the best dialogue in the film himself:

How do we inspire in this young group of New Zealand designers and technicians with the philosophies and the vision that will carry this film for 5 years and deliver it onto the world stage in a way that's worthy to the written literature of Tolkien? I very much believe now, what I said then:  
"If you couldn't rise to the highest level of enthusiasm, passion and professionalism, and grasp this task as if it was the single most important thing that you have ever taken on in your life, then you weren't worthy of the task"  
(Walsh and Jackson, 2002).

Nurturing the creative side of Kiwi culture is a rare gift in any company or individual. Managing this with a level of mastery of the hard, logistics side, is an even greater blessing, but one Weta would have to draw from, to achieve not just creative but technical control over the design, fabrication and onset operations of all the elements required of *TLOTR*.

Logistics management was critical to Weta's work on *TLOTR* – Taylor explains that 'the whole design for every little element of the entire trilogy has been figured out to the nth degree' (Hill, 2001). How was such a monster undertaking planned? The logistics of managing such large numbers was a huge operation:

One small example is the logistics of controlling the 28 shipping containers that were on the road on any one day, travelling around the country. We have a logistics manager, who is part of a team of seven people, including Tania and myself, who are the management structure of the company and run the show (Campbell-Hunt and Finlay, 2002).

For Taylor to maintain oversight and overall control over so many small details of the filming of *TLOTR* required the superhuman feat of doubling your output - mind boggling to most, but merely another hurdle to be overcome with simple Kiwi ingenuity for Taylor: 'people say to you so often you should try and clone yourself, the use of this radio telephone and head set physically clones you because now I have 100% greater output that I don't without' (Campbell-Hunt and Finlay, 2002). His response? A human and technical blend - an RT (radio transmitter) device that Taylor uses to great personal effect, with his Personal Assistant, Jaq:

I answer with a combination of talking and with Morse on the button. I personally have about 80 emails a day and about, at the height of *TLOTR* about 100 phone calls a day. Ninety percent of those don't need to be dealt with immediately, 50% of those can be dealt with by other people, therefore, we have a console of phones at Jaq's desk, she choreographs what information comes to me through my RT and we have a Morse code system of yes's or no's, so she only asks me questions in yes's or no's, to help with efficiency (Campbell-Hunt and Finlay, 2002).

This process allows Taylor to act in oversight - doubling his mental capacity and output, without disturbing the most delicate of creative flows in either setting:

If I'm in a meeting with people, I can continue talking like this, while she can be having a whole other meeting sending information to me through my earpiece. You are doubling your capacity for output, that's one of the fundamentals of how we looked after this number of departments and how we've operated for many, many years. Very simple, but effective (Campbell-Hunt and Finlay, 2002).

Having such a technical support, however, will only develop the mental abilities that are already present. For Taylor, maximising this fundamental resource, the old grey matter, Weta-style, is very simple, yet like the complexity of the brain itself, very profound, and something which adds many dimensions to the Weta magic to allow creative freedom to exist unfettered. As Taylor has found over the years in Weta, the levels of creativity or output are so often hindered by factors other than their own skills 'so often, no matter how astute people are, so often the day to day ramifications of someone's job is dictated hugely by their personal lives (Campbell-Hunt and Finlay, 2002). So one of the biggest barriers to creativity not just for Taylor, but his staff as a whole, becomes external pressures: 'As the years go by the team get their mortgages and their families and they want an established career in your business, in a business that never had an established career before' (Campbell-Hunt and Finlay, 2002). So how did Taylor and Rodger cope with the fluctuations in such a risky business? 'If you've stepped outside the margins of your comfort zone it brings huge pressures back into the workshop, and we hope to lead by example, very firmly in that respect (Campbell-Hunt and Finlay, 2002).

How does Taylor push his own mental capacity so that innovations like the RT can be used to their fullest potential? Reducing the external pressures on the creative process becomes critical.

The moment that you create modesty in your personal life, your necessity to, your ability to focus on the pursuit of your work rather than the pursuit of your material wealth is significant, it's all about a state of mind and it's all about a life experience state of mind. That state of mind is one of great personal comfort so there are no great issues to be carried with you so the only thing you're dealing with is your work (Campbell-Hunt and Finlay, 2002).

Taylor and Rodger have modelled this unique partnership in their work over the years - demonstrating this ability to have a very clean, mental state from which to function:

We share an office, we're in each others' company 24 hours a day and we have about two days a year apart. We run the company on a 50/50 basis,

Tania runs all workshop management tasks and business, I run all client interaction and creativity, so I'm adamant that bringing a very clean and clinical mind to the job is important (Campbell-Hunt and Finlay, 2002).

Without this life-style the pressures become cumulative: 'Suddenly the boss has this weight over their heads that these people aren't surviving because we don't have work for them for a few weeks' (Campbell-Hunt and Finlay, 2002). So looking after the Weta people means fostering notions of sustainability in an industry which is infamous for its inability to support a career.

We're an established business with competitors and so on and so forth and we have to operate at a greatly higher level than we ever did in the past because we've got to keep the people around us, we've got to keep their confidence. These people are dedicated to the company, devoted at some level to our vision and us, but devotion does not pay the mortgage and therefore, the team will dissipate (Campbell-Hunt and Finlay, 2002).

Taylor and Rodger are very choosy as to the projects they will take on, knowing that the stakes for failure at this level are too great: 'you never enter a contract unless you know that your consequences will parallel the circumstances or better them. I've turned down a dozen jobs, because there is a dozen jobs we cannot do cause they are too risky for us to do (Campbell-Hunt and Finlay, 2002).

Finally and importantly for Taylor, is the principle of modesty: 'By the very fact you say you're being modest you're being immodest, but you know what I mean' (Campbell-Hunt and Finlay, 2002). For Taylor professional modesty is quite simply: 'the ability to stay modestly assessing of your own successes - we don't ride on the euphoria of something because we're too Kiwi to do that. No one would understand that in the world other than New Zealanders' (Campbell-Hunt and Finlay, 2002). Why is modesty important?

Because the moment you get complacent in any business but very true in the film industry, I swear by it and I often say to Tania that the day that I sleep well the night before the first day of shoot is the day we quit, because the day you lose, the nerves leave you and you become complacent, you've gone into a dangerous situation (Campbell-Hunt and Finlay, 2002).

Clearly this approach has served them well in the past, and will keep them on the edge of creative film-making for some time to come. From the sources of advantage which Weta have nurtured - both hard and soft - we now track back into the life and background of the founder of Weta Workshop to seek the sources of inspiration and nourishment behind such world-beating creativity.

### **Richard Taylor - to make is to be**

Veteran actor Christopher Lee describes Richard Taylor as 'a genius'. (Walsh and Jackson, 2002). From his earliest days growing up on a cattle farm in Te Hihi (in Franklin County) and then later in Patumahoe, Taylor knew what his passion - and subsequent career would be: 'I decided from the age of about 11, I was going to do art for a living, but the school I went to did not yet have an art class'. Unhindered, Taylor used materials he found around him to fulfil his artistic passion: 'For me it came down to the cotton reel, the rubber bands, the matchstick and the wax candle - making tanks that you wind up and zip across the vege patch. Keeping yourself

amused – inventing these worlds in your mind. He understood instinctively the challenge and the benefits of growing up in isolated, provincial New Zealand: ‘Growing up in this environment, it creates the necessity to make your own fun. We couldn’t just grab a blister pack toy where we were’. Taylor experimented with fake cuts on his sister, and began creating from the earthiest of materials: ‘I turned the clay of the creek into some fairly big sculptures’ (Campbell-Hunt and Finlay, 2002).

Despite what many people think, Taylor didn’t spend much of his early life engrossed in films: ‘Everyone thinks I must have loved movies as a kid but I had only been to the movies about five times before I was 17’ (Super-modeller, 2002). What he did find enthralling, however, was the *Thunderbirds* television series: ‘I grew up on *Thunderbirds*. There’s very few people whose work inspired me more than Derek Meddings who was responsible for the puppetry and effects for that (Bull, 2002). (In 2002 Derek’s children told him how much they enjoyed his effects on *TLOTTR* - it meant a lot to hear it from them (Super-modeller, 2002)).

Later, going to Wesley College in Pukekohe (a mainly Maori boys boarding school specialising in agriculture, Maori studies and rugby), Taylor finally found an environment that supported and celebrated creativity, without imposing strict conformity or competition: ‘I wasn’t a rugby player, but there were students and teachers there who were wonderful in helping me through - I can’t ever recall any peer pressure’ (Super-modeller, 2002). The environment of pride and excellence in Maori culture at Wesley also fed and perhaps even provided the model for, his emerging vision: ‘Wesley College was good at celebrating people who had a purpose, a focus. They left me to it. I guess I was very tenacious and pragmatic’ (Super-modeller, 2002). These were character traits he would need to draw on, sooner than he thought. Such a location must have provided a rich backdrop visually and aurally, to the young creative mind of Taylor, giving him insights to how a strong culture can sustain a vision.

In the context of the New Zealand culture in the 1970s he had made perhaps an innovative and bold decision to base a career on such passion, despite the absence of an industry or career structure. His family - out of care - questioned such a creative desire. Taylor’s mother was a science teacher and his father an engineer, so they were both perhaps keen to guide Taylor towards a career that at the time would at least be sustainable. Perhaps also however, they were recognising at an early age the unique blend of artistic and technical skills he possessed: ‘My parents being good people didn’t want me to do art - in fact they wanted me to be an orthodontist because they saw that my artistic abilities mixed with my technical skills could be a great business (Campbell-Hunt and Finlay, 2002).

Despite both his parents’ and later school’s protestations that such a direction would be fruitless, Taylor persisted:

In my seventh form year, having passed fifth and sixth form (through a combination of classes and correspondence process in which Taylor was the first student at the school to do art at this level,) I got wind of the Wellington Polytechnic after finding a brochure in the Employment Officer’s room - who was still adamant I was going off to do sciences or something like that (Campbell-Hunt and Finlay, 2002).



Such a path wasn't without its own barriers and challenges even at that early stage. In the mid 1980s Taylor flew to Wellington for the open day 'off my own bat' only to find that a portfolio was expected of him. Months behind schedule, and, in tandem with his own school's required 7<sup>th</sup> form portfolio Taylor learned from this early age how to multitask to produce creative results to a tight deadline, Taylor submitted his portfolio, perhaps months lighter in preparation time than the other candidates. Unused to the highbrow artistic discussion of the city, Taylor says he was shy and quiet – 'I had no great ability to chew the fat with the other prospective students, but I knew I had to be there' (Super-modeller, 2002). Taylor was turned down.

Three days before the start of the course, Wellington Polytechnic called him up and offered him a place after another student had dropped out. Despite almost every barrier rising in the path, he was finally in. In Taylor's own words: 'So from Patumahoe, hardly ever been to the city I moved down to Wellington' (Campbell-Hunt and Finlay, 2002)

Beginning on the visual design course Taylor had finally found his community, if not his niche, and the effect was like a scene from a visual in Monty Python: 'this was the first time I had ever met anyone my age that did art - who did things with their hands and it was like God's rays had burst through the clouds and hit me'. He quickly found that working in three dimensions rather than two was more in keeping with his earlier creative expression, even if this still flew in the face of graphic design education: 'I did almost every project with three dimensional artwork, with models and sculptures, even though most of the course was based around two dimension design and illustration' (Campbell-Hunt and Finlay, 2002)

Professor Yep, who taught on the industrial design course, remembers him very well: Richard's work stood out because he worked in three dimensions rather than two – this was really unique at the time since every other student was either painting or drawing. No-one had thought about it and it really went against what even the teachers and tutors were doing (Finlay, 2003)

Professor Yep also vividly remembered an aspect of Taylor's work even then which would stand out in later years: 'Richard was challenging the norm of how things could be presented' (Finlay, 2003). For Taylor himself, however, this was more out of necessity rather than anything else:

I would alter the brief so it was applicable to my skill. Fantastically the tutors were understanding. They very graciously and cleverly allowed me to explore these different media, so over those three years I really got to understand those materials at a good level (Super-modeller, 2002).

Clearly Taylor was working to a different vision, and had the skills to justify his intuition - as Professor Yep remembers: 'he had an excellent technical mastery - one piece I remember vividly was a human face carved in leather - it was really unique' (Finlay, 2003). He recalls how strong Taylor's vision must have been, even then:

Richard had a unique vision even in the early 80s - before even the Hollywood industry - of the demand that would exist for this type of three-dimensional work - it was really an undefined field - and he just modestly stuck with it (Finlay, 2003).

Taylor had not only the vision, but the ability to listen and be guided by it – even when everyone else seemed to be saying ‘it can’t be done’ - it was like he knew all along where he was going. ‘It was really quite remarkable to have such a vision 20 years ago, and in New Zealand’ (Finlay, 2003). Often such brilliance goes hand in hand with arrogance. Not so, says Professor Yep, ‘despite this he was very modest and quiet (Finlay, 2003).

Just before finishing three years of graphic design Taylor was offered an incredibly well paid job in graphic design which he left after six weeks: ‘I left because I knew that sitting at my desk using a pen, doing designs wasn’t me, so I took a six times pay cut and began painting backdrops for The Gibson Group in town’ (Super-modeller, 2002). Within two weeks he’d changed departments to become a model maker for TV commercials, and: ‘We’ve never looked back’ (Campbell-Hunt and Finlay, 2002).

Even from this early start, Taylor had an eye for detail and an innate ability to go the extra mile, challenging received wisdom. With his long term partner Rodger (they met on holiday when he was 13), working at a local hotel as duty manager during the day and helping in the evenings, their supportive and creative partnership began to emerge and for the next four years they forged their partnership in television commercials - often in the most basic of working conditions - to deliver way above expectations: ‘We’d take on Weetbix commercials when normally there’d be a pack shot and a 10 second voice over and instead we would build the whole of the Antarctic miniature, hire husky dogs, get sledges’ (Campbell-Hunt and Finlay, 2002). Taylor was easily able to convince his bosses that there was more going on than meets the eye and ‘in the process we were able to engender in our clients the sense that there was a lot more in our minds than in our hands’ (Super-modeller, 2002). Such extra efforts paid off: ‘We thankfully started catching our clients’ attention and began earning a reputation’ (Campbell-Hunt and Finlay, 2002).

#### *Public Eye (1986)*

The next and biggest break came in 1986 with *Public Eye* - the New Zealand satirical puppet version of the British television programme, *Spitting Image* - which began when he overheard a conversation in a hallway about how the Gibson Group were being lined up to potentially produce the show. Taylor immediately went out and sculpted a bust of the boss - Dave Gibson - from margarine, and put it on his desk: ‘I just put it on his desk, under a rubbish sack, and he said, great - you’ve got the job, you should have just asked’ (Super-modeller, 2002). Taylor had the chance to build on the technical ability with faces he had displayed in college, I sculpted them completely in margarine and Tania moulded, latexed and painted them while Clive Memmot built all the eye mechanisms out of roll-on deodorant balls. Like many in the creative industries, they required the ability to work creatively in the most basic of conditions: ‘We had produced the original trailer in the basement of the flat we were sharing with our fellow workmate Clive Memmot and when the show was picked up, moved into a bigger workshop where we produced 72 puppets over the next year and a half’ (Super-modeller, 2002). These puppets became so successful and iconic that the Backbencher Pub in Wellington is now a permanent display location for these artworks. Even then Taylor and his colleagues were beating the so-called best in the world: ‘It’s incredible to think today that three of us turned around two puppets a week while the Spitting Image team were working with a large crew of technicians’ (Super-modeller, 2002). This early experience began to attract more like-

minded creative individuals: 'we moved workshop nine times, each time more people gathered round or we found more people' (Campbell-Hunt and Finlay, 2002).

### **Peter Jackson partnership**

With the small size of Wellington, Taylor knew of a local film-maker whose reputation preceded him. Their first meeting was - like many things Peter Jackson - downplayed and casual:

We were doing a commercial TV shoot, and I remember Peter wandering into the shoot. We hit up a friendship, and he said he'd just finished *Bad Taste* and was moving onto *Brain Dead*, would I like to be part of it? I said I'd love to and left *Public Eye* to join him (Super-modeller, 2002).

However this project wasn't to be. Like so many in the film business: Six weeks later the whole thing had fallen over due to lack of funding (Super-modeller, 2002). However all was not lost. Thankfully the next day Jackson phoned him to offer him work on his next film, and the creative partnership which was behind *TLOTR* was born.

### *Meet the Feebles (1989)*

Making *Meet the Feebles* was an experience which was to forge a creative partnership between Taylor and Jackson which would carry through until, and become the success behind, *The Lord of the Rings* trilogy. As Taylor recalls, this was budget film-making at its best: 'We worked out of a dilapidated railway shed for a year, firstly manufacturing the puppets under the leadership of Cameron Chittock and then shooting what has since been hailed as one of the sickest pieces of film making ever' (Weta Workshop, 2002). This film-making introduced Taylor to the unique hallmarks of Jackson's creativity:

*Meet the Feebles* was a daily onslaught of fluffy toys and body fluids that one critic has described as 'muppets on acid' and 'puppet spunk hits the fan'. This was Peter Jackson at his most inspired, shooting from the hip, and at the height of filming, could be found running through Wellington undergrowth with a Bolex in one hand, a Vietnam mongoose on the other, yelling indiscernible quasi-Vietcong dialogue at the top of his voice. (Weta Workshop, 2002).

Taylor recalls this time with great affection: 'Film-making doesn't get better than this' (Weta Workshop, 2002). Another creative partnership was formed here which was to have a bearing on Weta Digital. As George Port, later of Weta Digital, remembers:

I got to know Cameron Chittock who called me up and said, 'Hey I'm doing this tiny movie with this other guy, come and have a look' so I went down to this little house in Thorndon and instantly was given this elephant suit to put on because they didn't have enough puppeteers. I stayed the entire week (Curious George, 2002).

George also remembers a common occurrence behind the making of the film, which is synonymous with New Zealand film-making:

We got about 20 minutes shot before they ran out of money. Peter had to go off to Cannes with his newly finished *Bad Taste*. He got money there for *Braindead* and when that fell over they had six weeks, all these sets, so they wrote *The Feebles* script (Curious George, 2002).

*Meet the Feebles* was made for \$750,000. The film won for Taylor and the team the 1990 New Zealand Film Awards (Best Contribution to Design) and in 1991 the Fanta Festival Rome ( Best Special Effects) Award. The next piece of work was the beginning of another significant innovation which was to play a significant part in *TLOTR* - the concept of making miniatures. The key to sustainability for the group has been the ongoing work involved in episodic television.

#### *Brain Dead (1992)*

Having achieved success with *Meet the Feebles*, Jackson hired Taylor and Rodger to run the effects workshop for *Brain Dead*: ‘we were hired to look after the design, fabrication and the onset mayhem that ensued in the making of this film’ (Weta Workshop, 2002). As with *Hercules*, Taylor used the opportunity to develop the skills and capabilities of the team as a whole, again, not necessarily in ways which pleased the establishment:

We hired a team of nine young Wellington effects enthusiasts and over the next year and a half turned the national television studios into a veritable bloodbath of apple pulp and maple syrup! Needless to say, the old timers at the studios were less than impressed (Weta Workshop, 2002).

This process culminated in a veritable bloodbath, in more ways than one: ‘The highlight came when our highly pressurised blood pump exploded over the *Sale of the Century* television set, twenty minutes before recording was supposed to begin’ (Weta Workshop, 2002). George Port remembers the initiative behind the development of computer capability: ‘During the making of *Braindead*, where I was doing some puppeteering, Peter Jackson was talking to me about the coming computer revolution’ (Curious George, 2002). *Braindead* won numerous awards, including the 1992 Rome Fantasy Film Festival; (Best Special Effects); the 1993 Avoriaz Film Festival; (Grand Prize, Critics' Prize, Special Effects Prize); the 1993 Oporto Fantastique (Best Film, Best Special Effects); the 1993 Sitges International Film Festival, Spain (Best Special Effects); the 1993 New Zealand Film Awards (Best Contribution to Design) and the 1993 Silver Screen, Holland (Best Special Effects). The next project was not only their biggest to date, but was the crucible within which Weta Workshop and Weta Digital were ultimately born.

#### *Hercules and Xena*

*Hercules* and *Xena* were television series which allowed Weta the experience to develop their skillbase, as well as the flexibility to take on larger projects as and when they arose. *Hercules* was Weta-driven with effects, then: ‘when *Xena* started up as an offshoot of the *Hercules* series, we were all thrilled to be taken on to produce a variety of characters for this show as well’ (Weta Workshop, 2002). *Hercules* gave them a taste, then, of how episodic television could be a skill-building and sustainable platform. This recipe was to be repeated with the next production schedule of *Xena*. They worked on the *Hercules*, *Xena* and related projects for six and a half years:

Working on this show was fantastic for myself and the Weta technicians, as it honed our skills in the process of making fast turn-around television. The variety of creatures and characters that we created on a monthly basis, not only supplied a constant workload, but also provided a huge creative outlet (Weta Workshop, 2002).

*Hercules* also allowed Weta to expand their skill base of local talent:

It allowed us to increase our crew and train up many people who have remained with us to become the creative and technical backbone of the company. We worked closely with the producer of *Hercules*, Eric Gruendemann, and the years we spent on the show have been some of the most enjoyable of our careers. (Weta Workshop, 2002).

*Heavenly Creatures* (1994)

The introduction to Jackson's next film was hot on the back of a previous completed film, and dependent on its success. True to tradition, 'Peter Jackson first read us the script of *Heavenly Creatures* whilst sitting on his bed in a little apartment at Cannes Film Festival when we were visiting for the screening of *Braindead*' (Weta Workshop, 2002). Taylor remembers the players involved in the formation of the company:

At this time, the company was formed by Jamie Selkirk, the film's editor, Peter Jackson, George Port, a digital enthusiast, Jim Boot, our producer, Tania Rodger and myself. We started our digital business with one computer in the back room of an old townhouse in Wellington.

But this wasn't any old computer: 'George Port started all the digital effects using this one computer and when the film ended we realised it would be a tragedy if the computer went back to America, so we pooled our resources, formed Weta and bought this one computer, it put the newly formed Weta into years of debt (Weta Workshop, 2002). George Port remembers it vividly:

When Peter turned up with the script for *Heavenly Creatures* we all talked about the visual effects required and doing it in America. After we did some pricing though, we realized we couldn't afford those processes on a NZFC [New Zealand Film Commission] budget. Then we started talking to Kodak of all people about them leasing us some gear. At the end of the day we got one computer, a film recorder, and a film scanner- that was the beginning of Weta Digital (Curious George, 2002).

Like many in the business at that stage, George wasn't exactly an expert with the new technology:

When we bought it I had no idea how to run any of it. The film scanner had a lovely glossy brochure, but when we got it we discovered it was only the third they'd ever made and they had no idea what they were doing. Its instruction manual was two photocopied pages and didn't tell you anything you needed to know, meaning I had to learn on the job and took three months to discover that the scanner they sent us was faulty (Curious George, 2002).

As Taylor recalls, combining the newly-formed digital capabilities with the physical aspects of Weta Workshop was a potential recipe for success: 'Incorporating the talents of the physical effects workshop and the newly formed digital effects division, Weta Ltd provided the miniatures, prosthetics, suit effects for the fantasy realm of Borovnia, as well as digital effects for *Heavenly Creatures*' (Weta Workshop, 2002). However the film was memorable for more reasons than the success and birth of Weta. The cycle of life had its own moment of deep sadness for them: 'sadly, our close friend and business colleague, Jim Booth, passed away during this time. It was a great loss to us all' (Weta Workshop, 2002).

The film went on to win numerous awards: 1995 Fantasia Film Festival Italy (Best Film); 1995 French Fantastica Film Festival (Grand Prize); New Zealand Film Awards (Best Design, Best Contribution to Design). *Heavenly Creatures* was made for NZ \$2.5 million.

*Jack Brown, Genius (1995)*

Director Tony Hiles' debut feature about a modern day inventor, battling with a medieval monk inside his brain, required Weta to build a scale model of Wellington railway yards - a far cry from the normal supernatural entities or historic landscapes:

Weta provided all of the visual effects for the picture and had great fun building a large variety of interactive props and fairly sizeable miniatures. These included a 10th scale version of the Wellington rail yards and two of the suburban trains which end up in a comical collision with the lead actor's car! (Weta Workshop, 2002).

Then an ever-present partnership brought Taylor and Jackson back into contact for a project that could only be done in New Zealand, and highlights their ability to work tongue in cheek for the love of the genre – a far cry from the pressure to deliver blockbuster they were becoming used to.

*Forgotten Silver (1995)*

The next smaller project was classic Jackson. Tongue in cheek, the *Forgotten Silver* mockumentary journeys deep into the South Island, tracking forgotten hero filmmaker Colin McKenzie. Weta Workshop made the models and props that were highlighted throughout the footage (Weta Workshop, 2002). *Forgotten Silver* won the 1996 New Zealand Film & TV awards (Best Contribution to Design). With the skills and experience built up since Taylor's early career, Weta were ready for the big league.

*The Frighteners (1996)*

The next film saw another first for Weta – their entree into Hollywood films. Jackson's Hollywood breakthrough saw Weta working with actors such as Michael J. Fox. Weta Digital played a large part in creating the effects for the film, working in seamless partnership with Weta Workshop, whose up-front time investment mirrored the new level of subtlety required for the Hollywood level: 'We worked on the film for over a year, conceptualising and creating the various creatures, make-up and gore effects that were used to support the huge amount of digital effects'. Despite the enjoyment of working with great cast and crew, the film was a test of endurance, and one which would serve them well for later projects: 'We were pleased when we completed work on the film as the project was a long haul of fairly technical filming work' (Weta Workshop, 2002).

Working within considerable budgetary constraints, Weta's model-making and miniature skills came to the fore in allowing the film to be completed:

We finished the project off with the miniatures shoot, which was a real blast! The reduced crew, helmed by Peter Jackson, got the work knocked out quickly and with a great deal of improvisation. John Baster and Mary Maclachlan, Weta's two senior miniature builders, employed their considerable expertise to make a little go a very long way (Weta Workshop, 2002).

*Frighteners* was made for \$14 million and won a variety of awards for Weta: 1996 Australian Effects and Animation Festival: 1996 (Best Model maker award) Sitges Festival of Fantasy Film - Spain; 1996 Nomination for the Saturn Award for Best Special Effects.

#### *The Ugly (1997)*

Weta most often get their work through recommendation and reputation. *The Ugly* was no exception, and the process underscores how important Taylor's vision of 'each job to perfection' becomes. Director Scott Reynolds held Weta in the same level of respect that they held him: 'We both had mutual respect for each other's previous work - we enjoyed a short film that he had written and directed called *Game with No Rules* and Scott had enjoyed our work on *Braindead*' (Weta Workshop, 2002). Weta drew on their considerable prop and effects repertoire to support the director's trademark trick camera photography - skills they would need in abundance for later projects:

This film possessed a number of gruesome murders committed with a switchblade razor and it was Weta Workshop's task to create these gags and various other special make-up effects. Characters called 'Visitors' haunt the lead actor's world and their look was created with simple make-up effects and clothing and then taken into the realm of the truly bizarre through camera trickery, which is one of Scott's trademarks (Weta Workshop, 2002).

There is no better signal of confidence in Weta's work than repeat business, especially with directors with whom they have to build a working relationship from scratch. Their next project was again for Scott Reynolds, following from the success of *The Ugly*.

#### *Heaven (1997)*

True to form, Scott Reynold's next vision took the gore of *The Ugly* and amplified it: 'We created numerous massacre victims that were the dancers and clientele of a seedy strip joint, as well as other severe injury prosthetics for the lead cast members'. For Weta, their ability to draw the best from their own team was equalled by getting the best drawn out of them by such talented directors: 'We thoroughly enjoyed working on the project with Scott, as his inspiration and onset flair brought out the highest level of creativity in the small crew that was working for him' (Weta Workshop, 2002).

#### *Tidal Wave (1998)*

*Tidal Wave* was spotted through a quick trip to Los Angeles after Weta's collaboration with Jackson and Universal on *King Kong* fell through. At the time, a Hollywood version of *Godzilla* had bombed at the box office, and caused Universal to cool on the Jackson effort: 'As Taylor remembers, such a collapse placed them in a precarious position: We had been working on a remake of *King Kong* (for Jackson and Universal). When that project collapsed we urgently needed to get more work into the facility' (Weta Workshop, 2002). Taylor had to do some pretty quick juggling amidst some hectic shooting schedules to bring in another deal:

At the time, we were shooting days on *Hercules* and *Xena* and nights on *The Ugly*, and in amongst all this mayhem I made a quick 24 hour trip to LA to be briefed on the work for this telefeature. We did not hear from the

production again until the director turned up in Wellington on the first morning of shoot! (Weta Workshop, 2002).

Despite this, it was very enjoyable project: ‘This was a quick little job that both got us out of a jam and was a delight to do’ (Weta Workshop, 2002). Their next project would rely on all of their previous experience, ingenuity and calmness of mind to take on the biggest film project yet proposed in history.

### ***The Lord of the Rings (1997-2003)***

When Peter Jackson pulled off the rights and funding to film *TLOTR* with New Line it wasn't a small proposal. (Jackson's previous attempts at funding with Miramax stalled over the size of his vision for the film: they would fund one film of two hours while Jackson wanted two movies - six hours at the minimum.) When Jackson approached Bob Shea, boss of New Line, with his vision, and previous work, Bob himself didn't support two movies. As Jackson remembers:

So Bob Shea just sat there and heard what we had to say and then said: ‘Well you know the only way I think this should be done is in three movies’. Which was exactly what we wanted, but we didn't prompt him - he just said it should be three - three movies... We couldn't believe it - we kind of fell out of our chairs (Hill, 1998).

So the gauntlet had been thrown down. To rewrite one of the biggest and most successful fantasy novels into a coherent screenplay, without doing any violence to the plot, characterisations or storyline. To film three of the biggest individual movies sequentially (each film is over three hours- over nine hours in total). To create a believable 3000 year old world, one of the best known, read and imagined of any, in such a way that the viewer will feel it to be real (where every other attempt had failed). To create realistic battle scenes of over 10,000 soldiers, with every detail reflecting the cultural heritage of over 10 different and unique cultures. And do it all in one of the most remote and under-resourced film-making countries in the world. The vision behind the film, for Jackson, was simple: ‘I started with one goal: to take moviegoers into the fantastical world of Middle-earth in a way that is believable and powerful’ (*TLOTR*, 2002).

From the beginning, Jackson had pitched the project thinking of Taylor and his abilities to bring this vision to life (Weta were first approached when they were working on *Hercules* and *Xena*). As Taylor remembers, when they were asked: ‘Peter called us up and said come over to the house with fish and chips and coke and said, “How about making *The Lord of the Rings*?” And we said, “OK, crikey where do we start?”’ (Hill, 2001). Jackson offered Taylor the choice of departments to run on the film. True to form, and following on the successes of *Hercules*, *Xena*, and Scott Reynold's gore films, not to mention the earlier Jackson partnerships, they chose the design, fabrication, and on set operation of the armour, weapons, creatures, miniatures, special make-up effects and prosthetics, plus gore and injury rigs. For this, Taylor and Rodger came on board two and a half years earlier than other departments, indicating the levels of planning required. Although it was a mammoth task, as in *The Fellowship of the Ring*, strength would be in the team: ‘At no time did we consider it an impossibility - but if we brought together a collective of like minded young artisans and technicians and we actually started the journey, taking one step at a time, it was possible’ (Hill, 2001)



Weta could maximise their capabilities for front-to-back servicing in a way that could allow this unique and enormous vision to be created with a unity and coherence befitting their founder's attention to detail, as Taylor saw in retrospect: 'We have been working on the project for four years to date and at the height of filming have serviced seven shooting units and two miniatures units. By opting to house so many departments under one roof, we have sought to paint Tolkien's Middle-earth with a singular brush stroke' (themakeupgallery, 2002).

One of the first tasks was the budgeting. Small errors here could carry major consequences: 'It took six months to budget the film. We're one of the few independent companies working on the film - misquote it by 1% and you'll collapse the company' (Hill, 2001). Taylor's attention to detail helped: 'We break it down to the most excruciating detail - we take the production schedule and we break down the armour - the buckle, the arrow tip, the strap of leather that would hold the pants on the Hobbits' (Hill, 2001). How could they budget for unforeseen circumstances, such as the actor Sean Bean refusing to return due to a fear of flying? (They replicated him as a silicone version of a wax model - a la Madame Tussauds in London.): 'We budgeted because of ten year of experience making things like this the same way' (Hill, 2001).

Taylor and the team then had to marshall their combined resources to organise and begin the mammoth job of creating Jackson's vision, in a way that would serve the original integrity of the work. Taylor describes Weta's approach as a whole:

We have approached this massive project with a level of passion and enthusiasm we feel befitting of such a visionary epic. *The Lord of the Rings* is a work of modern English folklore and to be given the honour of portraying it through film in our own unique way has been a great gift for all of us at Weta (TLOTR, 2002).

Such high levels of passion however, were directed towards a singular aim: 'I would say that we have been fanatical about this project. We wanted to stay fanatically loyal to the written word of Tolkien' (Hill, 2001). Taylor insists, however, that this wasn't fanaticism in the traditional sense:

Fanaticism suggests something crazy and you can't operate on the level we have to if you're crazy. This has to be a professional approach with an artisan's eye. The effects shops of the world are the modern day artisan's studios. They can wield this level of craft and talent and blend it together in a commercial way to bring the product to the world (Hill, 2001).

Bringing this product to the world meant upsizing the Weta effect from regular to Mega Combo. The best way to do this was finding people with the key Weta ingredient – passion – and use such ingredients to craft a larger version of the Weta team culture:

The people I hired are people who have an intense love of Tolkien, who bring a totally fresh, written word approach to design. The whole design for every little element of the entire trilogy has been figured out to the nth degree. The bottom line was this: everything had to feel real (Hill, 2001).

Taylor drew on what he knew best for such a challenge - trusting Kiwi culture to both invest in and reflect something of its own culture - the energy and vitality of Aotearoa New Zealand:

We wanted a young New Zealand design team that had never worked on a film before. The studio campaigned very hard to hire internationally known designers, but we were confident that the youthful innocence and original eyes that New Zealanders bring - visions that hadn't been dictated by the pre-set paradigms of the American film industry - would add something special to the film (Super-modeller, 2002).

Indeed such a level of purity and innocence, for Taylor, is a hallmark of the trilogy as a whole, and has only been possible in New Zealand:

A question that the same level of heart could have been brought by such a collective of people as this incredible journey has been undertaken with a such a purity and a beauty as it has by the New Zealand film-making group. The enthusiasm that is still so apparent in the New Zealand psyche comes through the screen and captures you while you're watching the film (Hill, 2001).

How did Taylor marshal his forces for the challenge ahead?

How do we inspire in this young group of New Zealand designers and technicians the philosophies and the vision that will carry this film for 5 years and deliver it onto the world stage in a way that's worthy to the written literature of Tolkien? I very much believe now, what I said then: 'If you couldn't rise to the highest level of enthusiasm, passion and professionalism, and grasp this task as if it was the single most important thing that you have ever taken on in your life, then you weren't worthy of the task (Walsh and Jackson, 2002).

Jackson's vision for the film was compelling, and set the stage for Taylor, and the teams' task in the project: 'It is Peter's vision of the books that you're making and in the doing you grow to learn the world he wants to bring to the screen. His incredibly strong vision is one of total realism' (Hill, 1998).

Close collaboration would be required over almost every aspect. For Taylor, their years of working together was a large factor in their teamwork: 'After working with Peter for so many years, there is a level of intuitive understanding of what his vision is, what his aesthetic is' (Creator, 2002). To embody Jackson's vision across five massive departments, Taylor and Jackson collaborated closely and constantly to create a unity of design, which meant bringing the best out of their young design team. Taylor describes his coordinating role in ensuring such cohesion is developed and maintained across the design, fabrication and onset operation of each department: 'We were able to understand Peter's vision, and then invest his thoughts, through the designers, into the individuals across each of the workshop departments' (Walsh and Jackson, 2002)

Such cohesion has been for Taylor, critical to the success of the trilogy: 'Because Middle-earth was created by a single author that means it's been generated from a single vision. Therefore the more cohesively the departments could realise that vision, the more Tolkienesque the whole project could become' (Weta Workshop, 2002). This cohesion wasn't lost on Jackson:

It has just been phenomenal. His workshop is packed with staff, they have a huge team of people. They have really led the charge in creating the different cultures of Middle-earth and without that team of people this film would never have been made - it is as simple as that (Walsh and Jackson, 2002).

So Weta and their design team began to create, in close collaboration with Jackson, the cultures of Middle-earth, each one of 30 or more seemingly recognisable from a period of history, yet not exact enough to be named specifically. Throughout Taylor insisted that they approach the task not as fantasy designers, but instead as historical researchers. This vision, task and aesthetic, was to be as authentic to the original creator as possible: 'Tolkien imagined the world that was, for him, totally real and therefore our work has to support the fantasy with a backdrop of realism' (*TLOTR*, 2002). For Taylor, this support is critical because for each department of Weta, they had to be unified by this purpose:

The tapestry that was woven by the effects shops, the workshops of the props makers, the wardrobe, the arts department, all had to be one of strict reality so that at no time is the audience jarred out of the viewing to inspect the magical nature of the effects (Campbell-Hunt and Finlay, 2002).

Such a level of reality then, had to be approached with 100% commitment to every detail: 'This requires a level of subtlety and passion unlike anything that we'd tackled before. This had to be pursued at the highest level so that the level of historical research, the acid etching of the blades has matched this' (Campbell-Hunt and Finlay, 2002). At each stage, Taylor's dedication to the original integrity of the Tolkien spirit was paramount, and he drew as much as possible from the original work to inspire his team's creativity: 'We would photocopy appropriate passages from the books and place them all around the workshops as the artists worked. We were never without Tolkien's spirit on the set' (Cardy, 2002).

For each department, design and fabrication became processes of continual improvement, where daily design meetings became the vehicle by which work could be critiqued, and designers were encouraged to improve to finally capture Jackson's vision. As Taylor recalls:

We'd arrive at 8am and talk over a particular subject. For the rest of the day we'd get ideas down on paper. At 5pm, Peter would arrive and go over what we'd produced, telling us what he liked. Everything else was culled and the next day we'd start refining the best ideas and developing new ones (Sibley, 2002).

The design work extended over 700 days and it was the crucible by which the unity and cohesion was forged, not just between Jackson's vision and Taylor's creation, but also between the overall conceptual design of the film as a whole and each department.

Designing the overall look and feel of the cultures fell to (among others) six young Weta designers, Daniel Falconer, Ben Wootten, Sean Bolton and Sasha Lees (who helped create all the morally 'good' Elvish designs) and Warren Mahy and Jamie Beswarick (whose designs brought forth the 'evil', spiky orcs). Taylor, in characteristically proud tones, recalls how quickly the young design team were able to take Jackson's vision and translate that into physical reality, producing 1/3 and 1/6 scale miniatures to embody the look and feel of the two dimensional concepts for

Jackson's quality approval: 'Jamie Beswarick did a number of one-off sculptures that are in the final today. It was amazing how quickly he was able to capture Peter Jackson's vision and deliver designs that were able to carry through into final shots on screen' (Walsh and Jackson, 2002).

To help achieve this vision not only did Taylor and the team draw from the original Tolkien text, but one year into the design process, Jackson brought on Alan Lee and John Howe, two of the world's leading authorities on Tolkien and his world, to help support Weta's design. What they found impressed them greatly: 'They had already broken ground for the weaponry, the armoury and the creatures. Because we were on the same floor there was a lot of fraternisation. It was very stimulating' (Walsh and Jackson, 2002). Falconer remembers the effect working with such skilled artists had on the Weta team: 'We had already incorporated a lot of their stylistics in the design. It was a huge upskilling and experience base for us to draw from' (Walsh and Jackson, 2002).

### *Special make-up and effects*

Having the design process occur concurrently across all departments simultaneously in the first 700 days created design cohesion. Fabricating such designs was less straightforward. Since prosthetics covered anything that gets glued to change the appearance of an actor, there were very few actors or extras in *TLOTR* who didn't have their appearance changed in some form by Weta special make-up or effects. For the lead actors, this meant enduring suffocating face casts, from which exact replicas could be created and changed in scale to fit the scale double stand-ins, (used especially for the distance shots). Faces weren't the only aspect requiring change. For the four lead actors alone, 1800 individually created Hobbit feet were required. Since feet could only be used once (the seal which is glued on to the actors' skin is single use) Weta created a Foot Manufacturing Room complete with their own firing oven running 365 days a year for three and a half years to produce the quantities required. To service such requirements Weta's years of product knowledge came to the fore (they have thousands of product information sheets on file) mixed with their skill of logistics management and ability to innovate almost constantly to solve problems as they arose. As Taylor recalls, subtle improvements in feet were an example of continual improvement: 'It took us six months to figure out how to make them so that they were pliable and soft as human skin, yet still tough enough for the actors to be able to run about on all kinds of terrain' (Sibley, 2002). Actor Sean Astin remembers how such a small detail helped him in the role: 'When we first got the feet, they were quite floppy and the toes would bounce when you walked. But as we went on the guys at Weta improved the design so that the feet now are really lifelike, you really learn how to work them' (Walsh and Jackson, 2002)

To fabricate the look for the orcs the special make-up and effects team turned to the animal world for inspiration, creating grey, wrinkled prosthetic skin suits (like elephant hide) and black armour (like an insect's skeleton) to produce the orcs' look - a cross between insect head and medieval knight. Each of these 200 orc heads made for the film was unique. Masks were again made of latex, foam, and silicone and implanted with yak hair woven strand by strand for different hairstyles. Rodger imported the yaks' hair from America and each mask was done by hand:

We had ten people hand knotting one hair at a time. There's about 10,000 hairs in a human wig, knotted with a complex knot into a fine piece of gauze that's

barely visible to the human eye. That went on for three years. Can you imagine anything as tedious? (Campbell-Hunt and Finlay, 2002).

The team also forged blue-tinged prosthetic feet, with long, curving claws, to stick out from the orcs' knee-high boots. The look was completed with layers of Middle-Earth mud. Taylor had a clear vision of how the Orcs should look: 'I wanted the orcs to look like soldiers who live under an ethic of fear of their leaders. (*TLOTR*, 2002). Creating the make-up and effects for the Hobbits and creatures of Middle-earth was one thing – creating literally thousands of armoury pieces (some needing identical scale miniatures) was quite another.

#### *Armour and weaponry*

In the Armoury, Weta Workshop became like a scene from Middle-earth, replete with the crashing of hammer on blade, to produce so many uniforms: 'One of our biggest challenges has been trying to come up with as many components as possible in such a short length of time, trying to mass-produce a huge army with every component being different' (Weta Workshop, 2002). Their response was typical Weta – innovate to deliver in ways more effective than they've ever been:

We've purchased a machine that's revolutionised the way that we've made stuff back in the workshop. It's a urethane-spraying machine that allows us to make flexible armour. You can make over a hundred helmets a day with it. It's given us the ability to really quickly make them as opposed to how we used to make things, which was all in fibreglass and a fairly slow and tedious process (Weta Workshop, 2002).

To create such unique items, Weta's workshop included real-life blacksmiths and swordsmiths (Stuart Johnston, Warren Green and Peter Lyon) forging blades true to the technology not of the future, but of the 14<sup>th</sup> Century. Innovations in armour were created too. Whereas traditional armour was knitted by using woven links, making for very tired actors, Weta instead created a process where armour was hand clipped, sealed and painted using 12.5 million millimetre thick slices of plastic piping, together stretching over 12 kilometres, all hand sealed over three and a half years. Gimli's costume alone took over 80,000 individually sewn clips. Actor John Rhys-Davies was impressed: 'I've never seen anything like it. These individuals hand knitted Gimli's armour' (Te Papa Exhibition, 2003)

Having John Howe on board brought additional bonuses. One of these was that not only was he slim enough to fit into some of the original armour used in the period, he also is one of the world's foremost experts on how armour operates. This allowed for the Weta team to absorb some of the best knowledge on the design and fabrication of armour in the world. At the height of the making of *TLOTR*, the armoury, and indeed other departments, were making more than 1200 suits of hand-made armour, more than 2,000 rubber and safety weapons, more than 100 special, hand-made weapons, more than 10,000 facial prosthetics and 2,000 body prosthetics, and more than 1,600 pairs of prosthetic feet and ears, individually sized and shaped. Compounding the complexity was the need to make different scales of some items, required for large scale and small-scale camera trickery, to dovetail with the digital effects required by Weta Digital:

We had to create almost everything at least twice in different scales. The mathematics alone was a staggering challenge. But it was the only way to stay

true to what Tolkien created in his imagination: a world of many different sizes. (Weta Workshop, 2002).

Weta's quality of physical delivery was not lost on Jackson: 'The level of reality in Weta's creations was such that you could pick up a sword that looked completely real and find out it was made of rubber. Their stuff looks that good' (*TLOTR*, 2002). Their attention to detail in weaponry was also not lost on the actors. Viggo Mortensen, who plays Aragorn, came on slightly later in the piece. Coming up to speed with the sword craft required meant that Viggo used every available aid to get into character. For him, the hero sword (the heavyweight authentic version of all the versions made) became the only one he used, and was virtually inseparable from him. Indeed for him, this authenticity allowed him to portray the levels of fatigue that would realistically accompany such constant sword use. Realism in swords wasn't all that was required of Weta.

### *Miniatures and bigatures*

With Alan Lee and John Howe's artwork (which Taylor describes as superb), the design of the miniatures of such locations as Saruman's Barad-dur carried some exacting specifications. Creating such realistic scale models of such stunningly written and painted architecture would be no small task. However, with their skills of building slightly larger than the normally expected miniature developed during *Tidal Wave* and *Forgotten Silver*, Weta's solution - the upsized miniature - was aptly titled a 'bigature':

We built 72 miniatures of which 30 were bigatures and filled our construction stage. They were as big as the biggest film sets built in New Zealand to that point and they were just miniatures it shows you the scale of Alan, John and Peter's vision (Campbell-Hunt and Finlay, 2002).

For the miniatures, department attention to detail takes on a whole new level. Their attention to detail on the multiple scale models went to the level of ornately inscribed marble panels, interwoven into the designs. As miniature builder Mary MacLachlan found out, creating such sculptures of Barad-dur wasn't without its frustrations as Jackson's quest for perfection would challenge them to new heights, both literally and figuratively. MacLachlan was able to replicate Lee and Howe's vision of Barad-dur, but Jackson knew there was something greater waiting to emerge: 'There was a time limit on the job. After a huge amount of work it was finished. However it wasn't quite what Peter saw in his mind, despite being exactly what John had drawn' (Sibley, 2002). How could she produce the extra magical ingredient? With the help of Weta sculptor Ben Wooten: 'The atmosphere was electric. We were within an inch of what Peter wanted, the clock was ticking and we were sculpting like crazy! Then, somehow - we got it!! Peter saw it and said, "that's lovely" and we just collapsed!' (Sibley, 2002). Such drive by Jackson was intuitive: 'You always know when there's something extra in your craft that wants to come out - if only you can find it and set it free! If there's ever been a film that can drag a little bit extra out of people then this is it!!' (Sibley, 2002).

Building such physical miniatures is one thing. Applying the Weta magic to them is quite another. Given Weta's unique blending of the physical and the digital, how were such creations rendered into a form useable for the final film? Taylor explains that 'For that Weta has developed over the last ten years some pretty significant

technology that only a few people in the world were using at that time' (Campbell-Hunt and Finlay, 2002). Weta utilised a handheld scanner (adapted from a meat scanner) which renders an exact physical image into digital form. This technology allowed them to create, for example, rocks in *TLOTR* which are not just life like, they are in fact, scanned versions of Red Rocks, near Wellington. Such scanning allowed the cohesion between the design, fabrication and onset - or onscreen- operation to be as seamless as possible, maintaining the Tolkien integrity. It also is one for the most significant capabilities that Weta have mastered to allow such effects, and therefore the whole trilogy - to be taken on at all.

However not all the miniatures or bigatures were digitally scanned. Some of these original design maquettes were so lifelike in detail that they were in fact used for wide angle and close up shots in the film itself. As MacLachlan remembers, these shots indicate the level of respect that the film-makers had for their quality of work (each job to perfection): 'It's a model maker's nightmare! You've got two weeks to build the model, thinking it's only for a long shot, then find there's a camera going in really close, shooting two inches from the surface. It gives you heart attacks!!' (Sibley, 2002).

With a team able to create detail in miniature, able to withstand up to a minute of close up shotwork (an eternity for miniatures in film), Taylor and his team have some serious skills in the miniatures department.

#### *Merchandise*

Such is the quality of the miniature department's work that their output has extended to the full *TLOTR* miniature merchandise brand. Such a vehicle has become important in Weta generating sustainability. With what Taylor calls a 'sliver' of merchandising revenue being controlled by Weta, they can apply their own skills, such as those of MacLachlan and others, to benefit themselves. Weta have innovated here too. Their technology has been developed onsite from home grown-skills from what comes to hand, for example, producing, with a bit of welding and local materials, a custom-built smelter able to produce vacuum sealed miniatures able to outdo the world's best equivalent - Kiwi number-8 wire, somewhat upsized.

#### *Creatures*

Weta designed, created and ensured the on-set operation of creatures, some of which were as central to the movie as a lead actor. Such creatures included the Ents (huge trees which were to play a vital part in the destruction of Saruman's lair), Gollum, (played in human form by Andy Serkis) and warriors in the Helm's Deep battle scenes. Taking the cave troll example, highlights the design-to-onset operation: with Jackson leading (often physically mimicking the actions required of the monsters the cave troll being a slightly stupid and childlike creature), Weta's creature sculptors created scale replicas which were adapted up to final, full skeletal form. These were then covered in plasticine, and coloured to Jackson's exact specification. Once complete, they were able to be scanned into digital form, retaining the integrity of Weta's design directly onscreen. Indeed many of the original creatures were so true to Jackson's vision so early in the piece that they remained right through to the final film.

### *Digital effects*

The unique ability of Weta Workshop and Weta Digital to seamlessly blend the physical with the digital would serve them well, but not before some proprietary technology upgrades, not least of which was the creation of world beating software which allowed the animation scenes of Helm's Deep to be created with unparalleled realism in CG (computer generation). Hence physical effects made with 14<sup>th</sup> century technology were blended with 21<sup>st</sup> century computer animation. The software for the 10,000 strong Helm's Deep battle scenes (Massive) was programmed by Steve Regelous. The software allowed each digital soldier to respond individually to his environment, within broad parameters. Hence each army could be programmed with unique physical responses reflecting the culture and tradition of their background (Te Papa Exhibition, 2003). Testing the software gave some hilarious results. Filming a mock battle with the software in a field opposite Camperdown Studios in Miramar, saw digital soldiers on the edges of the battle turn and flee, as the best option for their own survival. Such options weren't open to the characters in the film. (Te Papa Exhibition, 2003). When the first few soldiers were filmed against a blue screen background, human action and digital recreation gave stunning results. Combining the physical and digital also reached new levels with the Animatronic Treebeards and full digital creation of the character 'Gollum'. Treebeard posed some unique problems for Taylor and the team:

One of our greatest concerns from a design perspective was 'how do you personify trees? How do you bring them to life and have them interact as complex invigorated characters, that would talk wisdom and emotion at the level of a lead actor, without being corny?' (Cardy, 2002)

Treebeard was designed by Daniel Falconer and created by Dominic Taylor, by adapting technology originally developed for Jackson's earlier attempt at *King Kong* (dropped after a few months). Here a 4m high, urethane-covered, servo-driven aluminium Treebeard was filmed, complete with two Hobbits (both scared of heights) in its branches, against a blue screen, to be later blended with digital landscapes (Te Papa Exhibition, 2003). Included in such landscapes was the tower of Saruman, created as a scannable maquette by John Baster and Mary MacLachan.

For Gollum, the character was brought to life by blending the human and the digital in innovative ways: the physical action of actor Andy Serkis, with a CG equivalent, who mimicked every detail of the human. Such blending was achieved by capturing moving images of Serkis with ping-pong balls glued into a black motion capture catsuit able to locate with pinpoint accuracy body movements, before being transposed to CG movement. Each scene was shot three times: one with Serkis alongside the other actors, one without Serkis, just the other actors, then one with Serkis alone wearing the motion capture suit. However it wasn't quite as simple as it sounds, as Taylor describes: 'He added a complexity beyond belief because Andy is bigger than Gollum. That meant that everywhere Gollum didn't cover up the digital artist had to remove and replace the environment where Andy is, making for a massive body of work' (*TLOTR*, 2002).

Creating the cave trolls was no less complex, as this description illustrates:

Using 3-D animation software called Maya from Toronto-based Alias/Wavefront, re-created the book's fantastical creatures, such as the Cave Troll, an 18-foot-tall colossus. The process is complex. First, animators build a



clay model of the creature and laser-scan it into a computer. Next, they texture and paint the computer model to make it look realistic. To animate the model, they build a computer-based skeleton that can be manipulated to create realistic movement and expression. The computer mimics a camera lens and allows the animators to match the movement of the creature to the live-action footage of the film. Lighting and shadows are also digitally added. *TLOTR* used several hundred computers networked together to work on the images (Curious George, 2002).

Planning the sequence also posed some challenges. For this, Jackson created a virtual reality studio which he could then physically interact with, using VR goggles, to literally 'walk' around the 'set' with a camera's eye view of the action. Such planning was required to blend the physical cavernous sets for human action with the exact digital replica within which the cave troll would act.

Having covered such a colossal project covering such massive departments, and overcoming such monumental challenges: 'The greatest feeling of success has been to watch all these bits and pieces of polystyrene and metal and wood become a world so real you believe these characters live there. We've painted Tolkien's palette as much as possible across the film' (*TLOTR*, 2002). For Taylor, Jackson's version is unique: 'It isn't slick like some Hollywood movies. People do go to the toilet. The Hobbits do fart occasionally, they do puff away on pipes. This is a world that has vitriol and is gritty and real and a world you can feel you've been drawn into' (Hill, 2001).

Perhaps the definitive word on Weta's input to *TLOTR* should go back to Jackson:  
The contribution of Richard Taylor and Tania Rodger and their WETA Workshop has been essential in putting the film together. They truly understood my desire to make every inch of this production feel real. Right down to the pitted, greasy, dirty armour, WETA has gone the extra distance to get the details right (*TLOTR*, 2002).

*TLOTR* trilogy was estimated by Jackson's company, Three Foot Six, to have cost \$478 million between mid 1998 - to mid March 2002, with the final figure a closely guarded secret but reported to be close to \$600 million. (Dixon, 2003). *The Two Towers* is estimated to have grossed (as of April 2003) internationally \$910 million (making it the fifth biggest grossing film of all time) and collectively with *The Fellowship of the Ring* to have grossed \$1.8 billion worldwide (as of April 2003) (*TLOTR*, 2002).

The two films have won for Taylor and Weta the following awards:

In 2002 *The Fellowship of the Ring* Oscar (American Academy of Motion Picture, Arts and Sciences Awards for: Best Visual Effects (for Jim Rygiel and Richard Taylor); Best Make-Up (for Peter Owen and Richard Taylor).

BAFTA (British Academy of Film and Television Arts) awards for: Best Achievement in Special Visual Effects (for Randall William Cooke, Alex Funke, Jim Rygiel, Mark Stetson and Richard Taylor); Best make-up/hair (for Peter Owen, Peter King and Richard Taylor).

In 2003, for *The Two Towers*: An Oscar for: Visual Effects (Jim Rygiel (Weta Digital's Visual Effects Supervisor), Joe Letteri, Randall William Cook, and Alex Funke).

Taylor, in his 2002 Oscar's speech, touched on a now familiar theme – what an incredible journey the trilogy had been:

We have been on the most amazing journey together due in part to the vision of Peter Jackson, the camaraderie of Barrie Osborne, the incredible support of Mark Ordesky, the faces and bodies of the actors who went through hours of makeup (Taylor, 2002).

In characteristic form, Taylor honoured the input of his partner Tania Rodger, and also the unique creativity of the Wellington and New Zealand film-making industry:

My journey has been made whole by the love of my partner Tania Rodger and the wonderful genius of the small group of young New Zealanders that have gathered around us to make this so possible. Thank you everyone for helping us support this cause tonight. It's a lovely day. Thanks (Taylor, 2002).

At the end of the filming, Taylor and the Weta team were faced with one last challenge.

Peter Jackson is arguably the most successful film-maker in the world at the moment, the greatest showman on the planet, but we can't expect to rely on him because his work fluctuates, he can only make a film every few years. So we have to therefore, be the controllers of our own destiny. It's not fair on him to expect that he will always keep us busy (Campbell-Hunt and Finlay, 2002).

For Taylor the problem for Weta's future is simple:

The fundamental problem for us on that level is two-fold. One is that we are constantly at the beck and call and the availability of our clients' ideas. Secondly and at a far more abstract level is this: The industry continues to pour its unique creativity and intellectual property ideas into other people's work. They continue to reap the rewards, as they should because they have taken the risk and put in the investment and hired our time, but they continue to reap the rewards of this unique New Zealand talent. How can we therefore benefit from their huge amount of creative input? (Campbell-Hunt and Finlay, 2002).

They seek such control with another innovation, they originated from their early days on such projects as *Tidal Wave*: 'We do it by owning the biggest piece of the merchandising pie that we can afford. We have started our own merchandising business, that is to try and create a tail end ownership of the ideas that we have created in *TLOTR* and other projects' (Campbell-Hunt and Finlay, 2002). To do this, Weta people flew to meet with studio executives to float the concept. Taylor remembers the meeting well: 'In the middle of the [*TLOTR*] shoot we flew to New York for a day to pitch our project to New Line that would provide us with a continuity of workflow (Manson, 2002). Although there was a significant result in securing some rights, Taylor is realistic what it really means:

Now unfortunately, that was a tiny, tiny sliver and to that end our ability to make any great amount of difference off it is almost slight, but what it has done, is it's allowed us to control and set the standards of our own merchandising.

Our work has helped set the look of the merchandising of *TLOTR* by the unique situation where the people that made the film are making the merchandising (Campbell-Hunt and Finlay, 2002).

Such efforts provide for a critical ability for Taylor and Weta to survive: 'our collectibles business has kept our core staff of 48 people busy over this period of time' (Campbell-Hunt and Finlay, 2002). But Taylor challenges some public perceptions of Weta's success:

If we were truly successful at a business level we wouldn't have let a hundred people go at the back of *TLOTR*, because we would have had another film project on our doorstep. We've gone 13 months with three and half week's work, we've supported 50 people for 13 months, that's the reality of the film industry (Campbell-Hunt and Finlay, 2002).

So how can Weta survive on the back of the success of *TLOTR*?

### **Sustainability – Kiwi-style**

If there is one holy grail that Taylor is looking for above all else, it is summed up in a word - sustainability. To this end:

We are in the process of trying to put together a New Zealand-funded, totally vertically-integrated entertainment company, and by that I mean we instigate our own story concepts, we produce them here, we populate them with New Zealand actors, we find New Zealand investment capital, we power it from the unique and rare creativity and enthusiasm that's found in this country (Campbell-Hunt and Finlay, 2002).

Taylor deplors the lack of any national structure or mechanism which could prevent the feast or famine situation in the local film industry: 'How can it be that *Hercules* and *Xena* leave New Zealand and a huge number of people have to sit unemployed for some years? It's insane that there isn't another show ready to take its place (Campbell-Hunt and Finlay, 2002). Like everything Weta, the lack of sustainability is just another issue to be approached with creativity and a little bit of good old Kiwi confidence and innovation:

We are all trying to think on how we can stop gap that, so between the films, between these epics, there's this sponge that sops up the overflow, and episodic television done well is a sustainable resource that can go on for many years that uses high level creativity to a very rewarding level, with very entertaining results (Campbell-Hunt and Finlay, 2002).

Taylor knows how well the New Zealand costs in making episodic television stack up against the expensive blow-outs of the American studios:

One series of 24 episodes would cost about approx US \$24 million and it would have to be in circulation for two or three years before it started to make back the money it has been spending on the show, even if it could run that long. We believe New Zealand can make that same quality television with a greater artistic scope and creativity for greatly less (Campbell-Hunt and Finlay, 2002).

Generating a sustainable industry means finding clients from far and wide. The geographic isolation of New Zealand, which Weta have used to their advantage, also has a price:

We're trying to win a client in LA at the moment. We have to fly to Mexico in two weeks for a meeting with them. We've been wooing those people for about ten weeks, we have a 1 in 6 to 1 in 8 success rate in getting work. It's a huge leap of faith for people to come down here, distance is our fundamental hurdle, the fact that we don't have an international airport at Wellington is the greatest downfall of the city from our perspective (Campbell-Hunt and Finlay, 2002).

### **The future**

The Oscars have given Weta some positive spin-offs: 'Certainly, since the Oscars we have had a lot more interest from various people around the world, which has brought some very enjoyable work into the facility' (Campbell-Hunt and Finlay, 2002). Part of this work is another stunning Weta victory - providing the Henson stable with Muppet figurines. Henson Marketing Director, Karina Gee saw Taylor's work at a New York Toy Fair in February, 2002: 'She saw *TLOTR* figurines and was just blown away. She said she had never seen any toy product as good' (Manson, 2002). Such an investment in Weta is not a small thing, given Henson's stringent reputation for quality. They send originals with exacting specifications for the Weta artisans to work from, as Taylor is aware: 'In many ways it is the crown jewels of American merchandising and being allowed so close to them is a great privilege. (Manson, 2002). Other projects [forthcoming from 2003] include *The Return of the King*, work on *The Last Samurai* and the new Russell Crowe film, *Master and Commander*, *Hellboy*, *Perfect Strangers*, *Evangelion*, *I Robot*, *Van Helsing*, and the *Lion, Witch and the Wardrobe*.

However the biggest question hanging over the industry remains where to from here – post-*TLOTR*? Given the skills and knowledge built for such a trilogy - from the animatronic Ents through to the award winning MASSIVE software, another project was required which would capitalise on such capabilities. Only one current New Zealand director has the reputation to bring such a project back to Wellington. Thankfully that question has been answered by the famous Wellington partnership with another classic monster remake.

### **King Kong**

Taylor's alliance with Jackson paid off again with the announcement in April 2003 that Jackson's favourite boyhood film, *King Kong*, was to be his next project. With the huge success of *TLOTR* many options were open to Jackson. Indeed his partner Fran Walsh had speculated that the next picture would be a smaller, more art-house type affair (local speculation had even named an adaptation of *As Nature Made Him* - a biography of David Thiesson) but this project would never provide the spin-off work for Taylor and the talented team that had been built at Weta, as Jackson is well aware: 'If you can't have another film to follow on then obviously those people are going to seek employment elsewhere, possibly leaving the country' (Manson, 2003). Instead, an 'unbeatable' offer from Universal in October 2002 has seen the confirmation of the *King Kong* project which will harness *TLOTR* skills:

*TLOTR* films have meant we have created this wonderful team of computer artists who have enormous skills now. This would be a whole lot more daunting and frightening if we were going into it three or four years ago. In some respects fate has been incredibly kind to us because we have such an incredible infrastructure of talent (Manson, 2003).

The film is a chance to remake a boyhood dream for Jackson: 'King Kong had a profound effect on me. It changed my life. It literally made me want to become a filmmaker. It got me really excited about the magic of films, the escapism and the special

effects' (Manson, 2003). The remake is estimated to be budgeted at \$200 million, and creates a realistic King Kong replete with scaleable skyscrapers, filmed in New Zealand, using technology directly from *TLOTR*:

We will build somewhere in the Wellington region - we'll just find some flat land and build a big backblock set of New York streets and then use our computer to extend the buildings, make the streets longer and buildings higher. It may just be a field somewhere on someone's farmland (Manson, 2003).

Another monster project such as *King Kong* highlights a dream that Jackson and Taylor have been working to for years - a film industry in New Zealand with the world's best skills and capabilities able to deliver world-leading films. Building the capabilities of, and indeed ensuring the flow of work for, such facilities has inevitably revolved around its key players, and their partnership. It is in no small part due to Taylor's quality of effects and pre-production that sealed the fate of the *TLOTR* trilogy, and it is directly Jackson's films that allowed such skills to be developed. However, such a symbiotic relationship is not the only aspect that Taylor and Jackson are trying to build. Relationships beyond themselves carry possibilities and challenges too, in helping to create a sustainable industry.

### **Industry partnerships**

Generating individual or group success from closely forged partnerships is the stuff of an industry such as film. However generating ongoing success for the industry as a whole and beyond individuals within it, means creating larger strategic partnerships, and making connections that have been a change from most of what Taylor and the film-making community have been used to: 'We have an alliance with people like the Government of New Zealand in as much as they know about us: Helen Clark [Prime Minister] actually cares about our business and industry stability' (Campbell-Hunt and Finlay, 2002). With ongoing debates about government tax breaks a constant theme of film industry discussions, Taylor is positive and welcoming of such government interest regardless: 'To that end it's amazing and they have a personal interest. Whether they have governmental, financial invested interest in helping us through tax rebates or whatever, we're yet to see (Campbell-Hunt and Finlay, 2002) Announcements by Finance Minister, Michael Cullen, have clarified the Government's position – with a somewhat favouritist position supporting tax breaks in the film industry unpopular – despite the industry being unified in seeking them: 'But at least they know we're on the radar, we'd gone 13 years being just the same company and we'd never even met a politician, but now *TLOTR* has focused interest on the industry and brought well-needed assistance to it' (Campbell-Hunt and Finlay, 2002).

Taylor joined other industry leaders as part of this partnership between the film industry and government, in the form of the Screen Production Industry Taskforce, set up in 2002 to support a vision for a sustainable creative industry in New Zealand (SPT, 2003). Part of this strategy entails the setting up of a \$NZ 100 million New Zealand Venture Investment Fund, to attract overseas investment. How much of this fund goes into creative industries is yet to be seen, although the vision of a sustainable creative community in New Zealand for Taylor is compelling: 'Now if we can keep this New Zealand-funded how wonderful it will be to enrich that, because once again

the money goes back into the coffers of the country (Campbell-Hunt and Finlay, 2002).

Has he thought of going overseas?

Tania and I are committed to stay here because, one, we're so entrenched in the New Zealand film industry and, two, we can't see anywhere else in the world that we'd choose to attempt to make this sort of business. There's a very even relationship between us and our clients because of the ease with which we can interact with them - they appreciate the talents they can access here (Grant, 2002).

More than that, Wellington and New Zealand have created something that can't be found anywhere else: 'It's the unique coming together and the unique blend of a like minded group of individuals that have found their way to this city and this city is the place they want to be, that have allowed us to be part of this cutting-edge, creative industry' (Campbell-Hunt and Finlay, 2002). As Taylor sees it, 'If *TLOTR* has achieved anything, it has given New Zealand the opportunity to stand on the world's stage and brand our culture for the world to see' (Super-modeller, 2002). With people like Taylor as part of that industry, it certainly is world class. Not bad for an afternoon playing in the Franklin mud.

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## APPENDIX I

### WETA AWARDS to 2003

British Academy of Film and Television Arts	2003 BAFTA Award for Best Costume Design	<i>The Lord of the Rings : The Two Towers</i>
Visual Effects Society	2003 Award for Best Miniatures	<i>The Lord of the Rings : The Two Towers</i>
Hollywood Hair & Makeup Society	2003 Award for Best Special Makeup	<i>The Lord of the Rings : The Two Towers</i>
Academy of Motion Pictures, Arts and Sciences	2002 Academy Award for Best Visual Effects	<i>The Lord of the Rings : Fellowship of the Ring</i>
Academy of Motion Pictures, Arts and Sciences	2002 Academy Award for Best Make-up	<i>The Lord of the Rings : Fellowship of the Ring</i>
Academy of Motion Pictures, Arts and Sciences	2002 Academy Award Nomination for Best Costume	<i>The Lord of the Rings : Fellowship of the Ring</i>
British Academy of Film and Television Arts	2002 BAFTA Award for Best Visual Effects	<i>The Lord of the Rings : Fellowship of the Ring</i>
British Academy of Film and Television Arts	2002 BAFTA Award for Best Make-up	<i>The Lord of the Rings : Fellowship of the Ring</i>



British Academy of Film and Television Arts	2002 BAFTA Nomination for Best Costume	<i>The Lord of the Rings : Fellowship of the Ring</i>
Wellington Region Gold Awards	2002 Winner for Overall acknowledgement of outstanding contribution to the Wellington Economy	
Las Vegas Film Critics Society	2002 Best Costume Design	<i>The Lord of the Rings; The Two Towers</i>
Las Vegas Film Critics Society	2001 Best Visual Effects	<i>The Lord of the Rings; Fellowship of the Ring</i>
Las Vegas Film Critics Society	2001 Best Costume Design	<i>The Lord of the Rings; Fellowship of the Ring</i>
Phoenix Film critics Society Award	2001 Best Costume Design	<i>The Lord of the Rings; Fellowship of the Ring</i>
23 <sup>rd</sup> Annual Saturn Awards	1997 Best Make-up Nominee	<i>The Frighteners</i>
23 <sup>rd</sup> Annual Saturn Awards	1997 Best Special Effects Nominee	<i>The Frighteners</i>
NZ Film Awards	Best Contribution to Design	<i>The Ugly</i>
Saturn Awards	Nomination	<i>The Frighteners</i>
Stiges Festival - Spain	1997 Best Model / Miniatures	<i>The Frighteners</i>
NZ Film Awards	Best Contribution to Design	<i>Forgotten Silver</i>

NZ Film Awards	Best Contribution to Design	<i>Heavenly Creatures</i>
Stiges festival - Spain	Best Special Effects	<i>Braindead</i>
Avorez Festival - France	Best Special Effects	<i>Braindead</i>
Portuguese Film Festival	Best Special Effects	<i>Braindead</i>
Silver Screen - Holland	Best Special Effects	<i>Braindead</i>
NZ Film Awards	Best Contribution to Design	<i>Braindead</i>
Fantasy Film Awards - Italy	Best Physical Effects	<i>Meet the Feebles</i>