LIVING CRAFT

A PAINTER'S PROCESS

EDITION TWELVE

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AND
TEXT SELECTIONS

TAD SPURGEON

zoetrope

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Formulas

These are given in parts by volume, or in the metric system, by weight or volume, followed by American kitchen measurements in parentheses. Note that certain formulas are designed for use on panels only. Medium formulas are generally on the thick side for *conditioning* the paint on the palette, these are easily thinned slightly with *small* amounts of thinner oil. Variables in natural ingredients and individual measuring methods make a technical notebook an excellent idea. The concept is to measure carefully, then paint freely. Some formulas contain historical ingredients can be toxic if not used with care; solvents are considered toxic. In the text, these formulas are designated thus: ⚠

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A Note to the Intrepid Reader:

Living Craft is a book for painters whose involvement with technique and process has brought them to wonder how the contents of the 15th to 19th century galleries at a major museum can be reconciled with the way the materials and techniques of oil painting are presented in the 20th century textbooks.

At this point, the book has been revised and rewritten through twelve editions. But there is still one recurring source of confusion: the idea that the book is a *reference manual*. The 20th century textbooks tend to create this expectation, and, it is true that, for experienced painters, this approach may work to an extent: although, for the important differences between hand-refined and commercial linseed oil, see section 6.2.8. But, here is the nub. This book is the record of an extensive creative research project, not a mass market textbook for college students. It assumes older technique to be valuable, and recoverable to an extent. Most importantly, the focus is not just on *empirically justifiable information,* but also on the creation and maintenance of multi-dimensional *living systems* within the creative process. In terms of the potential *realms of utility* of *Living Craft* compared to a reference manual, these are major differences.

So, to avoid confusion, and the agony of lost time it often entails, I want to suggest a course of action that, after six years of correspondence with intrepid readers about the book, I feel is probably in your best interests. This is – especially if you are younger, relatively new to painting, or to the history of the search for older practice in print – to *read the book* before doing anything else with it. I know, OMG, not exactly what you had in mind. And of course, you bought it, so you're going to do exactly what you want with it.

But, if I can prevail on you to *hurry slowly*, this approach will let the book influence, perhaps even reorganize, the conception of the painting process you have almost inevitably inherited from your culture and education. And this will contribute immeasurably to the simplicity of your future experience with both the book, and with making paintings.

I am not implying that you that you have been sold a bill of goods by your culture, and its definitions of painting, education, or reality. I am simply encouraging you to read the book, then come to your own conclusions about the different definitions it presents. These are based on the reciprocity of perennialism and older practice, and, as such, may be new to you as a frame of reference. In terms of human culture, however, this approach to both life, and the art we make from it, is quite old. It has, in the largest sense, stood the test of *time*.

Acknowledgments

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Thanks to my brother, who, long ago and far away, suggested a book about the relationship between the materials and the process. Also from long ago and far away, thanks to Brave Eagle and Paddle Person.

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Into the Labyrinth

The Frame of Reference 1.1

Once upon a time, long ago, and even far away for those of us in the New World, painters had a deep understanding of their materials. This came about through a combination of training and experience, in a world both simpler and more complex than our own. In these circumstances, the complimentary routines of life and art fused naturally into a living craft. Currently, this understanding is often framed as a myth, yet the work it produced is in museums all over the world. Culturally, its existence is paradoxical: an inspiration to some, a burden to others. As painters, can we leave pride and prejudice behind, and explore older practice, artistically and technically, as a set of creative tools?

What became lost from the early craft has intrigued and plagued painters for centuries, perhaps even before Reynolds set out late in his career to emulate Rembrandt's broken style with such mixed long-term results. At this point, through a combination of research and technological advances in the analysis of older paintings, we know more than ever before about the ingredients of older technique in terms of pigments and mediums. But how these were modified and assembled, what the working methods of the painter's studio were during the long 15th to 17th century apogee of the craft, will probably always remain a mystery. Given that secrecy regarding means – the art of concealing the art – was always basic professional intent, perhaps this is just as it should be.

The craft of painting has changed greatly in the last six hundred years, especially in terms of the commercial origin of materials, and the vivid colours now readily available. But, while modern life actively encourages us to be consumers, we retain opposable thumbs and the capacity to make things, offering both a different type and quality of experience. As such, there are now two crafts: one based on purchased materials, and one based on personal materials. The purchased craft is a search for what to buy, and from which manufacturer. The handmade craft develops incrementally, often from humble beginnings. It remains physical, and begins where it always has, in a daily relationship with the materials. Pigments and oil, chalk and glue, grinding, mixing, brushing, scraping: this story is still about learning, and discovering further levels of, a series of deceptively simple procedures. Similarly, this book began with an apparently simple question: What would happen if the craft were explored once again as it had been originally: step by step, by hand? It quickly became apparent that this project could not attempt to be historically accurate and have any hope of concluding within a typical human lifespan. What I looked for instead was a creative analogy, a way to apply the principles of the older craft within a contemporary context.

Several related arguments are presented here about oil painting as a personal and vocational practice. They are addressed in relation to the quality of life: the dialogue between process and product, and are illustrated by examples from art history – the paintings – and technical art history – the research.

First, that painting is about life: the original teaching tool, both literally and conceptually, which contains, and therefore cannot be defined by, ideas. Painting from life views the mental, emotional, and physical aspects of experience as equals. Second, that a handmade craft has more to offer than a machine-made one. Third, that an experiential or heuristic approach to the materials offers more than an abstract or empirical one. Fourth, that the most functional relationship between art and craft is reciprocal, not hierarchical: they are both sides of the same coin. Fifth, that honoring the ancient contract of art in service to society has more to offer than ignoring it. This last argument goes back at least as far as Diderot's critical distinction between *le naïf* and *le théâtral,* and, by implication, to Plato's original complaint in *The Republic* that painting is merely copying, not a creative art. The philosophical and practical elements of painting are presented in separate covers now, but this has not always been the case. Practice and motivation are still enhanced when viewed as complementary aspects of a craft whose tenets are not materialist, empirical, nor intellectual, but grounded in the fundamental physical and metaphysical interdependence between craftsperson and society.

This book contains seven sections: *concepts, aspects, colour, materials, mediums and varnishes, methods,* and *systems.* The information base is threefold, or *triadic:* older practice as defined by technical art history, the craft as a creative resource, and the equal validity of both logic and intuition in the painting process. The goal is to offer an alternative to both the encyclopedia of differential description, and the grimoire of equivocal arcana, through a practical, holistic reference that documents one painter's experience in detail. Whether of technique, proportion, or innovation, the details of daily experience combine to generate a process that is both stable and lively. Modern texts on painting occur in frames of reference that are either scientific or aesthetic. The case is presented for the dynamic interaction between the art and its materials evident in the 15th–17th century heyday of the craft. Older practice is examined for what it explains about the cultural attitudes that generated it, and what this might offer painters at work today. This approach can be applied to any level of experience, by anyone whose attitude towards painting stresses the quality, rather than the tempo, of the creative process. As a frame of reference, this still provides an opportunity for the life and the work to become one.

Concepts: The concepts are based on concerted observation, which in turn produces enhanced perception, thus linking the work to life in larger terms. Learning to think in colour and form develops the relationship between the visual and verbal realms of the brain. This connects logical and intuitive problem-solving skills and includes more of each over time. The concepts organize the process, aiding intuition through the simple but endless logic of dialectic analysis. This ancient technique uses an applied awareness of opposites to create new possibilities, even a new frame of reference, through creative synthesis.

Aspects: The aspects emphasize elements of the process and the greater level of tactile or haptic awareness that is intrinsic to older painting. One expects this depth from the materials, but it begins with the way the process itself is organized.

Colour: Organization is also intrinsic to the way colour is implemented, or deployed, in older painting. This section explains how colours are arranged to evoke light and space, and the ways older painting used optical techniques to map colour to form. These methods create more perceptual colour from fewer pigments via a version of simultaneous contrast with the added dimensions of pigment optics and the way positive colour is both integrated with, and differentiated from, negative colour. Taken together, they define a triadic balance between the *vivacity* of local colour, the *unity* of an integrated light-shadow axis, and the *optical depth* of the paint itself.

Materials: The materials are principally traditional, based on the older texts on the one hand, and the findings of technical art history on the other. Modern materials such as methyl cellulose are used when they have proven to be stable and non-yellowing.

Mediums and Varnishes: This section offers choices that developed based on the findings of technical art history, made with both handmade and, in some cases, quality modern materials. The positive and potentially negative aspects of six medium types are covered – *oil, putty, egg, resin, emulsion,* and *beeswax* – along with various useful combinations.

Methods: The emphasis of the *methods* is on the 17th century, but some concepts or formulas – panels, gypsum gesso, the Strasbourg Method – are earlier. The methods developed by comparing the formulas and instructions in older texts with the findings of modern conservation research. Technical art history has shown that the older texts themselves are most often compilations, the work of scribes, not painters, containing a complex assortment of useful and unlikely information. The dedicated technical publications from London's National Gallery and Tate Gallery proved to be a reliable filter for the older texts. The consistent message of informed simplicity from these findings effectively sliced through the Gordian Knot of the literary trail, establishing the basis of the older system as *simplicity, ingenuity,* and *expediency,* derived from cumulative experience, and practiced in the service of *longevity.* For the craftsperson working to secure a livelihood in a cultured, but highly competitive context, this approach functioned both as advertising, and insurance.

Systems: The *systems* are both technical, based on a specific approach to the materials and methods, and historical, based on sets of materials and methods that were tailored to a certain style at a given period.

Purpose: This book explores the relationship between the creative and the practical poles of oil painting, documenting one painter's search for greater awareness in relative detail. Its materials and techniques are not presented as historical reenactments, nor as definitive; it is simply a record of what worked for one interested party, me, and why. The purpose has been to explore the original partnership with the craft in a way that can be functional and expedient now. This bond occurred naturally during the 15th–17th century flowering of the craft, and there is no reason why it cannot happen again. The reader is gently urged to consider the potential of the materials when addressed on their own terms. Overarching attention to detail is both the literal foundation of the universe, and the functional basis of any creative process. Once observed, these details accumulate to form natural systems whose components are logical, yet unfathomable otherwise. Entering into a dialogue with the materials incrementally, from the inside out, produces far reaching results for the life, the work, and their unique partnership at the easel.

In Plain Sight 2.3

We develop a visual shorthand as we navigate through life, but to paint life we need to look more closely. One would think this would be boring, but an interesting phenomenon occurs: the greater the search, the deeper the perception. At first the mind rebels: "Why are we staring at this apple?" But once the mind relinquishes its condensed version of the visual, this first level is quickly past: "Oh, because actually we know very little about this apple." Trust quickly brings further levels to explore. Looking out, or looking in, there is always more to see.

Imagine the simple process of drawing the apple from life with a pencil. At first the outline is drawn lightly, then the process of correction begins. Why? Because it is not quite right. This may be frustrating, but provides the energy to go further. Bit by bit, the outline gets better; the errors provide clues to their solution. Bit by bit, more of the subtleties and intricacies of the form fall into place. It is essentially round, but not like a circle is round; there's more. But is any place actually flat? No. Are there any concave places? Oh, yes. How can a single contour be so articulate?

This is the beginning of nature's great lesson. The visual world contains tremendous built-in complexity that we tend to take for granted. In our day to day life, we are in fact often involved in attempts to create an alternate world, instead of exploring the one we just may inhabit for a reason. To the extent that we are willing to slow down, and look more closely, nature reveals more about both its structure and meaning. Nature's gentle but inherent profundity is not available to someone in a hurry; an apple, in this case, is just an apple, preferred as a snack or not. This attitude may be necessary in daily life, but is it useful for art? The answer depends on how art is defined: as an initial or spontaneous response, or one that is achieved through study over time. Matisse made apples that are flat, Cezanne made them out of planes, Chardin made them dimensional without copying them pixel by pixel, Magritte made them with an eerie perfection that questioned the concept of reality itself. These approaches to the pictoral apple are all different, yet succeed on their own terms as transformations: the viewer knows that the painted apple is, and isn't, the actual apple; that this paradox is intrinsic to painting. Reconciliation between the philosophical and the practical point of view may be complex in larger terms, but it is necessary within the context of style. Each painter approaches this individually, yet the created world is so detailed that to comprehend something as basic as the outline of an apple, it is necessary to pay attention in a different way. The fact that the things we see are more than their mundane identity has been a staple of painting since antiquity, possibly originating in the Platonic concept of the visible world as a material projection of the invisible world. Delacroix (10-17-53) refers to depicted forms as a hieroglyphic language, leading the viewer to deeper levels of meaning. Yet, meaning is optional; the painter's intention may not be apparent to the viewer. Painters have complained about this, but it is only fair that the viewer also exercise perception that is personal. Accepting the validity of all types of seeing – from the casual to the committed – develops an interpretive tension between the surface and what is, or is not, beneath it. When does an image have meaning, a coherent message? Is it ever simply a document? We may disagree, even strongly, but over time, this tension serves to refine our process of communication.

Exploring seeing actively, as a process rather than a given, leads to the paradox of more being created from less. When we put a hold on temporal activity, our consciousness stops ranging around on the surface and begins to settle down. As it settles, it naturally goes deeper. How deep does it go? There are plateaus, but then, as in quantum mechanics, a sudden shift occurs leading somewhere new: the apple of an hour ago is not the apple of the present moment. The observational skills necessary to paint something as deceptively simple as an apple can be a great exercise in developing patience; in both searching, and waiting, for the next level. When is it merely rendition? At what point does it become art? Does this transition occur through more complexity, more simplicity, or the interaction of both?

A fascinating reciprocity comes into play, an awareness of the relativity or unreliability of perception itself. The object changes, but so, necessarily, does the observer. The apple is "merely" an object, but concentrating on it allows it to function as a gateway to further awareness. What appears to be an act of mimesis becomes a dialogue of mutual transformation. The observer moves beyond the confines of imitation or symbology to a realm where microcosm and macrocosm interact in the moment. Once this is experienced, a quantum change takes place. Nothing can be perceived as "the same" again, because the concept of identity has been shown to exist in flux. As a result of focused attention, of looking deeply instead of broadly, seeing has become evolving.

The less we take the act of seeing for granted, the more we can consider questions that shed light on its inscrutable weave of fact and mystery; the warp and weft of what can and cannot be known. If we conceptualize the apple as an object, it remains one. No matter how well painted, a larger visual narrative is unavailable. If we conceptualize the apple as a vehicle, there is no telling where it can take us. This turns the craft of depiction into the art of transformation, and is the foundation of the creative process in representation. The goal is to determine what wants to happen *now.* This means balancing the known – experience – with the unknown – exploration. The structure of the past is altered by the search for expansion into the future. This is the consistent message of the present moment. The energy of the moment allows the process to grow into its next frame of reference and sense of fruition. The structure experiences not replication, but rebirth. The key is the enthusiasm, the emotional relevance, established by what wants to happen in the moment, allowing the craft to serve the art.

Colour

An Unruly Lexicon 4.1

Colour as a language is at once articulate and inscrutable. A similar basis on wavelength and tonal relationships makes for interesting comparisons with music, but there are no discrete scales or specific notes in colour that simplify the situation: colour in paint is in a constant state of flux. Its limitless possibilities make colour exciting, but not necessarily peaceful. With colour, there can always be more, but, as is the case with words, it is not a matter of knowing them all, but of being able to assemble a natural vocabulary in an inspired sequence.

At this point, tension often exists between colour for its own sake, and colour as an aspect of the painting process. Early in *The Interaction of Color* (1963), Albers states that paint is too complex a tool for the study of colour. Conceptual colour and its physical vehicle can certainly be dealt with as different things, but, for painters, they act as one in paint. Wehlte suggests that the study of colour, like that of drawing, occur separately, and prior to work with paint. This would allow the inevitable fascination with colour as a *Ding an sich* to develop on its own terms. After a period of experimental freedom, working with a basic selection of traditional pigments is more likely to provide a sense of direction, rather than limitation.

We are typically educated with an emphasis on the efficiency of linear thought, and this is mirrored in the flat color of much 20th century painting: this is as linear as colour gets. But, conceptually and in nature, colour is purely multi-dimensional. Planar colour can certainly be artistic, but does not exist in nature. Which makes the planar approach complex: on the one hand, a search for the abstract basis of colour as a universal language, on the other, a rejection of the way colour occurs within the universe of our common experience.

Because colour is so related to feeling, it is most often used intuitively: painters develop a personal method of altering or condensing colour, a chromatic shorthand. In realism this works up to a point, which is defined by both the period and the imperatives of the style. Convincing natural colour involves fine tuning value and temperature within the light-shadow axis when mapping colour to form. More realistic rendering is typically paired with more realistic colour, but neither of these may be necessary: a great deal of art has been made with strong shapes and simple colour. To use colour intuitively and creatively, it must first be harnessed to, or filtered through, the system established by the logic of light. Colour can be creative within this logic, but is unreliable, or, at best, difficult to develop further as an aspect of style, without it.

We can turn to the scientific study of colour for guidance, but this is not based on the physical behavior of pigments. Modern colour models are three-dimensional solids that take value and chroma into account, but do not address the degree of transparence, the chromatic complexity introduced by layering, or the all-important way colours – especially colours of different types, or contrasting temperatures – *interact.* Any model is also relatively abstract compared to the living quality of colour when it is embodied as paint. Colour knowledge can be helpful, but pigment awareness leads to colour instinct – an aesthetic feeling of colour in paint – which is more useful in practice.

In realistic painting, colour is used to create a consistent illusion of three-dimensions on a flat surface. This means arranging colours to appear to be in different planes – to advance or recede – through mapping colour to form by type. Colour has a structure whose study makes it easier to comprehend. A given colour has:

- A *value* from light to dark
- A *temperature* from warm to cool
- A *chroma* from dull to vivid
- A degree of *transparence, translucence,* or *opacity*
- A *level* in the order of the paint layers
- A specific type:
    - *Hues* are made from colours alone
    - *Tints* contain white
    - *Shades* contain black
    - *Tones* contain gray

The endless potential of colour can be likened to the dizzying number of words in a dictionary. But realism needs an arrangement of colour that is literally or figuratively accurate, and this is like choosing certain words to tell a specific story in the way that feels best. This means exploring colour within the light and shadow axis, as well as the air quality, of a specific place and time. The goal is to integrate chromatic variety with value, temperature, atmospheric recession, and midtone vivacity, so the painting reads as a unified whole.

Given the primal appeal of colour, the variety of pigments available now is a mixed blessing. Even as late as the 19th century, the permanent pigments beyond the earth colours numbered less than two dozen. Manufacturers gleefully put out a confusing number of colours; information about which to choose for the palette is contradictory. Paint nomenclature remains a disorganized *mélange* of actual, historical, and alluring names for which there are loose traditions but no rules. Under these circumstances, the harried painter is apt to substitute a variety of scintillating pigments for the art of colour mixing. This can easily lead to paintings with *Chromatic Anxiety Disorder:* too many pigments without enough relationship between them. When this occurs, we are not using, but being used by, colour. Relentless vivacity is wearying to the eye, just as relentless *fortissimo* is wearying to the ear. In nature, vivacity is selective, balanced by the neutrality of reflections and the unity provided by the atmospheric envelope. Finely tuned colour dynamics can be an important aspect of the painting as a work of art.

To create harmony, or the sense of a specific place and time, a limited palette is an asset. This sets up a natural emphasis on colour mixing technique, and the balanced colour relationships found in nature. Well-known colours can be seen as *boring,* but prosaic colour on the palette does not mean prosaic colour on the painting itself, because *the perception of any colour is always determined by its context.* We think of cadmium red light as a certain colour, but when it is surrounded by blue, orange, white, or gray, it appears different in each case. This introduces an important paradox. On the one hand, cadmium red light *does exist* as a specific bright red-orange hue, but on the other hand, *no colour is absolute,* either in a painting, or in life. The actual chroma of a colour may be less, or more, than its perceived chroma, according to the colours it is reacting with. And colours are constantly reacting with one another, this is what they do. As such, colours are tuned to create more or less perceived chroma, to advance or recede to a given degree. Creating a convincing illusion of light and space is a matter of mixing colour within the key of a given light-shadow axis. Because colour is so sensitive to context, mixing technique is the most effective tool for creating unique colour, allowing the development of a unique set of contexts or relationships. Without using contrasting temperatures to establish the colour in context, a tendency to substitute chroma and energy for accuracy occurs. This approach typically involves great sincerity and heroic gnashing of teeth, but is not consistent, nor replicable, because it ignores the logic of light as the immutable foundation of colour relationships. Lively execution is often desirable, getting in touch with one's creative subconscious is great, but neither of these can alter the physics of the planet. Alla prima techniques featuring spontaneous or reactive mixing emphasize a strictly limited palette for precisely this reason. Mixing colour has many levels; a limited palette facilitates finding evolved ones because these exist *within* the sphere defined by the axes of red, yellow, and blue. To make convincing colour, it is important to both *see* it, and *envision* it. A method of sequencing the transition from the colour we *observe,* to the colour we *mix,* provides the *organization* that enables *inspiration* to be transcribed with clarity. Without this animating tension, we are either copying, or guessing.

The one hundred and forty-seven tubes on display at the store give the impression that all this choice is crucial. But this is not true. We only need to be concerned conceptually with the primaries: red, yellow, and blue. Each primary comes in two types: warm and cool. In the daylight palette, in addition to white and possibly black, there are six basic positions to consider: warm and cool versions of each primary. These positions don't all have to be filled: a painting can be made with a triad of three primaries and white. Many older paintings were made with a limited palette to concentrate on the advanced depiction of value and temperature that establishes a given visual-emotional mood. As such, when constructing a light oriented palette, it is important to first chose what is necessary, not what feels new or provocative. Observing the progress of successful colourists such as Bonnard or Matisse, we see that adventurous colour comes after learning to depict light and form. Painting light convincingly is not enhanced by colour variety, nor by colour identity, but by the accuracy and harmony of colour relationship within the value structure. These must be finely tuned to feel natural and are far easier to access with fewer colours and mixing based on value and temperature – the logic of light – than with more colours and mixing based on guesswork. As with any practice, guesswork develops over time, but guesswork is unnecessary, and tends to bind colour to a reliable but repetitive formula. Colour mixing is often subjected to rules, such as "never mix more than three colours together." This particular guideline is functional up to a point, but it is more useful to say that mixing more than three colours together can achieve great subtlety, but the value and temperature shifts of the colour key in question need to be well tuned in order to keep the adjacent colours in the same key. Like training wheels on a bicycle, guidelines can be helpful for learning, but eventually get in the way of the potential of the vehicle. The precision of realistic colour is such that a system for organizing value and temperature shifts is necessary. Painters have worked this way for centuries, and there are specific patterns, and accepted conventions, from which to learn the art of dimensional mapping. In Western art history, the coordination of value and temperature to create the illusion of space is at first relatively formulaic, but becomes more subtle and creative, over time. The varieties of 20th century colourist realism all use different iterations of this principle. The eye accepts tremendous license from colour as long as the basic logic of the light-shadow axis is consistent, as it is in nature.

Colours clearly have meaning, but these are hard to pin down. Is that an angry, or a joyous red? A sad or hopeful blue? A cringing or affirmative yellow? Colours have sometimes had a specific symbology in a given culture, yet this has often altered over time. How is meaning changed by shape or context, when many colours are arranged together? The power of colour is its existence as a language, but in a realm beyond words: it simply *acts* on consciousness. And, though we are unified in our response to colour, these responses are necessarily diverse.

The complex relationship between colour, feeling, and meaning makes colour selection largely intuitive. This evolves over time; a certain colour may feel predictable, then feel crucial, or vice-versa. Shifts here are often unconscious. Is the palette too bright or dull? Discovering the current "right" colour or colour combination is a relief: work can proceed in the appropriate emotional key once again.

Conversely, certain colours may feel intrinsically wrong. In her diaries, Virginia Woolf recounts Roger Fry's sudden pronouncement one day while painting in southern France that yellow-green is not an artistic colour, and the ensuing arch debate with her sister, the painter Vanessa Bell. Because all colours are, in the largest sense, created equal, exploring areas of colour which have been unconsciously edited out, or actively dismissed, can be intriguing. Are our inclinations highly refined, or prejudices in disguise? A given colour may not be seen, but this doesn't mean it isn't there: the chromatic frame of reference of a time and place can be difficult to see when existing within it.

The intensity of our reaction to colour is modeled on the evolved way colour is used in nature. Analogously, older paintings often exhibit great sensitivity and finesse in the way colour dynamics direct the eye. The power of colour is always exercised within the logic of light. Examining colour through the system of nature allows value and temperature relationships to be fine-tuned with an element of natural creativity. Yet, just as painting is more than drawing, it is more than colour.

A Craft of One's Own 5.3

While art history demonstrates the technical and artistic potential of the craft, in practice it may take trial and error, and evolution in proportional thought, to get a personal system underway. In this situation, not only is there is no substitute for experience, there is no substitute for *cumulative* experience. Each experience leads to a reassessment, sometimes small, sometimes large. These can take time to understand fully, but then lead to the next version of the system. When a painting is constructed with harmonious proportions – a process with both inner and outer dimensions – the result has both beauty and strength. Proportional harmony is involved in three major areas: the colour, the composition, and the materials themselves. The first two areas are always focal, but the last area has remained relatively obscure, even mysterious, in print or the classroom.

The key to creativity in the physical structure of the work is to develop a synergistic partnership with the materials. It is important not to rush to produce quality in quantity: haste can force the process into repetition and is also at the core of many historic technical issues. Quality occurs efficiently once the materials are understood, but this approach contains dimensions that have been edited out of not only the modern craft, but out of modern life as well.

Growing awareness of the craft has made raw materials more readily available. When purchasing, it is best to temper enthusiasm with consideration. Outside the confines of commercial products, new possibilities can lead to materials being generated without an organized or systematic method. This may not lead to disaster, but it can lead to serial conundrums about what happened, and why. The absence of a system makes these difficult to unravel or interpret, potentially inhibiting progress. Ironically, an overactive search for answers can in fact interfere with finding them. Proceeding methodically solves this problem, with the bonus of encouraging experience with known materials to become deeper. Once it becomes clear that a formula doesn't necessarily need new ingredients, but always has more to offer by *adjusting its proportions,* breadth is naturally subordinated to depth.

Attention to the process reveals further levels or dimensions. These appear because the craft occurs in a matrix of axes where decisions are constantly evolving in relation to one another. The fact that craftsmanship can appear natural, yet verge on the miraculous, is a cornerstone of older technique. *What* a given older painter used receives a great deal of attention, but *how* the materials were processed, combined, and implemented is equally, if not more, important. It is easy to conclude the materials need to change, but the issue may actually be with the proportions, or the method. A given system contains many variables, aspects of it can be overlooked or discounted at first, then emerge as having more to offer later. This is often a matter of first thinking the answer has been found, then realizing it is only *part* of the answer.

Each department of the craft is a world. Wehlte begins with a thematic discussion of the relationship between three elements: the ground, the pigment, and the medium. Painters gravitate towards the medium, but a more logical area to explore first is the support and ground. Further work then builds on a firmer and more personal foundation. If the oil is investigated, along with its potential in handmade paint, the medium may become less crucial. Painting from the ground up tends to be simple technically because personality is built into the work at the root. Try to be patient with learning to think in the materials. Any system has its own internal logic based on the interactions between the ground, paint, medium, and brushes, but this is a matrix with four dimensions, and therefore many variables. If an approach becomes involved, look for ways to simplify it. Much time can be saved by avoiding stratagems of fiendish cunning and simply observing the practice well. Change is inevitable, and need not be actively pursued. A considered approach leads to development at a reliable pace. Leonardo had one of the most resourceful minds in all human history, yet his concerted attempts to reinvent the exacting craft of fresco were not successful, ultimately resulting in self-imposed exile from Florence.

Issues with the cavalier and mad scientist approaches to technique are well known, but enthroning caution also has drawbacks. To be alive, the craft needs to develop. Change proceeds from a balance of known and unknown, certainty and doubt. What works best is always evolving as questions generate solutions, which in turn generate new questions. As painters, we may be interested in a technical goal or finish line, but the craft is not. As a given system reaches completion it tends to morph into something new. The original concept moves halfway towards the wall incrementally for a time, but then the wall itself moves, because the approach has accrued enough information to suggest the logic of a quantum change. Allowing the process to take the lead may not be convenient at a given place and time, but this is where the energy of its momentum can always be found.

There are three basic sets of options for designing a painting system:

- Setting up the initial composition around *lines or shapes*
- Working *alla prima or in layers*
- Painting in a *smooth* or *broken* style

These choices are personal, and typically only emerge clearly over time. Experience then suggests ways to balance each choice somewhat with its opposite, providing the potential for constant incremental development.

The act of painting constitutes an endless fusion between organization and intuition. Paradoxically, this means that if we *measure carefully,* it is then possible to *paint freely.* Away from the easel, it is helpful to think in the technique, to ask what happened in order to refine what comes next. The process also suggests further avenues of enquiry. This may be as simple as "cleaner temperature shifts," or "less chalk, denser oil," but can also be about changes in the palette, the ground, or alterations in concept to be built into the drawing or underpainting. The process can be repeated to refine it, in flux to redesign it, or anywhere in between.

Mediums & Varnishes

Secrecy, Proportion, and Evolution 6.1

Commercial paint is convenient, but also features the relative uniformity of a product, making the *presto chango* potential of the medium often of great interest. Dalí eagerly details the poignant, existential quest for the perfect medium, and gives a lively illustration of possible ingredients, but records no formulas. Beginning in the late 18th century, painters occasionally concentrated on short term results using complex materials. This means the medium is an area where a great deal has gone wrong: one of Turner's paintings famously cracked within a week of leaving the studio. The 19th century contained many proprietary formulas such as Roberson's Medium, and the tradition of trade secrets continues. For 19th and 20th century texts a separate medium component is given, but the concept does not exist in De Mayerne. In entry 195, containing one of several palette illustrations, De Mayerne indicates a large blank space where the colours are mixed with *the oil:* the simplest system possible. In a letter written early in the 19th century, Constable warns against period "nostrums" in favor of linseed oil alone [9.4.8]. Still, later in his career, Constable used poppy oil, and the sequestering triad of egg, resin, and wax [9.7.15]. Thus, even for a painter aware of the value of simplicity, technique evolved due to the complex nature of oil as a medium.

Literary detective work is often used to establish the pedigree of a material. The detective work may be sincere and painstaking, but the territory itself is quicksand. The amount of information actually written by working painters is small, and has been gone over assiduously. While scholarship has identified the occasional "impossible" recipe – *on Michaelmas eve, procure twelve scales of a yearling dragon, lute well in a new glazed pipkin,* etcetera – there are also numerous improbable recipes, especially for varnish, clearly not sourced from practice. This occurred because books made up of various craft secrets were a growth industry for centuries, often attracting "authors" who were simply collators and copyists. In this case, the identification of specific materials across centuries is sometimes obscure, and all-important details of procedure non-existent. The secrecy of guilds and working painters means that the evidence presented in these cases is at most equivocal. Even with a reliable source such as De Mayerne, a question exists about how much the mettlesome – and perhaps meddlesome – doctor was actually told. Within the craft, half the story is as effective as none, and far more polite. Rubens, for example, does not mention egg white to De Mayerne, a material increasingly thought to be part of his technique.

The consistent conservatism of older practice established by the NGTB research is logical for the artisan with a reputation to establish and protect. The degree of accomplishment in this work, and its hallowing over time, make it easy to forget that painting was most often a means to economic security in an aristocratic milieu with exacting expectations about the objects that represented it.

Medium *proportions* offer important guidelines. Ingredient amounts are prone to expansion in the studio. But this is not a situation in which the strongest sword is forged with the greatest heat. Accurate measurement and consistent medium-to-paint proportions help the process be reliable and replicable. By excluding solvent, denser and richer mediums can be used in minute amounts. Say we want five percent wax and 3 percent resin in the paint film. Note how, in *Table 2,* the proportions for Medium One is 1:2, and the proportion for Medium Two is 1:3.

Ingredient	Formula 1	1:2 in Paint	1:3 in Paint
Wax %	15	5	3.5
Resin %	10	3.3	2.5
Chalk %	30	10	7.5
Oil Mix %	45	15	11.5

Ingredient	Formula 2	1:3 in Paint	1:4 in Paint
Wax %	20	5	4
Resin %	15	3.25	3
Chalk %	25	8	5
Oil Mix %	40	10	8

Table 2: Medium to Paint Proportions

Medium Types 6.1.1

There are six basic medium types, which can also be mixed to produce more balanced or finely tuned behaviors. Which medium type works best depends on the way the style uses colour, whether the system is alla prima or indirect, and whether the surface smooth or broken. In larger terms, the medium that works best is the one that is invisible while working, allowing the most natural expression of the physical energy of the hands.

Oil Mediums

The primary instance of the medium is the oil in the paint. Paint was originally handmade with oil that was cold-pressed, and hand-refined. The oil was also probably *aged, preheated* or *thickened* to an extent in many cases.

A technical article often reports the medium as "oil." But the resourcefulness of older painters means that this can in fact be *many* different things, the majority of which are not in the 20th century texts.

Paint made with hand-refined oil allows control of both the consistency and the level of gloss of the paint. A further medium beyond oil with possibly a little beeswax or a variety of calcium carbonate on the palette is not needed. By beginning and ending with the highest quality oil, this system is arguably similar to what is often the 17th century approach. This does not mean that resins are best eliminated, but if they are implemented with an understanding of the potential of the oil, they are more likely to be used wisely.

For use in a separate medium, oil can be thickened three ways. The behaviors of these are compared in *Oil Mediums,* section 6.2. *Autoxidized* oils are thickened by exposure to air. They are the most adhesive or resinous group, especially made with SRO linseed oil. *Heat polymerized* oils thicken in response to high heat. They flow and level for smooth surface styles, and make long, sinuous lines easily with soft brushes. Oils can also be thickened in the presence of air and a metallic salt, usually lead, a process called *oxidation-saponification.* These oils have a gelatinous or syrupy quality that lends itself to elegantly condensed form.

Note: Combining heat polymerization and oxidation-saponification in the same procedure to increase drying speed easily becomes gaming with fortune and is not recommended, see *Leaded Oils,* section 6.2.5.

Putty Mediums

Another approach involves altering the paint's behavior using the putty medium derived from research into the methods of Rembrandt and Velázquez. These painters sometimes modified the paint with ground chalk or calcite, respectively; ground silica is also recorded as used in Venetian painting. Putty mediums can be made with a variety of ingredients, aid stability, and create textures from broken to smooth. They work well with lower chroma palettes and *chiaroscuro,* but may need sequestering to maintain the full brilliance of modern colour. See section 6.3.

Egg Emulsion Mediums

A third type of medium derives from the interaction of oil paint with the older egg tempera medium, incorporating a small quantity of egg – either whole, the white, or the yolk – into the paint. Beaten egg white transformed into glair was used as a medium in medieval illuminated manuscripts. Small amounts incorporated into the medium give a thixotropic paint with a certain resistance to blending and charismatic handling. The yolk is subtle compared to the white, giving a more matte look, finer discretion and more detailed handling, but is also an arresting agent, and keeps the colour brighter over time. While egg yolk ages inflexibly, and is safest on panels, the amount needed to make a difference is quite small, between two and three percent by volume. This group also includes the family of egg emulsion mediums. These mediums tend to lower surface gloss and brighten chroma. They feature the permanent, quick setting and drying, character of egg yolk, and produce semi-blendable paint in a wide range of behaviors. Egg emulsions are also for panels only. See section 6.9.1.

Other Emulsion Mediums

A fourth medium type is an emulsion made using a thickener such as starch, methyl cellulose, or hide glue as the aqueous element. These additions can be used in greater amounts to make water phase tempera on panels, or, with less water and in smaller amounts, as an oil phase emulsion to modify oil paint. Oil phase emulsions have density with pressure sensitivity and add an element of *smush* – the mashed potato effect – to the paint's rheology. See section 6.9.

Resin Mediums

A fifth type of medium makes use of resins from trees. There are many types of resin with different optical and working characteristics. Resins can be dissolved in oil via *heat,* or dissolved in *solvent*, making two basic groups. Hard resins such as amber must be dissolved by heat, making oil varnishes. Soft resins such as damar or the balsams can be dissolved with solvent to make spirit varnishes, but can also be heated into the oil. There are also resins, such as sandarac or Manila copal, that are typically dissolved with heat, but can also be dissolved in a strong solvent such as spike lavender. These materials offer damar varnish alternatives, see section 6.6.2. The NGTB research has shown that "small amounts" of resin, predominantly softer "pine resins," were used consistently, but not globally, in pre-19th century painting practice. Resins add luminosity, and help protect against drying down or sinking-in: the technical basis of their recurrence as "the lost secret," see section 6.1.6, below. The reliable way to incorporate resin is in a "small amount" to add brightness and alter paint handling, *not* as a global solution for increased saturation or bravura handling. In larger amounts, brittleness and darkening may not occur quickly, but do occur. Small additions of beeswax may mitigate this somewhat by protecting the paint film further from humidity and oxidation. See sections 6.6 and 6.7.

Beeswax Mediums

A sixth medium type uses beeswax in the paint. Wax is sequestering and the only permanently flexible material in painting, but beyond very small amounts, is not used alone because this makes a soft paint film. It is, however, highly useful with other medium ingredients, as, for example, in the various sequestering mediums based on pre-polymerized oil, damar, and beeswax. See *Beeswax,* section 6.10, and its formulas.

Mixed Medium Types

The behavior of a mixed medium is often complex in terms of its working characteristics. Balancing the behavior of disparate ingredients allows these mediums to do unlikely things, but this process can be deceptive. If, for example, a medium is made from three ingredients – oil, chalk, and egg white – it appears that there are three axes of behavior to consider. But the character of the oil provides an important fourth axis. Refining procedure, age, and type of polymerization are all factors. The effect of autoxidized hand-refined oil, for example, is much different than heat-polymerized oils such as stand oil or burnt plate oil.

Medium Characteristics 6.1.2

The medium's job is to enable natural painting in the chosen style. The basic issue is how to balance the paint's movement with how much it stays put. Is loose paint better, with plenty of *glide,* or should it have more hold, or *grab?* Grab can be increased until the paint no longer moves freely, and the technique becomes broken. Increased grab also introduces more potential for texture. Is this interesting, or frustrating? Should layering be possible wet-in-wet, a working balance of grab and glide? Or is the seamless, even elegant blending of a single layer more important? Can grab and glide be engineered for both possibilities in one system?

At first, answers to these questions are not made, but just happen. Over time, answers develop a pattern. At one extreme the paint is facile, mobile, and ever-blendable in one layer. This is a natural function of commercial paint, or a medium of thin oil on a non-absorbent ground. At the other extreme, the paint sets firmly in discrete pieces, the technique is incremental, the surface is broken. This is a function of paint handmade with aged oil, or a medium with thicker hand-refined oil, an arresting agent, an absorbent ground, or combinations thereof. Between these poles *many* possibilities exist. Any medium has a *zone of functional viscosity,* which varies, slightly to largely, with the ground and the brushes. This is also a function of temperature, colder temperatures typically making mediums denser. Formulating a medium is about adjusting its physical characteristics. These include the proportion of grab and glide the medium gives the paint, and the influence of the physical depth – thickness or thinness – of the paint.

The elements of pressure and timing can also come into play. When working wet-in-wet, pressure tends to decrease as the depth of paint increases, a case where firm pressure with a clean brush can result in blending, ploughing, or removal. With some medium types, the brushstrokes remain *discrete* if placed, but can be *blended,* allowing a möbius of wet-in-wet options. Open time is extended with materials that dry slowly. Using solvent or materials that set, open time becomes another form of pressure. Finally, the medium can enhance or diminish saturation. Options abound, and are best explored slowly, adjusting the system incrementally, and writing changes down for future reference.

Grab

There are three types of grab: one related to stickiness, one to thixotropy, and one to density. Resins increase grab; soft resin spirit varnishes in a sticky way, hard resin oil varnishes in a thixotropic way. Autoxidized oils such as sun oil and studio oil increase grab with moderate stickiness. Of the commercial thicker oils, only triple boiled oil increases grab. Chalk, calcite or marble dust, and fine silica (quartz, flint, cristobalite) increase grab through increased density. Wax increases grab in a cooler studio. Small additions of egg increase grab, although not as much as hard resin varnish. Small amounts of water-based additions – starch gel, hide glue, methyl cellulose – add a gentle grab. Grab contributes to the ability of the brushstroke to remain specific, and hold a firm edge. Enough grab makes layering and broken surfaces possible. Enhancing the grab of the medium can become focal in smaller scale work, where a flowing paint may be detrimental to appropriate detail. Grab can be increased globally by using an absorbent ground. Yet too much grab can mean difficulty in blending, or even in application.

Glide

Thin or heat-bodied oils increase glide, as does solvent briefly. A fumed silica gel increases the glide of a thicker paint film. Bone ash makes a medium more slippery or mobile. Of the thicker oils, small additions of unsun oil, stand oil or burnt plate oil increase glide. These oils are leveling, to the point of possibly melting in larger amounts. Glide with studio or sun oil is sticky; aged oil has more glide regardless of density. Glide tends to be more focal in larger scale work, increasing the overall sense of organic movement and finesse. Glide is influenced by many physical factors: a putty made with calcite has more glide than a putty made with chalk unless the oil involved is preheated or aged. Wax increases glide in a warmer studio. Soft brushes require more glide than firmer ones. Glide can be enhanced globally by a non-absorbent ground. Glide enhances blending and facility, but too much glide can lead to lack of cohesion.

Rheology

The rheology of the paint is the sum of its physical working characteristics, how it flows from the brush. Paint can be thick or thin, mobile or adhesive, long (elastic) or short (buttery!), leveling and blendable, or quick setting and tending towards impasto. These qualities typically moderate one another when ingredients are combined, and unusually balanced combinations are possible. The rheology of handmade paint is more sensitive to traditional modifiers than that of commercial paint.

Thixotropy

A paint is called thixotropic if it is gelatinous but mobile, and sets again after being moved. Scientifically, the fluid exhibits increased viscosity at rest, but decreased viscosity under shear stress. This means thixotropic paint is adhesive, with elasticity in motion, and forms low relief. This condition requires a specific combination of grab, glide, and viscosity, and is typically achieved by a physical, rather than chemical, reaction between the materials involved. Paint handmade with hand-refined linseed oil is inherently somewhat thixotropic, more so with aged oil. A small addition of hard resin varnish, elastic oil, traditional burnt plate oil, thicker hand-refined studio or sun oil, or ecks makes even commercial paint thixotropic, as does the silica gel, the use of a chalk putty medium, a small addition of egg yolk, or many emulsion mediums. The oils and varnishes are more elastic, the emulsion approach tend to be shorter and tighter. These characteristics can be balanced various ways in the medium itself.

Depth

The behavior of the system can change significantly based on the amount of paint that has been put on wet-in-wet. Once the ground has been covered, more or less movement may become progressively possible with the same paint depending on how much the paint beneath it has set. Does paint go *into* paint, *over* paint, or can it do both depending on the brushes and pressure? Experience with a specific system allows finely tuned layering situations as the painting progresses based on how pressure is used relative to depth. A useful paint viscosity for alla prima or completion is one that is layerable with soft brushes, but can also be moved or ploughed with bristle brushes. This develops confident handling as the work can be adjusted by the opposite procedures of adding or subtracting paint.

Timing and Set

Mediums can be formulated to rely on timing for various painterly effects. Operations proceed according to a schedule as the medium sets progressively. Timing becomes focal when using a quick setting soft resin with solvent as a medium or couch, or when involved in an extended alla prima system where the painting is finished in stages over several days. Timing is also related to depth: how much paint is put on, and how fast. The same system can produce different results when executed at different *speeds*. If working from loose to tight with a medium that becomes sticky, it is possible for the paint to set, or become tight, too quickly. Increasing the application speed results in a looser feeling again. Conversely, if slower application works better, the medium can be adjusted to increase its open time. Alla prima work is more likely to use timing than work in layers, although the final layer in an indirect painting often benefits from a medium which forces the issue somewhat, enhancing the ultimate sense of liveliness. Incremental adjustments to ingredient proportions can create procedures with a surprising synergy of opposite qualities.

Pressure

With certain mediums, the relative pressure of the brush becomes an important factor in the look of the painting. Pressure can be used at different levels to *apply* more paint, *blend* existing paint, or *plough* into previous paint. Pressure is an aspect of any additive system, but becomes focal with more thixotropic materials. Pressure is also related to brush type: softer brushes have more range of pressure than firmer ones. A soft brush ploughs smoothly, a bristle brush ploughs bluntly, with more potential for removal, or for flipping obscured colour back onto the surface. Eastlake notes this method of weaving layers of paint together inscrutably in relation to Rembrandt's later technique.

Brushes and Scale

The medium needs to be formulated for the brushes. A viscous medium may quickly destroy fine brushes. Conversely, it is difficult to apply a thin flowing medium with coarse brushes. Yet, there are also times when a slight mismatch between paint and brushes can produce interesting results. The viscosity of the paint can be adjusted to be mobile with bristle brushes, but tight or layering with softer brushes, allowing elements of both types of handling in one layer. By enabling a variety of manipulations, this offers flexibility with a single consistency of paint. The scale of the work is also a factor. A dense medium may feel lugubrious on a small painting, but unif a large one. A quick setting medium may make appropriate detail on a small painting, but create a sense of fussiness or constraint on a large one.

Saturation

Specific medium ingredients either enhance or diminish saturation. Unsaturated paint has a higher value structure, more reflective brilliance, and more emphasis on the fact of the pigment as in fresco, or tempera. Saturated paint has a deeper value structure and the potential for optical depth: the original appeal of oil as a medium. In general, paintings made with opaque or flat paint look better with low saturation, allowing the viewer to look *at* them. Conversely, paintings made with transparent pigments and *optical colour separation* (section 7.15) look better with high saturation, encouraging the viewer to look *into* them.

Pre-polymerized oil, resin varnish, and egg white all enhance saturation. Any form of stone dust, or an addition of egg yolk, starch gel, or beeswax, reduce saturation, needing an addition of thick oil to dry with a gloss. A *conditioning medium* (section 6.8) sets up the working behavior and the surface quality desired globally, before the work begins. This can be as simple as mixing a small amount of pre-polymerized oil into the paint for more density, movement, and saturation. An alla prima medium can be quite saturating. But for indirect painting, it is important to reserve saturation for later layers, and follow the *fat over lean principle* (section 7.2). In layers, the medium must be progressively richer or fatter to maintain saturation as the layers proceed. Because this cannot go on indefinitely without producing paint that looks unctuous, or is difficult to control, this means a lean underpainting, and adding thick oil in relatively small increments as the layers proceed. A series of saturated layers can be made on panel without issue using a conditioning medium made with thicker oil if the layers are kept thin and the preceding layer is *ground back* (section 6.11) to remove the shine prior to the next layer. Dependence on increased resin to make fine saturated layers is best avoided as these layers are prone to long-term darkening and delamination. A traditional glossy surface is most reliably achieved by a saturated final layer. There is then no potential that varnish may alter the value scale, and the varnish will be *on,* not *in,* the paint.

Construction and Exploration 6.1.3

Technical art history shows us that, after an early period with more tempera grassa work, materials such as resin or egg were used occasionally in older painting, but that the oil itself was always the most prevalent ingredient in the paint film. While, especially on panels, percentages of stone dust and egg can be larger, resin is best kept minimal. A safe amount is less than ten percent of the medium volume for soft resin varnish or a balsam, less than five percent for hard resins. Hard (cooked oil) resin varnish may protect the paint film more than a soft (spirit) resin varnish, but has the potential to darken more over time.

It is helpful to make up small amounts of a new medium, using measuring spoons and temporary containers such as spare jar lids, recording the formula for future reference. This allows adjustments to a formula to be made incrementally. If the first formula is made in a larger amount, serial adjustments can make the results difficult to replicate. The small amount also safeguards stocks of expensive materials, or those whose creation takes time. If using solvent, it helps ensure that the mixture is fresh, rather than exposed to oxygen over long periods in a half full bottle.

Underpaintings are lean and matte to enhance the adhesion of future layers. If used at all, the medium is leaner in the opening layers. The medium can be used more, or enriched, in the final layers, or in an alla prima painting, completed in a single layer. For indirect work in layers, it is important to develop a system: the medium cannot become richer *ad infinitum.* Using quality oil, a rich medium may remain technically sound, but can cause distracting, "encased" saturation and beading in subsequent layers unless the surface is ground back: not hard on panels but arduous on stretched canvas. Maintain paint film consistency from layer to layer by using *the same medium type* throughout the painting in oil. Research has shown the spot use of different additions or underlayer treatments to often cause difficulties with paint film integrity over time. The consequences of searching for Old Master type techniques with materials that ultimately frustrate the original aim are detailed variously in PRPT, and in conservation discussions of Turner or late Reynolds paintings [9.1.28 &9.7.5], illustrating that the craft is most stable when applied at the root of the process, rather than woven into the branches.

In developing the medium, complexity can be tempting for painters of a curious or experimental temperament. Yet there is no Alchemists Anonymous to turn to for support, so activities of the inner alembic may need to be reconsidered. Can the same effect can be achieved by a simpler approach featuring more finely tuned proportions? In most cases, yes.

Implementing the Medium 6.1.4

Mediums have been introduced to the paint in three different ways. While dipping from a palette cup is often considered standard, this method needs to be used with awareness of its potential issues.

Dipping

When dipping from a palette cup, the medium is blended with the paint on the palette as the paint is mixed. A standard method uses a double palette cup, one for solvent, one for the medium. This could also hold thin oil and thicker oil, oil and a liquid putty, oil and chalk, and so on. Dipping began when paint was handmade and dense, and the medium was high quality oil alone. It is a convenient method for an arm-held palette, but, with certain mediums, notably the 20th century workhorse of turpentine, stand oil, and damar varnish, can result in a layer that dries with an uneven gloss. This means the internal tension of the paint layer is also uneven, which, in extreme cases, on stretched canvas, can cause cracking. The dipping method also makes it easy to use too much medium, especially for painters with prior watercolour experience. Dipping is a given component in modern practice, but is a method to either avoid, or use with awareness of its issues. The more stable the oil or medium is, the less likely these are to occur. A small amount of slightly pre-polymerized oil added via dipping, perhaps the original method, does not cause problems.

Conditioning

Egg, emulsion, resin, or rich alla prima mediums are best implemented by conditioning. In this approach, the same amount of medium is premixed with each colour on the palette before painting, for example, 1 part medium to 3 parts paint. This is typically done with a thicker medium but can also be done using small jar or bottle caps attached to the palette to hold a thin paint-medium mixture. Conditioning offers less procedure, and assures that the paint is all modified to the same degree, therefore drying with an even film tension and the same overall level of gloss. This also means that consistent saturation can be achieved for an alla prima or final layer. Premixing is the method of the *Conditioning Mediums*, (section 6.8).

Couching

In the couching method a very thin layer of medium is applied evenly to the painting before beginning. This can create either more facile or more articulated paint, depending on whether the couch has more grab or glide, and also on its degree of set. Couching can be done over a drawing or underpainting for alla prima work, or used as a finishing technique. The repeated use of a couch is not recommended unless it is thin and stable, really only practical on panels with an aged, hand-refined oil. The generous "oiling out" procedure sometimes encountered is not recommended on stretched canvas, this is best done as thinly as possible even using quality oil. Solvent can be helpful in this case although the amount of surface area involved makes significant ventilation imperative.

Different types and viscosities of medium result in a variety of effects as couches. A couch with more grab means an additive or broken surface, while a couch with more glide means a mobile or facile look. There are many paintings in the 17th century that may have begun or been finished with a thin but gelatinous oil layer to create an overall sense of unity. In such cases, the paint exhibits a similar, dense but flowing viscosity, with characteristic tightening and increase in detail in focal areas such as the sitter's face or hands. This effect can also be achieved by using a flowing paint or oil to begin, then using chalk to tighten wet-in-wet.

As a technique, the couch *depends* on high quality oil. The technique is often deprecated in 20th century texts: a couch made with the typical hot-pressed linseed oil of the period would invite certain darkening and possibly cracking. On stretched canvas the couch must be thin and can be applied with a rag, on panels thicker oils can be applied thinly with fingertips. It is easier to put thin and even couch layers on a panel. For layered work, employ the couch later in the progress of the painting, keep it as thin as possible, and use a non-yellowing medium. Richer or more technically adventurous couches can be used in expressive alla prima work, see *Couch Methods,* (section 7.14).

Methods

Animation and Organization 7.1

Beyond professional portraiture and urban murals, relatively few paintings are any longer commissioned, or requested: most work is made because the painter wants or needs to make it. Given this relatively primal impetus – the physical generation of a personal myth – it is helpful if creative questions are balanced by a logical method. This is similar to packing carefully before venturing into the wilderness. The creative unknown presents sufficient challenges; further gambling regarding preparedness is unnecessary. The intuitive aspect of painting functions in the present moment, often altering the best-laid plans. Barring a pixel by pixel approach, little danger exists of the process becoming too organized. To be creative, execution must be intuitive. A consistent method encourages the process to evolve within it. When the process has certainty, more can be ventured with confidence.

Variations in method are endless, but are derived from two basic approaches, direct and indirect. The direct or *alla prima* approach typically places *animation* first, adding just enough organization to balance it again. The *indirect* or layered approach places *organization* first, adding meaning and intuition as the painting progresses. Both have been used to produce great painting, but both are more functional when their potential limi-tations are recognized, and factored into the system. The typical drawback of the direct approach is that the painting may not achieve enough func-tional balance in the time frame allotted. Usually this is about organization being submerged by the energy of the approach: the painting is charismatic up to a point, but unresolved, sound and fury have triumphed over significance. Conversely, the detachment of the indirect approach may simply exclude liveliness, period. In this case, organization overwhelms vivacity. Great prowess may be demonstrated, but the viewer is being lectured, rather than engaged.

Indirect painting has two basic systems. The early method uses democratic or panoptical detail, resulting in a tension between deep space and the way the overall detail tends to flatten spatial depth, as well as a tension between the stillness of the figures and the relative busyness of the composition. The later method features less formality, more selectivity, atmospheric emphasis, and the introduction of various types of psychological mood.

Following the procedure of egg tempera, the early method involved a series of exacting operations designed to produce a formally perfect object. All compositional elements were established first through a detailed drawing, followed by a complete monochrome underpainting, followed by thin, discrete layers that conform to the pattern of the drawing exactly. This is the method of most oil painting of the 15th and 16th century. Later, executed in different pigments, and often more broadly, it is also the approach of the various European Academies, of Ingres, Leighton, Alma-Tadema, and of much recent neo-academic realism.

The later indirect method may have evolved because the earlier method was so time consuming, perhaps also because it tended to produce images that, though polished and well-rendered, were relatively static. The alternate appearance of the "snapshot" approach seen in so much 17th century painting was seemingly casual, but highly engineered, based on both visual logic and working efficiency. Painting evolved out of a timeless or frozen perfection, into a livelier version of finished that emphasized the present moment: both within the painting, and for the viewer. Painters realized that it was only necessary to make the detail once – at the end – and developed a method of working from larger compositional shapes to smaller ones. Sometimes this was done in increments, at other times as much as possible was accomplished in one sitting before beginning again. This led to a procedure so condensed that it was possible to complete complex work, or sections of complex work, in a single sitting: the direct, or alla prima style. This type of painting embraces experience, assurance, and physical engagement to create art, rather than a methodical campaign organized in stages.

Either method involves personal adjustments to the paint, and how it is applied. In this situation, daily involvement with materials informs and enriches the work. Planning and theory have a place, but execution must be natural. The system creates itself intuitively via experience, but what this means often evolves, or even changes considerably, over time.