

ISSUES IN IDENTIFICATION AND THE AUTHENTICITY OF ARTIST'S SIGNATURES

For today's appraiser or researcher of collectibles, sculpture, antiquities, paintings and other objects of art, one of the most daunting tasks can be settling issues of authenticity. A question of which can lead its pursuer into a myriad of possibilities.

Such an exploration will undoubtedly involve the implementation and service of academic study, expert opinion and various modern methods of scientific analysis in its efforts to detect the mysteries and clues left through the distance of time or imbedded by a crafted forger.

To assist the informed or uninformed there exists many painstaking volumes of research and historical data that outline in detail, the characteristic changes that can occur to art and artefacts throughout the evolution of their existence, by both natural and unnatural means. In regards to the latter, one is often faced with issues of intent to deceive.

The allure of forgery is primarily motivated by the prospect of financial gain. True, that there have been those artists of fraud and trickery who have intentionally simulated in whole or in part, an object for the pleasure of mocking scientific identification or scholarly endeavour, but they are far and few between.

Notwithstanding the need for modern identification methods and a sound approach in investigating art and artefacts through the investigation of stylistic, historical and scientific analysis, the researcher must always consider the situation in which the object is being presented to deceive.

As with any counterfeit, the art and artefact forger's number one priority after creating their fictitious wares is the point of market entry. That is to say, where can they present their works that permits the least amount of scrutiny by the more curious, within an environment that will turn over maximum profit, before the deception is uncovered, if at all.

Here several key factors come into play, any one of which could determine the difference between a successful outcome or a poor one with lasting consequences for either the forger or the researcher or perhaps both.

First, consideration is given to the type of forgery being presented, is it the complete fabrication and construction of an object in all its parts and wears or is it a matter of alteration by means of additions or deletions?

Second, the complexity and the cost of the material to be worked must be considered. If the forger is to completely replicate or create anew, an object which must by its components or function, be unique as in one or have something in common with many, while adhering to a particular genre, movement or moment in time, then the imitator must possess a much deeper understanding of craftsmanship, artistic technique and material technical knowledge.

Third, is the objective of the forger in making the counterfeit in the first place. There has to be an ends to the means. Will it be a smaller profit gained through the fabrication of an unimportant object, entered into a poorly scrutinized and mostly uncontrolled marketplace? Or will it be for maximum profit through the fabrication of a more important object, employing the highest level of skill and entered into a higher, more critically scrutinized and controlled environment?

The second and third factors are the core derivatives spawned from the forger's decision made in the first. And with either, the art, artefact and collectibles world, despite striking advances in the detection of deception and learned research, still finds itself hard pressed to reduce the proliferation of rudimentary forgeries into the marketplace. This is not to be critical, but to be served as notice that there are limitations when standard historical or stylistic approaches are solely taken without the benefit of sound scientific detective work. Attempts to answer authenticity questions by applying any one without the other two, will more often than not, prove to be inconclusive or at its worse remain as deceptive.

In their assessment of the above, the forger will give foremost consideration towards the level of inspection that the object will receive once it leaves their care and control. At the less rigorous end or first line of inspection, we encounter the basic skills of the researcher or examiner. This will entail the employment of the fundamental human senses, coupled with the knowledge and experience of the individual assigned to give review. They are only limited by their immediate capabilities and skills in their objective of providing first impressions.

At the mid-level or second line of inspection, we begin to see the implementation of basic industry related equipment that will assist in a closer survey of the object at hand. This may include the use of such tools as: handheld magnifiers, direct or indirect illumination, ultraviolet examination, measuring instruments and photographic or digital capture devices, etc. Second level of inspection is limited by the degree of the examiner's knowledge, permitted time restraints, availability and functionality of in-house or field equipment and by the restricted reach of such apparatus to within the boundaries of primary surface characteristics.

The most severe level of inspection a forger's handiwork could be subjected to is that of third line inspection. At this level the full capabilities of trained examiners and researchers are brought together in a formal laboratory setting and the object in question is exposed to the rigors of controlled testing involving strict methods of scientific analysis and protocols. Such forensic examination may involve analysis such as detailed

microscopic and or scanning electron microscopy examinations, spectral analysis, infrared filtration, chemical analysis, material and property analysis, (organic and inorganic), etc. Or other tests such as those which are available through the nuclear sciences, including: neutron activation analysis, proton-induced x-ray emission, accelerator mass spectrometry, x-ray fluorescence and the like.

When the integrity of an object is put into question, the three levels of inspection should be viewed as progressive. Stylistically, an object should be studied for its place, period and purpose of origin. Historically, analysis should determine its materials and associated techniques of manufacture, both of which must be consistent with the style of the object and within its agreeable history. Scientifically, identification is made of the objects qualitative aspects in order to determine all elements or compounds found within the materials present. And measurements for quantitative analysis are taken to determine how much of the materials are present.

The advancement and pace of all examinations must always follow a predetermined path of non-destructive (unobtrusive) to destructive (obtrusive) testing, with the latter only being conducted at the third level of inspection, with the appropriate authority in place and only when necessary. It should be well borne in mind that there is an obligation to abate any examination if a point is reached whereupon any test might endanger an object by critically changing or otherwise becoming ruinous to its fundamental structure or essence. Furthermore, at any juncture the examination could come to a halt if a single point of identification determines that the object is not what it appears to be.

Given the many potential pitfalls awaiting the forger of complete works, it is no wonder that the most common type of art, artefact or collectable deception is perpetrated by the simpler method of additions and deletions.

Herewith, the forger resorts to a much more simplistic methodology of taking an object and either adding to it something that it does not have, such as by putting a known artists name to an unsigned piece. Or by removing an existing signature of an unrecognized or unimportant artist and then by replacing it with a more important or better recognized artist's signature. In either instance it is well known at all sectors of the marketplace that an anonymous work is generally considered less appealing and of a lesser value than that of a work which has been signed by its maker. Further, that a signed original is one of the first points in identification that assists the appraiser in supporting any contentions that an object is in fact an original work by that artist.

This is also true for any monograms, symbols, marks or stylistic features that are specific to individual or group wares and certain artists or craftsmen. Outside of the complete manufacture or total fabrication of an object, there are only two things that a forger can do in perpetrating the fraud and that is either add something to the object or take something away from the object, there is nothing else that can be done. The astute should also be made aware that the same procedure is used by the unscrupulous handler of bogus objects in their vain attempts at attaining a creditable or at least plausible provenance.

The importance of having a bona fide signature is of tremendous value to both the collector and the appraiser alike. The collector of sports and entertainment memorabilia; the archivist, researcher or collector of historical documents; the collector of art and artefacts; the expert; the specialist; and the purveyors of all such items, understand the great influence that a genuine signature can bear on the overall significance of an object, including its immediate worth and or long term financial interest. However, the question and evaluation of such signatures is not always an easy matter of employing normal signature comparisons utilizing standard methodology. This in part, is due to the reliability and the availability of known exemplars. And due, in part to artists' working habits and in relation to the actual era that a signature was applied, both practically and through physical contact with the material.

In assessing more historically placed signatures, the credibility of all signature specimens located in archive and through research, is often fraught with its own special problems. This may include the quality and quantity of available specimens and the signing of signatures by assistants or secretaries, especially when assaying those of Royalty, political persons and individuals from military history, etc. Resolving signature identification issues of more recent individuals can pose very similar vexations. This is often seen with popular sports or entertainment personalities and with the more charismatic of politicians and international business tycoons.

Highly stylized signatures are often found within a grouping of the more flamboyant artists or those who wish to impart a certain message which speaks to the person's public personality or to their technical virtuosity. The world of memorabilia and ephemera collecting is abound with specialized signatures created by entertainers, celebrities or sports stars, just for the purpose of signing such materials and souvenirs. This can be seen in signatures that have added picture like strokes or rémarque type images next to or inserted within the signature, such as those found in the signatures of certain entertainers like Red Skelton (clowns), Liberace (piano), Walt Disney (perceived mouse ears), Ella Macpherson (heart), etc. The introduction of signature stamps, autopens and other mechanical devices, and now digital reproduction capabilities coupled with modern printing technologies, has only served to compile the list of obstacles facing the appraiser and evaluator. However, the first giveaway of mechanical simulations should be the appearance of identical signatures or marks on multiple objects.

First levels of inspection are usually sufficient for identifying signatures mechanically reproduced as the telltale signs of the printing process used are usually very evident under 5x-10x magnification. This would include dots found in ink jet printers, variable-sized dots of true halftone printing, raised ink surfaces from intaglio printing, etc. Mechanical writing devices such as the autopen can prove to be a little more challenging to those unfamiliar with such devices and their output, but a little study will go a long way in understanding the dynamics or lack thereof, in signatures reproduced by this method.

The autopen has been in use for over sixty years and is one of the most common signing machines. It is often employed by organizations requiring many signatures from one individual, such as facilities that issue certificates or general correspondence in bulk. Politicians and influential leaders have utilized the autopen in order to meet the demands of many documents which require their signature while freeing them from having to be physically present to do so. Both entertainment and sports stars, including the producers of their memorabilia will also purchase autopens for the same reasons. Second levels of inspection will usually suffice in the detection of signatures signed by autopens. The higher quality of the image produced, evenness of line, the consistency of any striations present, lack of variable pressure, consistent speed and straight lifts, all distinguish autopen signatures from those produced by the more fallible human hand. [See: figure 1]

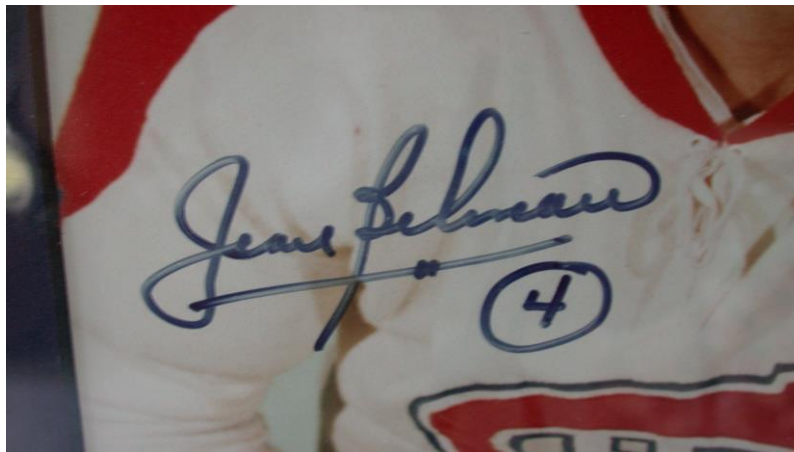


Figure #1
Autopen signature of Montreal Canadiens hockey player Jean Beliveau

Different forms of signature stamps and seal carvings have been in common use for thousands of years and many are still in use today. The type of material used in the making of signature stamps and seals can vary from wood, rubber, metal or stone. When a work of art bears an artist's signature stamp in place of one written by script, authenticity issues will generally be settled through careful analysis of image dimensions, design detail and by watchful attention to the minute imperfections and degree of wear present. All stamps will suffer from decline in condition through frequency and duration of contact. This is inevitable and the swiftness of decay will be depended upon the durability of the material matter from which the stamp is made. Questions related to signature stamps often encompass issues of image decipherment. The identification of obscure or incomprehensible impressions left by worn or defective stamps can be demanding, but not completely improbable. Trace amounts of ink or other chemical properties may still remain within the surface of the image area, which could allow for reconstruction of the image by drawing an inference from all viewable outlines. Or if the image to be read has been applied to a paper substrate, then examination for latent impressions should be conducted. If an appraiser or subject matter expert can attribute the work to a particular artist, then comparisons made against other known signature stamps from the artist's body of work may yield sufficient clues by assimilating all proportional measures of image loss with the rate of reduction observed in uncontested stamps in use over the years. This is accomplished in third levels of inspection. [See: figure 2 and 3]

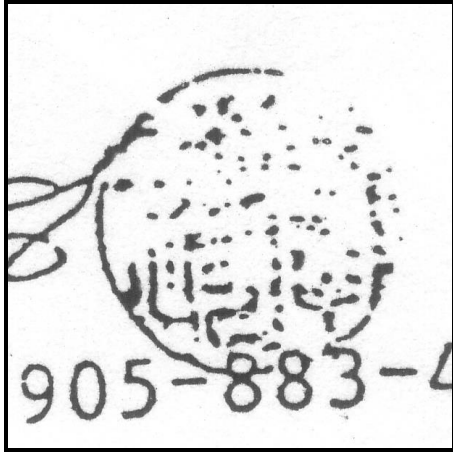


Figure #2
Questioned Korean Signature Stamp



Figure #3
Reconstruction of the Stamp

Before leaving the matter of stamps and seals, discussion regarding the forger's use of purely counterfeit stamps and seals is in order. There is likely not a single appraiser or examiner in practice today, nor before, who has not encountered fake stamps or seals which have been placed on the back of a painting, on the side of a sculpture or affixed to an even more questionable certificate of authenticity. This ploy is put into practice by the forger in an attempt to convince a prospective purchaser that such marks add support or irrefutable credibility to the art being presented. Official seals and stamps have long been used by customs offices, museums, galleries, leading collectors and the more infamous, to mark as identification their artistic holdings. So by mimicking this habit by fabricating the right stamp or seal, the forger is applying just the right amount of English to get the ball to where he wants it to go.

During World War II, the Nazis' are known to have marked legitimate art holdings from their institutions and those of confiscated works. Unfortunately for both the appraiser and the examiner there is no specific database available that might assist in distinguishing the fake from the real. Such an identification seal located on the verso of a painting executed on panel came into question in Toronto, Ontario Canada recently. [See: **figure 4**]

The seal was affixed with a very hard (almost plasticized) wax and is dark burgundy to almost black in colour. It contains official elements like the empire eagle (Reichsadler) and "NS-Hakenkreuz" and the date of "1941". However, an official German wax seal is made with red wax, its diameter is approximately 4 cm. It would also contain the empire eagle with the NSDAP party cross in the centre and the character "Deutsches Reich". It does not resemble a customs seal because there is no customs office character present like "Zollamt Berlin Packhof". This would be a typical part for a customs seal and all other official seals. The date "1941" is also very atypical for an official seal as you could only use the seal for one year. A second atypical characteristic is the missing character of the administration. And there is no institution identification or inventory numbers present. Therefore, any painting bearing such a seal would certainly require more thorough inspection and deeper investigation of its provenance.



Figure #4
Questionable German Seal on Verso

The contemporary forger who's mark is targeting the more quaint marketplaces of antique malls, country stores, antique shops and travelling collectible shows, does not have to venture far to obtain ready made devices that can assist them in making otherwise unexceptional wares into more desirable ones. With the availability of store bought or on-line ordered, engraving tools, specialty inks and pigments, glazes, artists' supplies and commercially manufactured stamps, etc., filling the void or meeting the needs of an unwitting collector, becomes a simple matter. Couple this with the virtual world of on-line purchase sites, including supply and demand, and the more talented and persistent of forgers can likely file their professional résumé as obsolete. [See: figure 5 and 6]



Figure #5
Commercially Manufactured Stamp



Figure #6
Forged Stamp - "Hand Painted Nippon"

When the mark of the artist is in question, certainly personal habits come into play. This may include differentiations between their artistic signature and that of signatures used for business or more personal correspondence. The placement and or position of artist's signatures or symbols may be consistent or it may sometimes vary from the artist's normal style. Furthermore, it is not uncommon to find that throughout an artist's career, they have introduced a wide variation within their signature design or even dropped an existing signature for the adaptation of a completely different one.

With any individual's signature or handwriting there will always exist a range of natural variation which will conform to within the confines of their own master pattern. And that such variation range would be considered as characteristic of the individual. In example, using the twenty six letters of the English Alphabet and considering both upper and lower case letter formations as well as both cursive and hand printed systems, an individual may have several variations in forming each letter depending upon its placement within a word. Therefore, appraisers should be aware that an artist may be consistent in the formation of their letters and in the design of their signature, while others will have a greater degree of variation. It is axiomatic that no one writes their signature in exactly the same way twice and that this holds true for any type of written language used.

There are also various factors that can affect an artist's signature, such as external environmental conditions (in studio or plein air), the type of material used (hard, soft or pliable), the writing instrument (brush, pen, pencil or stylus), the writing surface and the position of the artist. Abnormal writing positions such as prone or standing may result in signatures that appear unnatural when compared to those written in a more natural or comfortable position.

Further, there are internal corporeal conditions which will occur under varying circumstances and at different time periods throughout an artist's career, these may be changes in their health, physical ability or mental capacity and perhaps the influence of alcohol or drugs. Physical changes that affect an artist's gross motor-control skills may be sudden, such as those experienced by accidents or by unexpected ill-health or they may be more gradual as through the onset of old age or by the progression of disease. The process of writing is a learned behaviour which eventually develops into an acquired motor skill. And it is accomplished by interacting impulses from within the brain. Any disruption (internal or external) or acute alterations to the balance or coordination of these interplaying impulses will cause adverse affects in the artists fundamental writing ability.

Studying the signatures of elderly artists (retired or active) are often representative of the type of signature which will demonstrate prevalent characteristics generated by a combination of adverse affects from both internal and external factors. Such signatures are usually more slowly written, there may be hesitations of movement and or frequent writing stops. The signature will often look very angular and an inability to successfully retrace lines, produce smooth curves or accurate rounded forms will be noticeable. Manifestations of line tremor and stray writing marks will oftentimes be present. Occasionally the signature will take on a form which more resembles a forward moving

scribble. When assessing these kinds of signatures, the appraiser or examiner must be cautious in their evaluations and time should be taken to examine and compare as many known signature specimens, written as contemporarily as possible to the date of the questioned signature. This to avoid incorrect opinions of forgery based upon unnatural appearances in a genuine signature or by the approving of a spurious signature composed by the forger and successfully reproduced because of its apparent simplicity. The known signature of prominent Canadian Group of Seven artist A.Y. (Alexander Young) Jackson - '1882-1974', who signed a small gallery print of one of his works, while sitting in a wheel chair at the McMichael Canadian Art Collection in Kleinburg, Ontario in 1974 and just mere weeks before his passing, is a good example of such a signature. [See: figure 7]

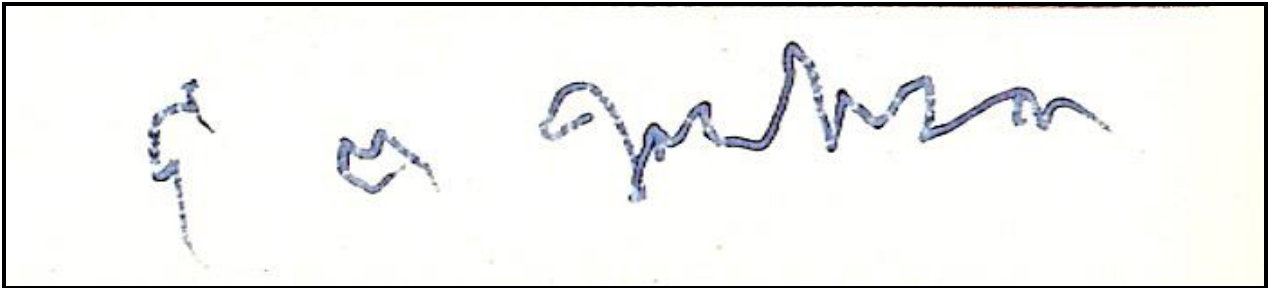


Figure #7
Genuine Signature of A.Y. Jackson – 1974

Consideration must also be given to the complexity or simplicity of the overall signature design. Some artists take great pride in the writing of their signature and will use elegant form in execution, while others show little care. Some use designs which lack any true identifiable letter formations or may resort to inserting just their initials, monograms, abbreviated forms or nondescript marks and signs. Indifference usually results in simplicity which leads to the susceptibility of forgery.

Both Pablo Ruiz Picasso '1881 – 1973' (Málaga, España) and Salvador Domingo Felipe Jacinto Dalí i Domènech, 1st Marquis of Púbol '1904 – 1989' (Figueres, Empordà Catalonia España) were extremely prolific artists with great bodies of work. Each had a habit and eagerness to sign their name. A study of the entire corpus for Picasso reveals that he was also indifferent about his signature and showed no preference in applying it. And many of the art objects that he painted, drew or otherwise created were left unsigned. Dali on the other hand was extremely pretentious and applied his signature freely and impudently. The known signatures located within the oeuvre of both artists exhibit relatively wide variation, with that of Dali being the utmost. Over the years an unlimited amount of reproductions and outright forgeries in signed prints and drawings have entered into the marketplace. Having to sort the fake from the real can be a particular dilemma for the appraiser of such works, so much so, that many will simply decline the assignment in the first place. In most cases the issue of authenticity can only be resolved through intense examination and should be left to a qualified specialist.

However, sometimes the associated costs or the immediate availability of an expert will be obstacles that preclude more detailed examination from occurring and the appraiser or collector is forced into rudimentary on the spot decisions. It is here that any knowledge regarding the principles of handwriting identification that an evaluator has acquired and can bring to the table will be found to be an indispensable tool in their attempt to make an informed assessment.

The successful identification of difficult signatures must take into account specific elements in handwriting which identify the individual characteristics and writer habits, these include: style, form, skill, spelling, variation, movement, line quality, size, slant, pressure, proportion, connecting strokes, retrace, lifts or hiatuses, base line alignment, initial and terminal strokes, arrangement, spacing and alignment, height-to-width ratios, trademarks and embellishments, etc.

Standard handwriting identification methodologies were utilized in the examination and comparison of a questioned Picasso signature accompanying a hand drawn crayon sketch on a piece of 5" x 7" paper of a "Lady in a Hat". Included was a handwritten date "4.6.63", with Roman numerals "IV" handwritten below. Above and beyond a more critical eye contemplating the stylistic features of the portrayed sketch, fundamental dissimilarities of handwriting identification characteristics are evident between the questioned writing and known signatures and writing of Pablo Picasso. The known signatures of Picasso are written without conscious attention to the act of writing. The speed of the writing is swift and the movement dynamic. Whereas the questioned writing appears stagnant and rigid, the speed of the writing is slow and the pressure applied is relatively heavy and constant. This coupled with the prominence of the signature and its placement within the sketch all denote the signature and the handwriting as a freehand simulated forgery. [See: figure 8, 9 and 10]

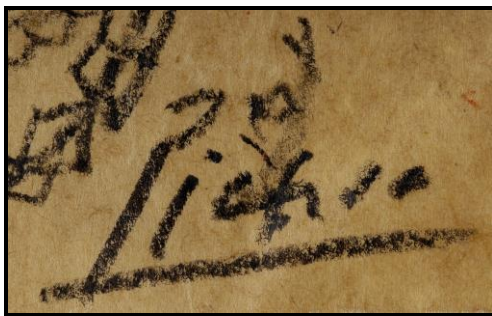


Figure #8
Questioned Picasso Signature

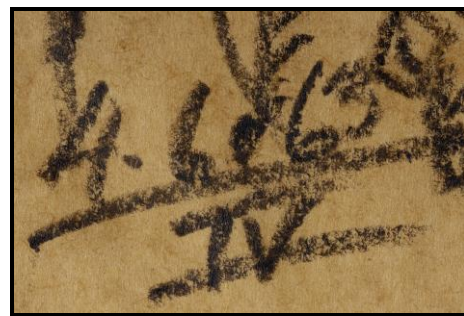


Figure #9
Questioned Picasso Handwriting



Figure #10
Questioned Picasso Crayon Sketch – “Lady in a Hat”

Not every signature can be positively identified or questions of authenticity resolved. Failure to do so could be the result of completely indecipherable signatures and or a lack of any available known specimens to compare them to. Surface conditions, pre or post treatments, poor conservation efforts, environmental influences, advanced decay and natural or intentional erosion may also render genuine artist’s signatures and marks illegible. Guesstimates of author identification often result in misattributions of works of art and at worse the passing of forgeries. This point is well exploited by forgers who will create unusual works in a near likeness of a particular artist’s style or as a one of a kind piece and then insert a vague signature or mark. The lack of any marketplace comparables or historical data will benefit the forger’s scheme, but will also provide a first clue towards potentially debunking its authenticity.

An exuberant necklace cast in bronze and carrying a purported provenance of being designed and ultimately signed by Pablo Picasso was submitted for examination. There were no known comparables for this kind of work being prepared by Picasso and much importance was placed on the ability to provide an opinion that an incised or moulded mark on the reverse of the centre plate read Pablo Ruiz Picasso. The significance of a conclusive identification or one within a degree of probability would have tremendous weight in the appraised value of the necklace. In spite of all best attempts put forward, the results of the examination were inconclusive due to the obscure surface area and the lack of sufficient identifiable letter forms. [See: figure 11, 12 and 13]

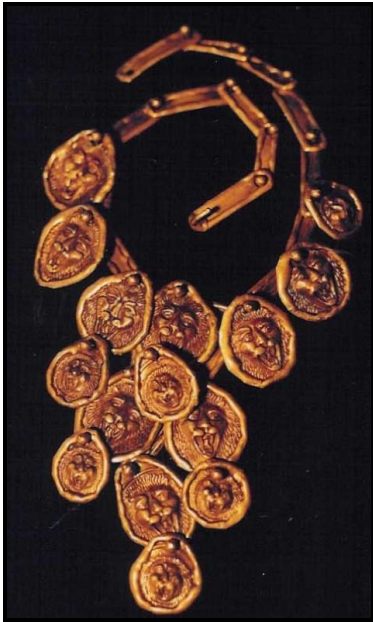


Figure #11
Questioned Bronze Necklace



Figure #12
Reverse of Center Plate with Questioned Mark

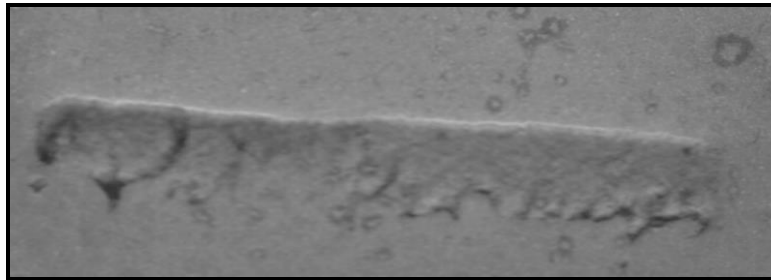


Figure #13
Purported Signature of Pablo Ruiz Picasso

It is rather fortunate that the majority of forged signatures, whether of the artist or the common man, are mostly crude reproductions fabricated by mechanical means or executed by freehand. And as previously mentioned the objective of the forger will be directly proportionate to the minimal or maximum amount of effort required to meet with predetermined monetary plans. Forgers of any era are a product of their time and will use the tools and materials available to them in trying to recreate the technical and stylistic properties of contemporary artists or of those who came before them. The most simplistic of processes are often resorted to when the forger does not possess the required skills to successfully replicate the mannerisms or learned ability of the artist to be copied.

Where forgers make no attempts to imitate a known signature and they sign another's name in their own handwriting style, it is usually because they lack the required skill to accurately compose the signature from a known model or that a model is unavailable to them.

When reproducing an artist's signature the imitator must contend with all of the inconspicuous and intricate traits and unconscious habits that all writers incorporate into their writing. Well practiced hands are amongst the most difficult to identify but differentiations in some features will still exist. Tracing of an artist's known signature are often seen and such issues can be readily solved by locating the model used or through detailed analysis of surface properties. Microscopic examination of a questioned Emily Carr (Victoria, British Columbia '1871 – 1945') signature on a laboured and poorly executed watercolour painting of trees in a forest, identified several areas of false starts, line patching and slight traces of graphite left by the pencil used to produce an underlying guideline. [See: figure 14 and 15]



Figure #14

Questioned Emily Carr Signature – Areas of False Starts and Line Patching



Figure #15

Portion of Questioned Emily Carr Signature revealing Graphite Traces

There are times when the authenticity of an artist's signature or a particular antiquity is not necessarily the primary problem rather it is the date of placement of the signature or an identifying mark which becomes the relevant question. Material concerns are generally an easy issue for the sciences to ascertain through property dating tests, such as: chemical time lines, radiocarbon dating, dendrochronology, or through computer-aided spectroscopy, etc. However, when assessing older antiquities for maker, date and place of origin, stylistic and historical references to inscribed period names or other such characters can prove most untrustworthy. This can be especially true when considering the centuries old practice of some cultures to copy their own classical wares and then adding marks of earlier periods. Also, both ancient and classical forgers plied their trade within their own time, so judgements or estimations based upon material testing alone would be mostly insignificant.

More precise evaluations of when an artist actually signed a work or when a stamp or seal was placed onto a particular object can be very imposing questions. Reliance upon proximate estimations is often the only course available. Every material object which makes contact with another object will eventually develop a pattern of wear. The degree of surface loss will most likely be progressive and developing characteristic features of the objects surface will be unique to it and it alone. These features will remain as identifiably characteristic of the object for certain periods of time that is until the pattern of wear alters the surface structure significantly enough to be visually differentiated from any of its previous stages. Alternatively, any sudden or unexpected surface damage which results in immediate alterations to the objects surface, such as impact breaks, etc., would cause even more unique surface characteristics to form. The value of these features of surface characteristics to the examiner and appraiser is their assistance in providing relative time frames for when a stamp or seal was probably placed on an object of art. This is accomplished by comparing all visible surface characteristics to other works which are known to bear marks from strikes made with the same stamp or seal. Prudent comparisons of all wear and unique features of surface characteristics will usually produce sufficient evidence to allow a date calculation to be advanced of when a particular stamp or seal had probably made contact with the surface of the object. However, caution must always be taken when making such determinations as surface characteristics can be altered not just by wear and tear, but also by simple cleaning or repairs. And these could be deceptive in and of themselves, as a corrected surface could lead to wrong conclusions of a new or different stamp or seal being used.

Approximations for the application of an artist's signature or handwriting to an object of art take on similar principles of physical decline. The deterioration in the fundamental appearance of an artist's signature could be the result of advanced years or some kind of trauma to the individual. The decline in form and quality of execution are interrelated. The degree of decline is usually measurable within time, therefore comparisons made with other signatures or handwriting bearing similar characteristics will provide good indicators of when (more or less) an artist applied their signature or handwriting. With the elderly or a terminally ill artist deteriorating form may be consistently progressive or become sudden by a worsening condition, but for others improvements in line quality will usually appear as treatments are applied and their general health improves or reverts back to a normal state.

The human element is omnipresent in all things made by man and the strictest of attention should be given to this essential detail. We are who we are and changing tendencies of natural perceptions or deviating from habit is a very difficult thing to achieve. Identifying a poor work of art or an inferior signature because of a lack of skill is usually something that most appraisers are relatively adept at doing, but it should be remembered that even the most skilled of artists have bad creative days. It is also not uncommon for a fake to be identified because the forger has produced a work that is superior to that of the best skills of the artist being copied. In comparing two signatures or handwriting it is axiomatic that a writer can never write better than their best writing. This can be viewed as a logical hypothesis, but is too often an overlooked fact.

For what ever personal reason some artists will leave completed works unsigned. Some will return at a later date and insert their signature or mark. Husbands and wives, children, relatives, mistresses or close companions are often called upon to sign the works of an artist posthumously. Remaining works or unfinished ones may be Atelier stamped. Later authorized reproductions or printed editions may bear estate or print shop identification stamps, edition numbers and oftentimes an authorized reproduction of the artist's signature created mechanically or by the use of a signature stamp. The occurrence of such marks being applied to prints of an artists work is also done within the lifetime of the artist.

Outside influences and cultural or regional changes that occur may have adverse affects on the process of artist identification. This was evident in the earlier stages of identifying Inuit artists of Canada's far north. Differences in the recorded spellings of given names, additions to or the partial removal of birth names, physical displacement, language barriers, extreme influences by Government, Religious and Educational entities, inaccuracies in published material, loss of records and faded memories, have all contributed to the many inaccuracies, misattributions or failures to identify the artist or their work. And this is something that the forger is more than willing to exploit.

There are countless ways and methods in which the would-be forger can rely upon or devise in developing their craft of deceit. And they are usually only limited by their own personal set of physical skills or how they manage their objectives. Evaluators should be cognizant of the fact that the materials and processes brought to bear in the making of counterfeits and forgeries are exactly the same as those employed in the production of genuine goods. And that supply and demand is the bifurcation of a single stem, but below its rise, it is still one and the same.

In conclusion, appraisers and other examiners of artistic wares will generally become proficient at spotting fakes and forgeries in objects that fall within their own area of expertise or collecting interest. Dogged persistence in their detailed research and through a thorough understanding of both the capabilities and limitations of scientific endeavour at all levels of inspection, will serve them well and avoid costly mistakes. But whenever in doubt one should always heed to the wisdom of the late American astronomer, astrochemist Carl Edward Sagan (1934 – 1996) when he stated that: ***“Extraordinary claims require extraordinary proof”*** and then apply it to the Latin proverb: ***“Idem est non probari et non esse; non deficit jus, sed probation” - “What is not proved and what does not exist are the same; it is not a defect of the law, but of proof.”***