# Coming to Grips with the Oboe

## Don't take "no" for an answer from inanimate objects

**David Goza, Director of Orchestral Activities**
**The University of Arkansas**

I am moved to begin this essay with a lament: in large areas of the country, particularly here in the mid-South, my instrument of choice is dying a protracted and ugly death: it is going extinct. There are four main reasons for this situation: the shabby instruments held in the inventories of many public school music programs (often placed in the hands of beginning players), the difficulty of obtaining playable reeds, a general lack of understanding of how to keep the instrument adjusted and in otherwise playable condition, and a dearth of good information about how actually to play this most difficult of wind instruments (misinformation, on the other hand, is very easy to come by). I will address each of these problems in turn.

### 1. The problem of inferior instruments

This problem can best be understood if placed against some historical background.

The oboe was the first of the woodwind instruments to be adopted as a regular member of what eventually evolved into the modern symphony orchestra. This happened in France during the last quarter of the 17th Century, at the outset of a great operatic tradition. It also happened before the universal adoption of equal temperament, so orchestral and operatic compositions tended to be cast in a narrow range of key tonalities ideally suited to ease of playing for the majority instruments of the orchestra: keys that take advantage of those instruments' open strings. Accordingly, most of the orchestral works from that period are in G major or keys closely related thereto (C, D, and occasionally A). Logically enough, the early orchestral woodwinds were designed for ease of playing in those keys: the oboe is essentially a G major instrument, and to this day, G major is by far the easiest key to manage on it.

A two-foot tube set up to play diatonically in G major needs no keys whatsoever – or at most, an extension key for low C. Hence the design of the earliest oboes.

With the widespread adoption of equal temperament around the beginning of the 18th Century, far-ranging modulation became possible, and composers began to exploit newly-available "remote" tonal areas for expressive purposes. Accordingly, additional keywork started appearing on the oboe. These early enhancements aimed at the elimination of cross-fingerings, resulting in more "logical" finger patterns and better tone quality for the chromatic degrees. Those developments were nevertheless applied to an instrument that retained G major as the basic pattern (right hand first finger down producing F♯, for instance – unique among the treble woodwinds).

Two factors precipitated a flurry of new and sophisticated keywork technologies during the 19th Century: the increased use of expressive chromaticism *within* established tonal areas (i.e. ambitious modulation) coupled with the exploration of exotic-sounding key tonalities (laden with extreme numbers of sharp and flat signs in their signatures) by the great composers of the

Romantic Era; and the incorporation of the oboe into wind bands whose populations were dominated by instruments in B♭ and E♭ transpositions. Just as the majority population of instruments in 18th-Century orchestras dictated sharp-tending "keys of choice," so also in the wind band – in the opposite direction, of course. To this day, the overwhelming majority of band music is written in B♭ and E♭ major or keys closely related thereto, and many directors' ensemble warm-ups also tend to favor those keys.

Where does this leave the oboe? In a bad way, frankly. Of all the players of treble woodwinds, only the oboist deals with a modern fingering system that favors G major above all other keys (the most telling feature being the manner in which the oboist produces F♯, a pitch called for relatively rarely in wind band music but prominent among the easiest and most logical fingerings on the oboe). The problem might be described this way: the oboe's F♯ lies within the "basic" fingering pattern for the instrument, while F♮ must be produced by raising E with an accessory "F key." The result is a major obstacle to playing in flat keys: while on the other treble woodwinds a single right-hand finger is needed to produce F♮, three right-hand fingers must be employed on the oboe, and the situation of those fingers makes it very difficult to get from F♮ to E♭ – a succession of pitches by no means uncommon in wind band music.

Two methods have been devised to make this pitch succession possible. The first of these is the retention of a fingering characteristic of the keyless oboe: F♮ can be produced by cross-fingering. This is the notorious "forked F" – notorious because it tends to be out of tune and dull of timbre (it is also fairly clumsy for the fingers). If an oboist is relying on forked F to get him through a composition in a flat key, he will of course be playing out of tune – and with an uneven-sounding scale – much of the time. The second innovation, which began appearing on oboes after the middle of the 20th Century, is the left-hand F key. This key is actually an additional lever for the F key already present on the oboe (the one that raises E a half step), and engaging it with the LH fourth finger frees up the critical RH third finger, necessary for producing E♭, D, D♭ and low C. Note that the oboist now has three different fingerings for F, while other woodwind players get by just fine with one. It should be clear from this synopsis that flat keys are inherently difficult for the oboist, with that difficulty accounting for much of the frustration commonly associated with this instrument.

In order to make forked F a little more nearly acceptable, oboists adopted the technique of "venting" the note with the E♭ key. This brightens the tone considerably so that, timbre-wise, it more nearly resembles the notes that surround it. Unfortunately, it also raises the pitch of a note that already tends to be sharp. Another 20th-Century innovation – an exquisitely complex device that *replaces* the opened E♭ – addresses two related problems at once. This "forked F resonance key" both frees up the RH fourth finger (eliminating a notable clumsiness) and yields improved intonation on account of its slightly smaller tone hole (it is also notorious for going out of adjustment, which can make the lowest notes impossible). Unfortunately, for the beginning oboist this benison can become a liability: if the student has the good fortune to be armed with an instrument equipped with this device but the *bad* luck to be equipped with a fingering chart calling for the addition of the E♭ key to forked F (as many such charts do to this day), this toxic combination will yield a note that is *grossly* sharp, and of course the poor student will have no idea why, or how to fix it.

This discussion could be greatly expanded to include, among other things, the problem of low D♭ *versus* the D♭ an octave higher (the first is flat, the second sharp), the double jeopardy to which one is susceptible when attempting to play in D♭ major with forked Fs, problems of high

D♭ and "third octave" notes generally, the difficulty of slurring to high D from many of the notes beneath it (unless you know the trick – which you are unlikely to find in a fingering chart), the near-impossibility of slurring cleanly from any second octave note to any note significantly lower, knowing when and when *not* to use certain other "alternative" fingerings (almost all of them designed for trills and nothing else), *et cetera, et cetera, et endless cetera*.

Fortunately, a great deal of R & D over the past half-century among the better oboe makers (Loree, Fox, Covey) has resulted in instruments whose carefully-engineered bore and tone hole properties compensate to a large degree for these historical difficulties (many of the fingering problems remain, but at least the results are somewhat better in tune and the scale more even-sounding). But if the student has the bad karma to be playing an instrument by Selmer (a Bundy, say), Linton, Cabart, Larilee, Mirafone, or any of a host of other such abominations, he has no chance whatsoever. Unfortunately, such instruments are not in short supply (I often see them in the showcases of instrument dealers, and I know they gather dust in the storage closets of countless band programs).

Such instruments are problematic for two reasons: generally they lack mechanisms that would make the flat keys accessible (left hand F is missing, there is no forked F resonance key, low B♭ is nowhere to be found), and the bore is of such primitive design that the instrument cannot possibly be played in tune (instruments that cannot be played in tune also tend to be grossly unresponsive, for the same acoustical reasons).

A commonly-observed result follows naturally: no self-respecting young student with a good ear and any motivation whatsoever is going to waste his time and risk sullying his artistic reputation with an instrument that places such impossible obstacles in the way of his music-making. So he takes up theater instead.

A big part of the solution is obvious: if you don't have enough money in the budget this year to buy a playable instrument, don't buy one at all (you'll only be wasting your money, setting up some poor student for failure, and enabling a scam). Save your money for a year or two, then purchase a *real* oboe in consultation with a respected professional player of that instrument. For heaven's sake, don't order one from a warehouse.

## 2. The reed problem

This is the problem that leads to more hair pulling than any other. The most often-cited concern is the *expense*, expressed in such phrases as "why don't these things last longer since they cost so much?" Believe it or not, that's actually a *minor* vexation compared to the central issue. As there's no delicate way to put this, I'll just say it: any time you buy an oboe reed out of a display case, you're getting *screwed*, no matter what you paid for it. When it comes to commercial oboe reeds, **there are no bargains**. Here's why:

- Reed cane (*Arundo donax*) is not at all consistent in quality. The best cane, from the most reputable suppliers (who grew it in the right kinds of soil, allowed it to reach full maturity, harvested it selectively and cured it thoroughly), ends up in the hands of professional oboists in the world's top orchestras. You and I will never see this cane. The second tier of cane is commercially available to other players generally, and can be purchased from a number of domestic sources. (If you examine such a supplier's price list, you'll see a fairly wide range.

Don't bother with the less expensive material.) The worst stuff is sold to the companies that manufacture oboe reeds, in huge lots at bargain-basement prices. It's not quality cane, and it cannot yield good reeds: garbage in, garbage out. If you buy a reed out of a display case, garbage is exactly what you're buying.

- No two pieces of reed cane are alike. There are differences in epidermal thickness, silica content, general diameter, consistency of arc (all cane is slightly triangular in section), quality of vascular bundle, and longitudinal straightness. It is therefore impossible in principle to apply a standardized scrape to all reed cane and arrive at a uniform product (although I suppose a uniformly *terrible* product is a possibility). Each piece of cane must be scraped according to its unique characteristics. Obviously, no commercial reed supplier is going to go to this kind of trouble. Even if the reed companies were using quality cane, their reeds would be unplayable for lack of careful attention to the needs of each piece of cane. Since they're using cheap junk instead, there's no chance whatsoever that a reed out of the dealer's case is going to meet *any* player's needs – *especially a beginner's*.
- No two mouths or facial structures are alike. Therefore I cannot make reeds for you, or you for me. I can get fairly close, based on the anecdotal information you supply, but I can never hope to fully satisfy your unique requirements; and a commercial reed isn't going to come within a light year of meeting your needs, my needs or anybody's needs.
- One cannot make reeds here for there, or now for then. Too many variables change too radically in the interim (atmospheric pressure, relative humidity, temperature, one's own corporeal being, the repertoire of the day: these all have noticeable effects and impose reed-making requirements peculiar to that particular time and place).

I wish I could say that "refining" commercial reeds affords some chance of yielding a playable product. Unfortunately that is not the case, for two of the reasons given above. It might, however, be possible to make adjustments to reeds that are already reasonably good (those that you might be able to buy from professional players[*] who make and sell them for a second income and take some pride in that which bears their name), so as to end up with something that works fairly well. Although it is unreasonable to expect a consistently good outcome from the application of a reed-making "formula," it is possible to articulate some general principles which may be used as guidelines for refining already reasonably good reeds. A reed is a dauntingly complex bundle of compromises and it is with these that we must deal, knife in hand:

- It must hold its pitch both *up* (this applies especially to short-tube high register notes) and *down* (this is especially critical for such notes as third-space C and low A and G). In general terms, removing too much cane deprives the reed of its ability to hold its pitch up, while removing too little yields a reed that is stubbornly sharp.
- Its tone must be sufficiently bright to furnish brilliance when the music calls for it, and sufficiently focused (in other words, not "spread") to make timbral darkness equally available. Generally speaking, the more cane left on the reed, the brighter the timbre.
- It must be both stable and flexible. These qualities exist in some tension with each other: stability can shade off into undesirable rigidity, while flexibility can veer off into wildness. Finding the right balance is difficult. Generally speaking, greater length in a reed yields greater stability (just as long-tube notes tend to be more stable than short-tube notes).
- It must strike a workable balance between *go* and *heft*: in other words, it must be reliably responsive in all registers at all times, while furnishing enough resistance for ample

[*] Sorry, but I'm not going to commit myself to print on this one. You'll have to ask me privately.

"leverage." Generally speaking, *go* is the domain of the tip while *heft* is supplied by the back. Removal of cane in general also yields *go*, and *vice versa*. You should not have to *coerce* the reed into vibration: you should instead be able to *permit* it to vibrate.

- It must be perfectly balanced in three dimensions: from side to side, from tip to back, and from blade to blade. You don't stand a prayer of accomplishing this unless you learn a) to sharpen a reed knife, and b) to clip an infinitesimal amount from the tip. Generally, one refines then clips, in that order.
- It must be appropriate to the music that is being played (one can't convincingly play Wagner on a Mozart reed, or Mozart on a Wagner reed).
- There is a test that can tell you a great deal about the quality of your reed: its tip opening when dry should look exactly the same as it does when saturated. If it doesn't, something is terribly wrong with the way the reed was tied or scraped. This is especially true if the reed has open sides when dry. In practice, this means you are going to expend valuable energy just keeping the sides closed while playing.

Ultimately, there is only one completely satisfactory solution to the reed problem: if you wish to enjoy any success as an oboist, you will have to become an expert reed-maker (this is a necessity not an option). This will take years of practice and untold expense, and will impose far too much grief and frustration for all but the most committed to endure. The oboe is obviously not an instrument to be chosen lightly.

The career of Bruno Labate furnishes a particularly sad cautionary counter-example. Mr. Labate was for a couple of decades the principal oboist of the New York Philharmonic. He never learned to make reeds, but he did find a supplier who could make reeds that worked for him. All went swimmingly well until the day his reed maker died. Over the course of one desperate year spent scouring the world for a reed maker who could step in and save his career, Labate nursed his remaining (rapidly-aging) reeds, sounding worse at each successive rehearsal and concert. At the end of that awful season he resigned from the orchestra, his legendary career in total eclipse.

Once you have found a source of reasonably reliable reeds that can be refined to meet your needs more or less, there are some things you must keep in mind if you wish to preserve them:

- The reed must be soaked *thoroughly* before playing, and in water *not* saliva! A thorough soaking means *in* water, up to the string wrapping, for 15 minutes: it will not do to run in at the last minute from gym class, pass the reed under the stream of water from a drinking fountain, shove it in the oboe and start playing. There are several good reasons for this: 1) cane retains a "memory" of its configuration when it was alive, and that configuration must be restored before you can rely on its behavior; 2) saliva is a digestive juice, and we soak the reed in water to give it some protection *against* this powerful deteriorative agent; 3) playing an inadequately soaked reed guarantees a bad sound, poor response and an early death for the reed.
- You must be able to *keep* the reed wet during rehearsals and concerts. But in the air-conditioned environments we usually play in, our reeds are constantly *drying out* (while we count a 30-measure rest, for instance). You must keep a small container of water close by for soaking every time the reed is not being used. Here's the primary reason: reed cane has a fair amount of strength when dry, more strength when getting wet, maximum strength when saturated, and *least* strength when drying out. A reed that is drying out is almost sure to split if it is set into vibration.

- Your reeds must be allowed to dry thoroughly between periods of playing (overnight, for instance). Make sure that the case you keep them in permits this. If it doesn't, your reeds will surely split the next time you play them (over-soaking your reeds is almost as bad as not soaking them at all).

## 3. Keeping the instrument in working order

A number of years ago I was engaged to play the first oboe part in a cantata by J.S. Bach – who happens to have written some of the most wonderful oboe *obbligati* ever. The second oboist was having some low-register problems during the first rehearsal and asked me for advice. I told her we'd first need to see if her instrument was in adjustment – that is, whether the pads were covering the tone holes completely and consistently. Using my own reed in her oboe (thereby eliminating a confounding variable), I proceeded to play a descending scale from third space C, the most "open" note on the instrument (this is a good way of discovering in what area of the instrument such a problem might lie). To my amazement, I couldn't play any lower than G! I handed her oboe back to her and asked her to play a descending scale, and she did so with far more success than I had enjoyed. But as her fingers covered tone holes in succession, her knuckles turned *white* from the pressure she was applying to the keys (she was – in the worst sense – "coming to grips with the oboe").

I asked her how long it had been since she had checked the adjustment. She told me she had never done that – had never learned how (she holds an MM degree in oboe performance from the Eastman School of Music!). I asked her how long it had been since she had had the instrument in a shop. She told me it had been about four years.

The scenario that led to her low register problem is easy enough to reconstruct. Every time we play an instrument, that instrument suffers a minuscule amount of wear and tear. Usually this entropy is so slight as to escape notice entirely. But as the wear progresses, *some* part of us notices, whether or not that awareness rises into full consciousness. A recalcitrant note, for instance, is unconsciously corrected with a little more finger pressure – "noticed," if that's the word, only by the finger that does the pressing. A few months go by, and it takes (has gradually taken) a little more finger pressure – now on three keys not just one. And so it goes, without our ever *consciously* becoming aware of what's happening. Finally, the instrument is so badly out of adjustment that even our vice-like grip is insufficient to coerce long-tube notes into good behavior. The image of an oblivious frog being slowly boiled to death comes irresistibly to mind.

The saddest thing about this tale is the fact that, of all the woodwind instruments, the oboe is the most thoroughly and beautifully equipped to make adjustment easy. Don't take my word for it: hold one up against a clarinet or a flute and notice how many adjustment screws there are on the oboe compared to those other two. (This is no doubt a natural outcome of the technological evolution of the oboe, as sketched above. Compare, for instance, the relative complexity of the oboe's mechanism compared to that of the clarinet). These adjustment devices were added to make it *easy* to keep the instrument in good working order.

Any time I'm going to play my oboe, I do six things in the following order: 1) put the reed into water to soak, 2) assemble the oboe, 3) run the adjustment from top to bottom, using two unsophisticated tools: a jeweler's screwdriver and a thin, wedge-shaped strip of cigarette paper, 4) brush away the dust from the entire mechanism and the exposed part of the instrument's body with a fine camel's-hair artist's brush, 5) test the reed by "crowing" (in the normal – that is,

"average" – embouchure, one should hear Cs in two octaves, with the lower octave appearing in the sound slightly later than the upper octave), 6) begin the session with an established practice regimen (that's another article). As I have recommended soaking reeds for 15 minutes, it is surely apparent that running the adjustment takes about ten of those minutes. Those ten minutes are time well spent.

A clear and concise guide to oboe adjustment is available from Patrick McFarland in Atlanta. His web address is www.mcfarlanddoublereed.com.

One final word about adjustment: there are oboe dealers who will, for a handsome additional fee, place Teflon inserts into the adjustment screw cylinders to secure the adjustment in place. Don't let them do this! That's exactly the same in principle as getting your violin in tune and then gluing the pegs in place in order to keep it there!

There are a few more things that must be done on a regular basis to keep an oboe playable:

- The entire mechanism must be oiled monthly (I set aside an hour each month to oil my bicycle chain and the mechanisms on my oboe and English horn: I do all three of them in that dedicated hour so that none of them is ever overlooked). One small drop of the finest-grade machine oil should be applied to each contact point, including split sleeves. Use a needle-type oiler for this.
- The bore of the instrument should be lightly oiled at least monthly (in dry climates, I recommend every other week). I use sweet almond oil, applied very sparingly (I have a designated cloth pull-through swab for this).
- The bore must be dried after playing. Use a cloth pull-through swab not a feather.
- A feather may, however, be used to discourage water from accumulating under the keys. After playing for about fifteen minutes, when there's a stream of water running down the back of the bore, insert the feather into each of the oboe's joints in turn and twirl the water around the bore, coating its entire surface. Note that this procedure is no substitute for drying the bore.

## 3. Lies, damned lies and statistics

There is probably more bad oboe-playing advice floating around in the ether than bad advice for the playing of any other wind instrument. The main reason for this is that playing the oboe is such a complicated project to begin with: players therefore (understandably) cobble together all sorts of weird compensatory "systems" to overcome its difficulties, and things that "sort of" work tend to get propagated among succeeding generations of students like the crystal spheres of medieval astronomers. The dismantling of such a structure is such an agonizing process that one would be sorely tempted to leave it in place, were it not for the fact that it invariably breaks down at some critical juncture (a satisfactory *diminuendo* is unattainable, or the low notes will not speak in *pianissimo*, or the third space C is consistently sharp).

Needless to say, it's far better for everyone concerned if only *good* playing habits are established from the outset. But this presupposes a degree of careful and expert oversight that is not likely to be available in, say, a mixed beginning woodwind class; nor is the non-oboe-playing band director likely able to furnish it in any case. (This is certainly not meant as criticism: you would hardly want *my* advice on playing the trombone, even though I know what slide positions produce which pitches, or the snare drum – my ability to calculate a roll base notwithstanding.)

There are far too many issues here to cover in an article of reasonable length, but I will address a few salient points.

## Air

We call the oboe a "wind instrument" – not a finger instrument or a tongue instrument. This means, quite simply, that most of the problems young players encounter can be successfully addressed by *first* attending to the wind.

In a majority of cases where students tell me they have a tonguing problem, I discover almost immediately that the problem is with the air not the tongue. The tongue is working fine (it moves very quickly); the problem is that the oboe is not responding as quickly as the tongue is moving, either because the oboe is out of adjustment and therefore leaking (which is, at the end of the day, an air problem), or the air stream is not reaching far enough down the bore to set the confined air column into a usefully energetic degree of vibration. (Note that so-called tonguing problems are much more likely to manifest themselves in long-tube, low-register notes than in notes like third-space C!)

There is a simple formula that has wide application and great corrective power: the fingers and the air should be thought of as being in a never-ending race to the bottom of the instrument (in a descending scale this is very easy to visualize), and the air absolutely *must* win that race every time. That is to say, the air must always be projected farther down the bore than the lowest tone hole covered. A good guide is to notice where the fingers are at any given time: the air must outstretch the one farthest down the tube. This is at least as much a matter of air *speed* as air *volume*. One can direct an otherwise limited stream of air a great distance very quickly – as young students are perfectly capable of doing when they blow out the candles on their birthday cakes. The first corrective measure to apply is: blow *faster* and *farther*.

As broadly applicable as this formula is, it is not of course the whole story. Notice that the oboe is a cone not a cylinder: it is *very* small at the top. This has some important acoustical ramifications. One is that high notes tend to be much "smaller" in sound (relatively dull and non-ringing) than low ones; also, overblown notes (notes "blown into" the upper octave with the aid of one of the octave keys) tend to be out of tune with the same pitch classes in the lower octave. As one progresses up the tube to the left-hand high notes, one will notice that, unless corrective measures are taken, those high notes are noticeably *flat*. (Try this experiment: play a third-line B, then without making any other adjustment, simply open the side octave key. Notice the result!) The inference is inescapable: as one progresses into these high regions, one absolutely must energize the air stream: the higher the pitch, the greater the air *volume* required.

There is a crucial difference between the oboe and every other wind instrument. I've already hinted at it: the top of the oboe's bore is very, very small (look inside the reed well – you'll see how tiny it is). The reed opening is, of course, even much smaller than that. The implications are profound: the breathing system that works for every other wind instrument *absolutely will not work* for this one. The *last* thing the oboist needs to do is "tank up" in the way that other players are encouraged to do. It's actually a very good idea to teach the young oboist to play any opening phrase on just the residual air in the lungs after a gentle exhalation – this is the "equilibrium air" that keeps the lungs inflated. It's easy to understand why this is so: it is physically impossible to empty a full inhalation through the tiny oboe – at the end of any phrase you care to name, you will be left with a great residual store of air. Of course, the blood stream coursing through the capillaries in your lungs will meanwhile have drained that air of its oxygen, and you're left with

nitrogen. If you make the mistake of inhaling on top of that, the problem is much compounded by the end of the second phrase. And in no time at all, you'll be gasping for oxygen even while your lungs are packed full of useless, "stale" air. Learn this as a maxim: oboists do not run out of *air*; they run out of *oxygen*. Accordingly, the best approach is as follows: start playing with the reserve only. At the end of the first phrase, inhale gently (try to take in only enough to replace the reserve). If anything's left over at the end of the second phrase, exhale it and start fresh (but *not* with a massive "gasp"). What works for the tuba does not work for the oboe.

Don't simply take my word for anything: test my recommendations. Try this: beginning with only the residual air in the lungs, start counting aloud. Notice how far you get before you run completely out of air. And realize that the opening you've been putting that air through – your throat – is *much* larger than the opening at the top of an oboe. Were it not for fear of someone's taking it to extremes, I'd even advise – with Joe Robinson – that oboists *exhale* before playing.

There are two more "wind" issues that bear closely on the parameter to be addressed next. First, I absolutely *do* inhale through my nose, without removing my mouth from the reed (why would I want to disturb a good setup – *especially* before an unreliable high note, say?). There is no good reason why the oboist should inhale in the way so many are unthinkingly taught. Second, I absolutely *will not* inhale on the conductor's upbeat and begin playing on his downbeat. That's compressing too many activities into far too small a fragment of time. To the extent that I inhale at all, I do so *well in advance* of his upbeat, place the reed appropriately for the first note I must play, set my tongue against the reed, and set in force the abdominal pressure that will expel the air through the oboe the moment I pull my tongue back from the reed (what I just described, by the way – the use of the tongue as a valve not a mallet – is precisely the way the tongue must be used *at all times* while playing the oboe). I use the conductor's upbeat only to determine what the tempo, dynamic level and style of the downbeat are to be (so his upbeat – along lines of earlier articles – had better be accurate and communicative!).

## Embouchure

This is a *very* sticky wicket. Let's begin by clarifying the word: strictly speaking, it is less accurate to say one *develops* an embouchure than it is to say one *uses* the *bouche* (mouth) he happens to have, in the service of playing a wind instrument. (One most certainly must *strengthen* the mouth in order to play the oboe.) The most important principle of embouchure formation is this: **the oboe is played in a basically open mouth *not* with lip-covered teeth.** You can easily find tons of bad advice where the oboe-appropriate embouchure is concerned. Some teachers suggest that the mouth be configured so that the upper and lower teeth are opposite each other. This is utter nonsense – try it, and you'll see how you must thrust your jaw to line up your teeth. Where is one to put the reed, if the teeth are in that position? At what angle would one be obliged to hold the oboe? You will read in some method books that the lips must be rolled over the teeth. This is *worse* than nonsense, because it will keep the player from developing any real strength in his embouchure *ever*, and will so constrict the vibration of the reed that all he will ever produce is a thin, obnoxious, ugly tone and uncertain intonation (usually sharp, especially in the short tube area).

It is just as nonsensical to rely on detailed descriptions and pictures of an "ideal embouchure" as it is to assume that a certain number and pattern of scrapes will yield an ideal reed *regardless of the material you began with*. No two mouths are alike: therefore, no two embouchures are alike. Don't bother looking at a picture – it can only mislead you.

A good way to begin proper embouchure formation (an open mouth not lip-covered teeth) is to relax the entire face completely. Take care to ensure that there is absolutely no tension anywhere. Then, without introducing tension into the jaw, open the mouth slightly. With the oboe closely aligned with the front of the body (*not* projecting trumpet-like out into the room), lift the instrument just far enough that when the lips close around the reed, about a third of the back (that's everything beyond the tip) will be exposed outside the mouth. As you close around the reed, draw the lips "in" as equally as possible from every direction (you may have to spend some time with this, discovering then developing muscles that you didn't know you had). At no time do the teeth come into play: pretend they aren't even there. When you have a good enough "seal" around the reed to guarantee that no air will leak around it, you are ready to start playing. Listening carefully to the result will let you know what adjustments you need to make: whether the musculature needs to be harder or softer, whether the reed needs to be farther in or farther out, whether the air needs to be stronger or gentler.

One of the reasons you can't expect to look at a picture to discover what an "ideal" oboe embouchure is, is that you must adjust your embouchure continually in many subtle ways as you play in the oboe's various registers, and at different dynamic levels (the embouchure is literally on an uninterrupted continuum of adjustment as one makes a *crescendo* or *diminuendo*). Infinite flexibility is called for. There are essentially two embouchure issues that must be addressed constantly and creatively as one plays, and their essential nature can be understood by means of two very simple experiments. We will explore these parameters using only the reed of the oboe.

The first is the amount of reed exposed *inside* the mouth at any given time. It is of course this portion of the reed that vibrates freely as we play. Start with an "average" amount of reed in the mouth: an exposure of about one-third of the back of the reed *outside* the mouth is a good way to begin. Start blowing through the reed with an "average" air stream (average volume and pressure). Now, without adjusting the air stream in any way, gradually move the reed in and out of the mouth, rolling the lips in with the reed and back out as you withdraw it. As you take more of the reed into the mouth, notice what happens to the pitch (it goes up), the dynamic (it becomes louder), and the tone color (it becomes brighter). File that information away.

The second parameter's characteristics are established by the following experiment: taking the same average amount of reed into the mouth as before, and using an "average" air stream without adjustment of any kind, gradually open and close the mouth in alternation (that is, decrease and increase pressure on the reed: "chew"). As you open the mouth, notice what happens to the pitch (it falls), the dynamic (it rises), and the tone color (it doesn't change much). The results you obtain with a more closed mouth are of course predictable. File that information away.

Now imagine that you are playing a phrase that ascends to the high notes of the oboe. Recall what I said about them earlier: that they tend to be flat, small in sound, and dull and non-ringing. One of the two embouchure adjustments you just experimented with will fix all three of those (related) problems with a single gesture (guess which one!). And this, unfortunately, is precisely the sort of thing that fingering charts cannot tell you. In my judgment, the fingering for high B is: first finger left hand, side octave key, reed *in* and air *fast*. *Voila!* – you have a usable and convincing high B. As an experiment, try fixing the high B problem any other way. If you do it by biting, you will of course raise the pitch (you will probably over-shoot), but you will in the process produce a tone even smaller and uglier than it was when the pitch was flat. (Note this:

generally speaking, the higher the music goes, the more reed must go into the mouth, incrementally; and of course the reverse is true as well.)

On the other hand, suppose you need to make a *diminuendo*. Intuition tells you that you need to gradually reduce the air stream to make the sound quieter, and experience tells you that as you do so, the pitch will fall – which of course you cannot live with. But the second experiment above taught you that increasing the pressure on the reed both reduces the dynamic and raises the pitch. Your solution is therefore obvious: to make a *diminuendo* you back off the air, taking up the pitch slack with increased pressure on the reed ("chewing") *in direct proportion*. The exact opposite is true of a *crescendo*; for just as we do not wish to go flat as we get softer, we do not wish to go sharp as we get louder. So as we increase the air to raise the volume, we also open the mouth (which reinforces the increase in volume even as it prevents the pitch from rising).

When we were conducting the first experiment above, note carefully that I said the reed must be *rolled* in (actually, I said the lips must roll in with the reed, which comes to the same thing). Notice that I did not allow for the reed to *slide* in. One can in fact get away with sliding the reed *in* – but remember that sooner or later, what goes up must come down, and that's when you're going find yourself in a world of hurt. If you roll in, however, you can subsequently roll out.

Is your low register loud and duck-like? Take less reed into the mouth, or roll out. Long-tube notes are extremely stable: rolling out will hardly affect their pitch at all. But it will certainly damp all those wild overtones that make your low D inappropriately bright, and will make you much easier to listen to. Happily, it will also reduce your volume. (The oboe is a cone: small at the top, big at the bottom. Its sound corresponds to its lateral section. Our job is to turn that cone of sound upside down, so that our rising phrases – sensibly enough – get louder and more brilliant, and our falling ones grow softer and more tranquil. This is done by creative use of the air and the embouchure. We must be flexible: we are not automatons. We must carefully monitor the quality of the sound we produce at all times, and we must be especially careful of pitch accuracy. If you introduce a corrective procedure in small increments and the result gets better, by all means do more of it. If the result is worse, by all means try something else – such as its opposite.)

## Position of the oboe relative to the body

Much fallacious information has entered the idea stream with respect to this issue. Contrary to some widely-disseminated "schools of thought," each player must determine his playing position according to his own requirements: no two players are exactly alike in mouth and facial structure. The angle at which the reed ideally enters any particular player's mouth will determine that player's proper playing position. There is however a general principle that is helpful: all other things being equal, playing with the oboe *closer* to the body will yield a more focused sound and better control over several other aspects of playing – tonguing notable among them. Don't look at a photograph to determine proper instrument position: it can only mislead you. Don't assume that just because so-and-so holds his instrument at an angle of 40º, that angle will work for you. The only way to determine your correct playing position is by experimenting: gradually lifting and lowering the bell of the oboe as you play long tones (the bell describing an arc whose focus is your mouth), and discovering which angle gives you the best sound and most consistent response.

## Hand position

Bad hand position is not uncommon among young oboists. Fingering charts are at least partly to blame; another reason is the unusually wide finger spread made necessary by the layout of the instrument. It's easy for young players to fall into traps of their own making as they seek ways to deal with a finger spread that's wider than that of any other woodwind instrument.

In a nutshell, "bad hand position" is anything that reduces dexterity and makes already difficult passages either more difficult or impossible. As with mouths and facial structures, no two players' hands are exactly alike, and we are thus obliged to rely on useful generalizations. (Don't bother looking at a photograph – it can only mislead you. Fingering charts are just as misleading, for a very good reason: they present the various finger positions as a series of static "ups" and "downs" finger-by-finger, while saying nothing about how you get between any two of those configurations.) There are several things to keep in mind:

First, *all* the fingers must be curved at *all* the knuckles *at all times*. That is to say, lifting a finger does not (must not!) involve straightening it, nor does reaching for the low B♭ key. You have far more vertical control (that is, in lifting and lowering) over curved fingers than over straight fingers. Don't take my word for it: test my claim on a tabletop.

Second: unless they are otherwise engaged in momentarily appropriate functions, the fingers must *at all times* be positioned directly over the keys to which they are primarily assigned. The RH third finger in particular must be monitored to make certain that this imperative is being honored. If that finger is being employed to produce an F in the key of F major, once the musical line goes from F to E or F to G the third finger must immediately find its way back to a position directly over the D key – it must not hover over the F key. For purposes of this particular aspect of oboe playing, note that the proper position of the left and right hand fourth fingers is directly over the A♭ and D♭ keys respectively (I even recommend that gentle contact with those keys be maintained pretty much constantly, as in typing). The RH fourth finger positioned in that way will be able to find its way to the E♭ key or to the C key with equal ease and accuracy.

Finally, there are three "special cases" that require notice.

One involves the relationship between the half-hole and the thumb octave key. On a well-made oboe, the half-hole plate meets the plateau of the primary key at a gentle enough slope that the player's first finger can easily slide between one position and the other (on a badly-made oboe, the point is moot because the player is already sabotaged in a hundred other ways). Likewise, it should be possible to slide the thumb from the wood of the oboe to the thumb octave key (if this is not possible, bend the key!). Now, as one goes from octave D to octave E (the first requiring the opened half-hole, the second calling for the half-hole closed and the thumb octave engaged), it should be possible by means of *a single motion* distributed between the front and back of the oboe to slur between these notes smoothly. The same applies for octave E♭ to octave F – a configuration much more likely to be encountered in wind band music (and in which case the left-hand F key will have to be employed, as discussed above). In both cases, the motion on the front of the oboe matches the motion on the back of the oboe, and two birds are killed with a single stone. To clarify – and to counter a widely-circulated and utterly erroneous notion: one does not *roll* the first finger onto the half-hole plate – one *slides*. (Obviously, if the player is exerting tremendous pressure on the first-finger key, such sliding will be impossible.) Understand that to roll the first finger while simultaneously lifting and replacing the thumb –

which is what many young players are, unfortunately, taught to do – introduces a tremendous and entirely unnecessary complication. Keeping the thumb either on the wood of the oboe or on the thumb octave key – and *never* floating "espressively" out in the ether – is a good way to tidy up one's technique. (The "*espressivo* thumb" contributes nothing to music-making, so avoid it like the plague.)

Another is the use of the thumb octave key in relation to the side octave key. Contrary to *all* the readily-available fingering charts, the player's thumb must remain on the thumb octave key as the side octave key is engaged: so one really is not so much making a "switch" as making an "addition." There are two good reasons for doing this. One is the eliminating of needless motion: the oboe is already difficult enough without introducing additional complexities. Another is: what goes up must eventually come down. If you proceed stepwise into the high octave, the chances are reasonably good that you will eventually descend through thumb octave territory, so you might as well be set to do so without yet another unnecessary motion.

The third special case is closely related to the matter discussed immediately above. It has to do with the best way of getting from octave G to high A (or octave A♭ to high B♭). It must be clear by now that I advocate the elimination of all unnecessary motion. Many oboists introduce a terribly complicated procedure into their playing when that succession of notes is encountered in a line. They seem to be trying to do at least *two* things simultaneously: pressing the side of the first finger onto the side octave key by collapsing the wrist, and lifting the third finger, more than likely straightening it in the process (many oboists, having been taught from erroneous fingering charts, introduce yet a third motion into this already complex array, by removing the thumb from the thumb octave key). In fact, a single, rather simple motion serves the purpose much better: when one goes from octave G to high A, one *rotates the wrist* of the left hand. This simultaneously raises the third finger from the G key without changing its curvature at all, and depresses the side octave key! This motion is so easy to execute that one could accurately trill this way.

The upshot of all the proceeding is as follows: if the oboist places his hands so that the fingers are directly above the keys primarily assigned to them (including the A♭ and D♭ keys for the left and right hand fourth fingers respectively), with curvature maintained in all the knuckles without exception, the wrists will of necessity rotate to the correct position to make this possible, the right thumb will find its best position beneath the thumb rest, and *voila!* – perfect hand position will have been achieved.

Quoting Benjamin Disraeli, Mark Twain maintained that there are three kinds of lies: I have used his list as the heading of the present section (while mercifully abstaining from the citing of statistics – 76.4% of which are made up on the spot). In the course of ferreting out a few of the many untruths that enjoy wide circulation, I have, needless to say, omitted mention of a great many others. But as a very fine carpenter once told me, a new house is never really finished – only abandoned. We have reached the point where we must move on.

## Evidences of extinction

I began this article with a lament that may have seemed extreme to some readers. I trust I have adequately supported my claims regarding the *reasons* for this looming extinction. Now I want to call attention to the *evidence*.

The extinction of musical instruments – and the tradition of playing them – is documented by a single and compelling piece of evidence (no Exhibit B is needed). That is: *composers stop writing for the instrument in question*. For an example, look through the scores of a couple dozen large orchestral works composed in the second quarter of the 19th Century. Notice how often the ophecleide appears in the orchestration. Now browse an equally large stack of scores from the last quarter of that century and see if you can find a single mention of the instrument. And while you're at it, ask yourself when it was that you last heard one.

It is awfully revealing that even as Hector Berlioz was composing his major works and specifying the ophecleide in the orchestration, publishers brought out his scores with the listing *Opheclëïde ou Tuba*. Those publishers were no fools: they recognized a bad risk when they saw one, and they hedged their bets.

The same thing is currently happening to the oboe. In recently-composed music designed for young bands – music of Grades 1-3, say – you are likely to find one of two things: either a single oboe part (no longer divided, as in other instrument families), pretty much confined to the mid-range of the instrument and doubled at all times by other instruments that are certain to drown it out, or no oboe part at all. It must be obvious that even when the composers and publishers of such music go to the trouble of including the oboe, they do so with the understanding that it's a non-essential instrument. The inclusion of the part, in other words, is a mere concession: it serves no purpose beyond that of making the music more "marketable" by guaranteeing that some poor kid with the bad luck to be saddled with this weird instrument will have something to do for the hour spent rehearsing the piece. Again, don't take my word for it: look through your library.

What makes this situation so alarming is that it still is the case – and is likely to remain so for the foreseeable future – that the public school band programs in this country are and will continue to be the primary hatchery from which the next generation of oboists – and the next, and the next – will emerge. If composers who specialize in the public school band "market" no longer give the oboe serious enough consideration to merit someone's investing the time and effort necessary to play it, where will our future oboists come from? Why would any talented youngster want to play an instrument which, in addition to being dauntingly difficult, is so clearly scorned?

Unlike the case of the ophecleide, the loss of the oboe would be tragic, for two reasons that are easy to illustrate. The first is that some of the most glorious solo lines in the great orchestral works of the 18th and 19th (and first half of the 20th) Centuries were assigned to the oboe, for a host of good reasons. Just try to imagine any of those solo lines – the one in Samuel Barber's Violin Concerto, for instance – played on *any other instrument*. The second reason bears directly on the first: because the demands that composers have placed on oboists are so very, very great (another way of saying it is that they have *entrusted* oboists with some of their best material), an eminent tradition of oboe playing has grown up, especially around the teaching and career of Marcel Tabuteau and – most wonderfully – that of his protégé, the late, great John Mack (many of whose insights appear in this article: the article's subtitle was in fact his M.O.). This tradition is carried on by Mr. Mack's many students, who may be found in the oboe sections of almost every orchestra in this country (when you search for reeds for your students, start there). There never was a great ophecleide-playing tradition. There most certainly is a great oboe-playing tradition. One does not lightly surrender such an achievement.

Teaching the oboe is an extremely arduous undertaking, for all the reasons I have given in this article. But it must also be apparent that the oboe's many challenges have been met, are being met, and *can be met*. I therefore urge directors to take the oboe seriously, commit to teaching it well, and (should the case warrant) reexamine their opinion of and approach to this most wonderful – and currently most neglected – of wind instruments, and do whatever they can to nurture, encourage and perpetuate the great tradition that surrounds it. For those who succeed in mastering the oboe's many challenges invariably find that they hold in their hands a means of music-making that is quite simply without peer, and worth every bit of the effort it took to come to grips with it.