

Nikola KomatovićUniversity for Music and Performing Arts Vienna
nikolakom@gmail.com

**“MODULATE! MODULATE! MODULATE! BUT DO NOT
CHANGE THE KEY.”
THE DEVELOPMENT AND TRANSFORMATION OF
THE TERM *MODULATION* IN THE 19TH-CENTURY
FRENCH THEORY**

Historical sources recount an anecdote about a class on organ improvisation taught by the already renowned composer and organist César Franck (1822 – 1890) and attended by young Claude Debussy (1862 – 1918) in the 1880s. According to this testimony, Franck persistently kept telling his young, self-assured student to “Modulate! Modulate! Modulate!” (‘Modulez! Modulez! Modulez!’); Debussy stubbornly refused to do so, asking his teacher why he wanted him to do that (‘Mais pourquoi voulez-vous que je module’) and professing that he felt very comfortable in the starting tone (‘je me trouve très bien dans ce ton-là’). Of course, the representatives of two different generations had misunderstood each other, but the nature of their misunderstanding remains unclear: was it a matter of style and esthetics or merely terminology?

The term *modulation* is today unambiguously identified with the process of switching from one key to another. However, in the 19th-century French theoretical literature (as well as in European literature in general), the term experienced a long evolution: in line with older discussions in the period of Enlightenment, it was first seen as a much wider concept – a way of tonal manifestation (e.g. in the works of François-Joseph Fétis and Jérôme-Joseph de Momigny) until it later began to acquire its modern paradigmatic features, for example in Anton Reicha’s *Course in Musical Composition* (*Cours de composition musicale*). However, even after *modulation* became synonymous with changing the tonal center, some younger theorists still insisted that the term could be used in a wider sense (Napoléon Henri Reber’s *Treatise on Harmony/Traité d’harmonie*).

This paper aims to present the paradigmatic evolution of the term *modulation* and show that different modern categorizations of tonal changes have roots in its earlier meanings. Hence, one of its aims is to attempt to infer if the abovementioned misunderstanding reflected an esthetic or merely a theoretical and terminological dissension between a composer educated in the first half of the 19th century and his several decades’ younger colleague.

1. Introduction

By the time of the anecdote about Debussy's class with Franck in the early 1880s,¹ the term *modulation* was already consolidated in its modern meaning: the view that it refers to the act of changing the key had become widely accepted.

However, once we delve into the etymology of the word, its Latin root (*modus*, *ad modum*) can also be understood as 'manner' or 'measure' (Avis 2011: 777). Of course, its association with classical Greek and medieval modes (Lat. *modus*) as scales is also inevitable.

These etymological premises give rise to the following question: how did the terms of *modulation* and *changing the key* become identified with each other? How could a term so closely associated with scales as such, major and minor (in French and Italian) or a certain manner-system, which can have a certain duration within the piece, become reduced to the act of merely changing the tonal center?

Although it is virtually impossible to offer a comprehensive answer to this question, a part of the explanation can be inferred through researching seminal French theories on harmony and tonality from the 18th and particularly the 19th century. As we will demonstrate, ideas on modulation and key change had different starting points. In French scholarship, they became identified with each other in the 18th century and then briefly diverged until a new convergence in the late 19th century.

2. Mersenne and Rameau

The seminal treatise published in 1637 by Marin Mersenne, a mathematician and music theorist, can provide a starting point for many elements. The book was published before tonality became widely accepted in practice as the language of music. Of course, the fact that music theory tended to lag behind the practice of composition in the 17th and 18th century also needs to be borne in mind. But there is another striking aspect to Mersenne's book: namely, in ad-

¹ See abstract for details.

dition to the matter of modes, the third volume of the first part of his book entitled *Des genres, des espaces, des systems et des modes de la musique* offers a lengthy discussion of another topic that was to become very popular in practice by the end of the 16th century – the status of the diatonic, chromatic and enharmonic, which he referred to as *genera* (Mersenne 1637: 141–196). The terms of *genre* and *modulation* will be closely associated with each other throughout the following centuries and often seen as synonyms.

The next step forward in terminology and methodology occurred in the first half of the 18th century with the appearance of one of the seminal works in the history of music theory: Jean-Philippe Rameau's *Treatise on Harmony*. Now considered a classic theoretical handbook, at the time of its publication this work was revolutionary in many aspects. The bulk of this treatise – which treats modes and tonality as equal – discusses the nature of chords and the practical side of composition. As far as the terms *modulation* and *modulating* are concerned, Rameau explains that they were derived from the term *modus* (Lat.); however, he does not use them in the sense of a scale as the fundamental pitch and instead uses them to explain the initial tritone, which can be either minor or major. He further uses these terms for the treatment of two relatively similar concepts. In the ninth chapter of the third volume, translated in the English abridged edition as *On the Manner of modulating Harmonically, when a harmonic Progression is given to the Bass*, he touches upon something that could today be described as tonicization without changing the tonal center, providing a detailed and rather modern explanation of its technical execution by using secondary dominants (Rameau ca. 1775: 25–30). On the other hand, the 23rd chapter, *Of Modulation, or the Manner of removing from one Key into another*, discusses the true change of key (Rameau ca. 1775: 72–77). Rameau does not offer a typology, but the context makes it clear enough that his descriptive technical guidelines suggest moving to adjacent keys through shared chords – in other words, diatonic modulation, leaving the manner of implementing this to be decided in line with the composer's own preference, or to paraphrase, as a 'matter of taste rather than rules' (Rameau ca. 1775: 74).

Taken together, these two chapters reveal Rameau's pioneering achievement in music theory and scholarship: his consideration of the manners of changing the key and tonicization (in view of the fact that many European theorists were still

focused on modes at this time); in addition, Rameau was certainly one of the first to use the term *modulation* for both concepts.

As for the term *genera*, unlike the widespread practice of his time, Rameau does not make a clear distinction between them. More accurately, the bulk of his book is dedicated to diatonics, while only one of the last chapters (the 34th) discusses the question of chromatics, offering a phenomenological explanation, with routine technical implications and explanations of upward and downward semitone moving (Rameau ca. 1775: 111–116). Probably the most controversial part of the treatise is the fact that Rameau completely ignores the enharmonic scale as a separate *genus*. This was probably inspired by the creative practice of the author and many other composers, who gradually began to accept equal temperament and all of its possible effects, including enharmonic modulation; however, this quickly brought Rameau into conflict with many thinkers of his time, the philosopher and Encyclopédiste Jean-Jacques Rousseau being the most notable among them.² This paper will not attempt to delve into the bitter and (in)famous quarrel between these two great minds that lasted for half a century, but it is noteworthy that in texts published over the following decades Rameau revised his position several times. Toward the end of his life, however, he remained faithful to his original view of the treatment of modulations and *genera*, completely subjugating the enharmonic to diatonic and chromatic, and used it to (owing to equal temperament) achieve remarkable effects in his own operas, including enharmonic modulations. And although Rousseau, for his part, declared himself a direct opponent of Rameau's, it should be noted that in his *Dictionary of Music* he accepted the possibility of using equal temperament and enharmonic modulation (as Rameau sees it) in works for keyboard instruments, while firmly rejecting them in all other music genres (Rousseau 1768: 198–199).

3. Catel and Reicha

It took Rameau's concepts a few decades to become fully accepted by the academic public in France. They were given full recognition and blessing by the

² On this issue, I suggest an article written by Alexander Rehding: *Rousseau, Rameau and enharmonic furies*. See bibliography for a full reference.

committee of the Conservatoire de Paris in the early 19th century, shortly after the French Revolution, when the Conservatoire decided to entrust the task of writing the first academic handbook to Charles-Simon Catel (Groth 1983: 9–10). Like Rameau's, Catel's very practical book does not tackle the question of tonal genera. Although he treats modulations in a similar manner to his predecessor, among his specific illustrations the author notably lists some examples of changing the key that correspond to enharmonic and chromatic modulations in the modern sense (Catel 1802: 64).

Almost two decades after the publication of Catel's treatise, his book was virtually replaced by another seminal work that would go on to shape multiple generations of 19th-century composers: Anton Reicha's *Cours de composition*. Although not expressly stated by the author, the definition and context of the entire chapter makes it abundantly clear that Reicha distinguishes between the concepts of modulation and key change: "...moduler ne veut dire autre choses que lier, unir ou marier successivement différentes gammes ou Tons ('Modulation means nothing but linking, uniting and successively marrying different scales or keys')" (Reicha 1818: 48). Some of these words seem particularly noteworthy: *linking* 'lier', *marrying* 'marier' and, above all, *successively* 'successivement'. Hence, in this sense the change of key is to be understood as a *fait accompli* – a 'done deal' that meant that one tonal center had been abandoned and another achieved. On the other hand, modulation in itself entails a process or – let's put it plainly – a mode or a manner that musical progression gets introduced into in order to enact a change of key. In this sense intermediary chords (*accords intermédiaires*) play a very important role. Reicha discusses their number and duration in a separate subchapter (Reicha 1818: 53–54). He states that the longer duration of the modulating process – for instance in Haydn's works – allows the change of key, which is at once both gentle and extraordinary: "les plus douces et en même temps les plus extraordinaires" (Reicha 1818: 53).

The author categorizes modulations somewhat differently to his predecessors. Namely, he does not divide them into subcategories in the main chapter, but the examples he provides indicate diatonic and chromatic modulating (Reicha 1818: 53–54). The following chapter is entirely dedicated to enharmonic modulations, i.e. *transitions*, to use the author's own term (which only supports the interpretation that he sees modulation as a process) (Reicha 1818: 63–68). As for the definition of the enharmonic genus (for which he does offer a definition, unlike

the diatonic and chromatic), the author's view seems similar to Rousseau's, and he associates the modern notion of the enharmonic (which derives from equal temperament) with keyboard instruments (Reicha 1818: 63).

4. Fétis and Reber

In the decades when Reicha was still active, a plethora of different theorists and philosophers in the French-speaking world tackled the question of modulation. The deepest mark was made by François-Joseph Fétis, who tried to offer a different typology of keys. Instead of genera, his most important and frequently reprinted book – the title of which is usually abbreviated to *Traité complet*, he offers a solution in tonal *ordres* 'orders' (Fétis 1867: 151–200). His *ordres*, which are often identified with tonality itself throughout the book, are based on the historical evolution of the system from the 16th to the 19th century. The type of modulation used in a composition (if any) depends solely on this. Chronologically there are four *ordres*: unitonic (*ordre unitonique* or *tonalité ancienne*), transi-tonic (*ordre transitonique* or *tonalité moderne*), pluritonic (*ordre pluritonique*) and omnitonic (*ordre omnitonique*). Only the first *ordre* – *ordre unitonique*, which is actually identified with medieval and Renaissance modes due to their nature – leaves no possibility for modulation (Fétis 1867: 163–164). With the establishment of the second *ordre* – tonality in the true sense of the word, which leads to the crystallization of tonic-dominant relations, *transition* becomes possible (as noted by Renate Groth) (Fétis 1867: 165; Groth 1983: 61). The third *ordre*, which according to Fétis emerged in Mozart's time, allows wide usage of the enharmonic – thereby completely refuting a Rousseau-esque understanding of this genus (Fétis 1867: 177). The last type is described by the author as the tonality of the future, because it allows any key to be achieved easily through the use of enharmonic means (the author refers to this *enharmonie transcendante* versus *enharmonie simple* – simple enharmonic spelling) (Fétis 1867: 184).

The theorist and composer Napoléon Henri Reber discusses modulation in the tenth chapter of his comprehensive *Traité d'harmonie* ('Treatise on Harmony') from 1861. In the very first sentence this student of Reicha's explains what his predecessors had merely implied: "The term modulation does not simply signify a change of key (*changement de ton*), but also implies the way (*moyen*) of mov-

ing from one key to another. The art of modulating is contained in the art of the transition effect" (Reber 1880: 43). As for categorization, although a large part of the chapter discusses diatonic modulations (which remain unnamed), already in the first subchapter the author explains chromatic modulations, while the rather short eighth subchapter discusses enharmonic modulations (Reber 1880: 45, 58). It is interesting to note that, from the modern point of view, the examples he lists do not represent 'true' enharmonic but rather chromatic modulations, accompanied by enharmonic spelling (Reber 1880: 58). Another subchapter is dedicated to tonicization – *Modulations passagères* (Reber 1880: 56).

5. Insight into 19th-century practice

So far we have only discussed theoretical treatises; this leads us to the following questions: what is the situation in practice?

Let us examine one segment from César Franck's *Symphonic Variations* ('Variations symphoniques') for piano and orchestra.

284

Allegro non troppo.

F Sharp: D (V)

César Franck: *Les Variations Symphoniques pour piano et orchestra* M. 46 (1886), excerpt for two pianos (Franck 1921: 27–28)³

Through the prism of many non-chordal tones and figurations, throughout the duration of this segment we can perceive only one harmony: the dominant in F Sharp key. The opening part actually represents the final stage of a tonally instable and highly chromatinized section. It is impossible to establish if this is major or minor, although minor seems more likely. The decisive moment is the

³ Graphic editing and harmonic cyphers by the author of this paper.

trill in the right hand which occurs at the same time as the change of key signature and tempo. However, in the auditory sense, the first change occurs from the third bar of the trill, when the semitonal pitch (C Sharp – D) becomes tonal (C Sharp – D Sharp). At the same time, many chromatic figurations disappear and are replaced not only by pure diatonic but only chord tones.

If there is a change from minor to major, it is certainly not decisive: the tonal center and harmony have remained the same. However, in terms of perception, a change did occur: from chromatic to diatonic. The precepts of one Fétis's *ordre* (pluritonic or omnitonic) have been replaced by others (probably transitonic). In this sense, this could arguably be said to represent *modulation of a higher order*, which includes not just a mere change of key but a change of the reference system.

Franck's professor Anton Reicha would have probably offered words of praise for this segment: in its long elaboration of this indirect chord, it meets the criterion for 'correct' modulation – although the key remains the same, the audience perceived a change.

6. Conclusion

This paper suggests that analysts and researchers need to be more cautious in their approach to many terms that have evolved through history, including the term *modulation*. Until it reached its modern meaning – which has been manifestly identified with tonality change – the term went through many stages of contextualization and re-contextualization, both within the framework of tonality and independently of it. Since the late development stage of old church modes, *tonal genera* (or orders) underwent their own evolution and in time became associated with the term *modulation*; today the two terms are considered intertwined and closely related. Hence, this is not to be seen merely as a curious historical fact, but as a very valid argument in the realization of harmonic analysis of 18th- and 19th-century works.

References:

- CATEL, CHARLES-SIMON. 1802. *Traité d'harmonie*. Le Roy. Paris.
- FÉTIS, FRANÇOIS-JOSEPH. 1867. *Traité complet de la pratique et de l'harmonie*. Neuvième édition. G. Brandus et S. Dufour. Paris.
- FRANCK, CÉSAR. 1921. *Symphonische Variationen für Klavier und Orchester*. 2 Klaviere zu 4 Hände. Ed. Emil Sauer. Peters. Frankfurt.
- Latinski rečnik. Srpsko-latinski, gramatika, latinsko-srpski*. 2011. Avis, Alba. JRI. Zemun.
- MERSENNE, MARIN. 1635. *Harmonie Universelle, contenant la theorie et de la pratique de la musique*. Chez Sebastien Cramoisy. Paris.
- RAMEAU, JEAN-PHILIPPE. 1722. *Traité de l'harmonie reduite à ses principes naturels*. L'imprimerie de Jean-Baptiste Christophe Ballard. Paris.
- RAMEAU, JEAN-PHILIPPE. ca. 1775. *A Treatise of Music Containing the Principles of Composition*. J. French. London.
- REBER, NAPOLÉON HENRI. 1880. *Traité d'harmonie*. Neuvième édition. Colombier. Paris.
- REICHA, ANTON. 1818. *Cours de composition musicale ou Traité complet raisonné d'harmonie pratique*. Chez Gambaro. Paris.
- ROUSSEAU, JEAN JACQUES. 1768. *Dictionnaire de Musique*. Veuve Duchesne. Paris.
- REHDING, ALEXANDER. 2005. Rousseau, Rameau and Enharmonic Furies in the French Enlightenment. *Journal of Music Theory* 49/1. 141–170. <https://www.jstor.org/stable/27639393> (accessed on July 7th, 2018).

„Moduliraj! Moduliraj! Moduliraj! Ali ne mijenjaj tonalitet.”

Razvoj i transformacija naziva *modulacija* u francuskoj teoriji 19. stoljeća

Sažetak

U povijesnim izvorima postoji anegdota o satu orguljaške improvizacije koji je 1880-tih godina mladi Claude Debussy (1862. – 1918.) pohađao kod tada već renomiranoga skladatelja i orguljaša Césara Francka (1822. – 1890.). Prema svjedočenjima, Franck je mladomu i samouvjerenomu studentu uporno ponavljao (cit.): „Moduliraj! Moduliraj! Moduliraj!”, što je Debussy uporno odbijao jer se (parafr.) „osjećao najbolje upravo u polaznome tonalitetu”.

Naravno, među pripadnicima dviju različitih generacija došlo je do izvjesnoga nesporazuma, no postavlja se pitanje je li on bio stilsko-estetske ili samo terminološke prirode?

U današnje vrijeme pojam *modulacija* nedvosmisleno se izjednačava s promjenom tonaliteta. Međutim, u francuskoj teorijskoj literaturi 19. stoljeća (kao i u tadašnjoj europskoj literaturi općenito) taj je termin prošao značajan razvojni put, pri čemu se (u skladu s ranijim diskusijama iz vremena prosvjetiteljstva) najprije najčešće sagledavao znatno šire, kao način tonalnoga ostvarivanja (npr. u knjigama Fétisa i de Momignyja), prije nego što je počeo dobivati suvremene paradigmatске pretpostavke (npr. u „Udžbeniku kompozicije” Antona Reicha). Međutim, čak i kad je *modulacija* postala sinonim za promjenu tonalnoga centra, pojedini teoretičari mlađe generacije nastavili su insistirati na tome da ona može imati i šire značenje („Traktat o harmoniji” Napoleona Henrija Rebera).

U ovom je radu predloženo na koji se način odvijao paradigmatški razvoj pojma *modulacija* te kako različite suvremene kategorizacije promjene tonaliteta zapravo vuku korijene iz ranijih značenja toga pojma. Stoga se, između ostaloga, pokušalo zaključiti i je li nesporazum s početka teksta odražavao estetski ili puki teorijsko-terminološki procijep u razumijevanju između kompozitora školovanoga u prvoj polovici 19. stoljeća nasuprot njegovu kolegi nekoliko stoljeća poslije.

Keywords: modulation, 19th century, French music theories, tonality, harmony

Ključne riječi: modulacija, 19. stoljeće, francuske glazbene teorije, tonalitet, harmonija