Verbs and their mutations: the genetics of conjugation

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1   Introduction

A study of verb conjugations is not likely to make the New York Times bestseller list. But consider what the Italian learner has to cope with: If you list the basic verb forms—person, number, tense, mood, plus past participle and gerund—there are about fifty such forms in all. Hence even for *regular* verbs there are fifty conjugations to learn, not counting the fact that the regular verbs fall into three infinitive types -are/-ere/-ire. When irregularities are taken into account, all hell breaks loose: The tables in [Larousse] give about 110 different patterns, making for $50 \cdot 110 = 5,050$ conjugations. Admittedly, this is a gross overestimate because many verbs are irregular only in certain conjugations, notably the passato remoto. Nonetheless, the task is formidable, and for those whose memory is as bad as mine, it is essential to organize this chaotic mass of data as efficiently as possible. My hope is that the non-standard approach taken here will help others as it has helped me. The two key ideas behind it are (1) an analogy with evolution, in turn contrasted with a mythical Designer; and (2) a "multi-dimensional" approach to verb forms.

It is obvious that languages develop through evolution, not "design". I like to think of irregularities in the verb forms as *mutations*, because there is a verb—to mutate—that goes along with the noun and and highlights the useful analogy with biological evolution.[1] One

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[1] It would be fun to import the term "singularity" from mathematics, and so for instance refer to verbs such as *essere* as "isolated singularities". But this would risk turning this chapter into nothing but an elaborate in-joke for mathematicians.

can even view certain verb forms as obtained from others by using a DNA-like template, causing mutations to be replicated from one form to the next. On the other hand, it can also be a useful and amusing exercise to postulate a Designer of the Italian language. One can deduce, for example, that this mythical Designer was extraordinarily prejudiced against the letter "u" as a marker for verb forms. If only he/she had made systematic use of this perfectly respectable vowel, life would be much easier for Italian learners; we'll see many examples of this below. At times the "design" of the vowel markers appears not to have been thought through at all. The four—a, e, i and o—are shuffled about *ad hoc* as conflicts with already established uses arise.

Verb forms are multi-dimensional in the sense that they depend on four basic parameters: (1) person (first/second/third); (2) number (singular/plural); (3) tense (past/present/future + variations thereon); and (4) mood (indicative/conditional/subjunctive/imperative). In an introductory course one can't very well avoid proceeding in a linear order: First one learns the present indicative in all person/numbers, then similarly for the passato prossimo, future and so on. With hindsight, however, for the purpose of memorizing the hundreds of conjugations it is more efficient to hold certain well-chosen parameters fixed while letting others vary. The most striking illustration of this principle is that the first and second person plural conjugations are remarkably regular across all tenses and moods, including the notoriously irregular passato remoto. Learning these separately allows one to concentrate on just the three singular forms and third person plural.

Note: I'll make use of the standard linguist's device of putting an asterisk * in front of intentionally incorrect examples.

2   Infinitives, stems and markers

2.1   Definition of infinitive types, stems and markers

Infinitives fall mainly into three regular *types* according to their endings: -are, -ere, -ire, for example: parlare, credere, partire. Deleting these endings from the infinitive results in what we'll call the *verb stem*, for example: parl-, cred-, part-. In addition there are the more eccentric -rre verbs, namely the -arre, -orre, -urre verbs such as *trarre, proporre, condurre.* In these cases we delete "rre" to form the verb stem.

The various conjugations are obtained from the stem by attaching various combinations of letters that I'll call *markers.* Typically the marker has three components, indicating type, tense/mood and person/number. As an ideal example, let's take the third person plural of the imperfect indicative:

$$parl + a + v + ano = parlavano$$

The "v" is characteristic of the imperfect indicative (in all person/numbers), while "ano" marks the third person plural. The "a" marks the type, i.e. that the verb in question is an -*are* verb. Similarly, we have *credevano* and *partivano*, which differ only in the type marker.

2.2 Effective and defective conjugations

In the example just given the conjugation is *effective*, meaning that it is uniquely determined by the markers: The word *parlavano*, even if taken out of context, is unambiguously the third person plural imperfect indicative of an *-are* verb. In particular, the person and number are determined by the conjugation; this is true for most conjugations in Italian and hence personal pronouns are usually omitted as they are already implicit in the conjugated verb.

However, there are a fair number of *defective* conjugations as well. The most prominent example occurs in the present subjunctive, where the 1st/2nd/3rd person singular conjugations are identical. The second person plural present is defective with respect to mood, since its indicative and subjunctive are the same. Other conjugations are defective with respect to type, for example the gerund parlando/credendo/partendo (as opposed to the more logical *partindo). From the gerund alone of credendo/partendo, there is no way to know whether it is an *-are* or *-ire* verb. But this is not a significant problem; more annoying is that the future and conditional are type-defective as well, but with the -are/-ere verbs coalescing instead of the -ere/-ire.

Finally, even the stems can be defective, meaning that the stem doesn't determine the verb, although fortunately this seems to be fairly rare. Examples include the stem *fond* (fondare, fondere), *rod* (rodare, rodere), *sven* (svenare, svenire) and, alas, the very common *vol* (volare, volere). Notice, for example, that the conjugated verb *fonderà* could be the third person singular future of either fondare (to found) or fondere (to melt). Of course, this is unlikely to create a problem in context.

3 Mutations

As explained earlier, *mutation* is my term for irregularity. There are both stem mutations and marker mutations.

3.1 Stem mutations

Many examples of stem mutations will be given later, but there are two broad classes that are worth mentioning right off the bat:

Orthographic stem mutations. These forms are perfectly regular from the point of view of the spoken language; it is only in the writing that the stem changes. For example, *cercare* ⟶ *cerchi* and *pagare* ⟶ *paghi* to preserve the hard c,g respectively. Note that this is an issue only with -are verbs. There are a number of other orthographic mutations, for instance with verbs ending in -iare, but we'll postpone consideration of these.

Anachronistic stem mutations. Some verb stems once had a longer form. When the contemporary conjugation relapses into the old form, we call it an anachronistic stem mutation. The most common verbs of this type are *fare*, *dire*, *bere*, which at one time had the longer forms *facere*, *dicere*, *bevere* with stems *fac*, *dic*, *bev*. This explains conjugations such as facevo/dicevo in the imperfect indicative, and *bevo* in the present indicative. Some of the -rre verbs also appear to have undergone stem revisions, although I don't know if this is

really the explanation or not. For example *condurre* $\longrightarrow$ *conduco* and *proporre* $\longrightarrow$ *propono* (first person present), suggesting that at one time the stems were *conduc* and *propon*.

3.2 Marker mutations

Marker mutations can be illustrated by one of the most commonly examples: the sc-mutation found in certain -ire verbs, such as capire. If it were regular the singular present indicative conjugations would be **capo/capi/cape*, but these have mutated to *capisco/capisci/capisce*, as well as *capiscono* in the third person plural rather than *capono. As far as I know, there is no way to tell from the stem alone whether or not an -ire verb has this mutation. Many further examples of marker mutations will be found below.

3.3 Replication laws

This brings us to one of the most helpful memory-saving devices in the whole business: *replication laws*. The idea is that in certain pairs (or even triples) of verb forms, any mutation occuring in one of them is faithfully replicated in the other(s). For example, in the present tense the indicative and subjunctive satisfy a replication law; any mutation occuring in one occurs in the other. The sc-mutation mentioned above is an example: capisco/capisci/capisce/capiscono $\longrightarrow$ capisca/capisca/capisca/capiscano. The key point here is that not only does the replication hold for *all* sc-mutating verbs, it holds for *all* mutations whatsoever in the present indicative/subjunctive (well, apart from a few degenerate cases such as *essere*). It is as though a sort of DNA-template was used to produce one from the other, with the effect of transferring the mutated genes intact. In any case, it's a useful concept that I highly recommend to anyone learning Italian.

4 The imperfect present, imperfect subjunctive and the gerund

These come first because they are the most regular of all the verb forms. They are grouped together because the replication law holds for this triple, in that irregularities occuring in one of the three forms almost always occur in the other two (with exceptions, of course).

4.1 Imperfect indicative

The marker for the imperfect indicative is v, the person/number markers are o/i/a/amo/ate/ano, and the type markers are the regular a/e/i. Thus:

parlavo/parlavi/parlava/parlavamo/parlavate/parlavano

Similarly credevo/.../credevano, partivo/.../partivano. The imperfect indicative is therefore *effective* as defined above. There are very few irregularities. Essere, of course, and the usual anachronistic stem mutations: facevo, dicevo, bevevo, as well as conducevo, proponevo, traevo in the -rre verbs. The orthographic stem mutations are absent because

these arise mainly with -are verbs, and since in that case the type marker is "a" in all person/conjugations, no mutation is needed to keep the hard c/g.

4.2   Imperfect subjunctive

The marker for the imperfect subjunctive is *ss*, except in the second person plural where it is a single *s*. The person/number markers are i/i/a/imo/te/ero. Why the Designer didn't use "o" for the first person is a mystery. The type markers are again the regular a/e/i. Thus:

parlassi/parlassi/parlasse/parlassimo/parlaste/parlassero

Similarly credessi/.../credessero, partissi/.../partissero. This conjugation is defective in two ways: First because the first and second person singular coincide, and second because of the bizarre fact that the second person plural here coincides with that of the passato remoto (see below). But there are very few irregularities. Essere changes its stem but follows a similar pattern (fossi/.../fossero). Beyond that the irregularities generally replicate those of the indicative, but with a couple of sneaky exceptions: *dare* and *stare*. Here the "a" capriciously changes to "e": dessi/.../dessero and stessi/.../stessero. In the amusing "Intervista Impossibile" from *Piazza Italia 2*, Signor Congiuntivo laments:[2]

Spesso gli italiani mi trattano male (come sto male quando sento "stassi" e "dassi"!!!).

It's comforting to know that even Italians can make such errors. I feel your pain, amici.

4.3   Gerund

Finally, the gerund is the most regular verb form of all. The marker is -ndo, with type markers a/e/e (i.e. partendo instead of the expected *partindo). There are hardly any exceptions to this rule, not even for essere (che miracolo!). The only irregular cases I'm aware of are the anachronistic stem mutations replicated from the imperfect forms:

facendo/dicendo/bevendo/proponendo/conducendo/traendo.

5   Future and conditional

These conjugations are also quite regular, with one troublesome family of exceptions (the *stem degenerations* below). They also satisfy a perfect Replication Law: Any irregularity that occurs in the future occurs also in the conditional, and vice versa. There are no exceptions whatever to this replication, as far as I know. The type markers are e/e/i; thus parlerò instead of the expected *parlarò, and *parlerei instead of the expected *parlarei.

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[2]Thanks to Roberta and Elisabetta for this reference.

5.1 Future

The marker for the future is "r", with person/number markers ò/ai/à/emo/ete/anno:

parlerò/parlerai/parlerà/parlaremo/parlarete/parleranno,

with the -ere/-ire verbs following the same pattern.

5.2 Conditional

The marker for the conditional is *re*, with person/number markers i/sti/bbe/mmo/ste/bbero, although perhaps it reads easier to think of the marker as again being *r*, followed by ei/esti/ebbe/emmo/este/ebbero. Thus

parlerei/parleresti/parlerebbe/parleremmo/parleresti/parlerebbero,

where that 3-syllable ending on the third person plural certainly makes for some long words. The future/conditional conjugations are effective, but note that in the second person plural we have one of many examples for which the distinction between the pronunciation of single and double consonants is crucial.

5.3 Mutations

As for mutations, first of all there are the obvious orthographic stem mutations: cercherò, pagherò, etc. with the same in the conditional. The standard anachronistic stem mutations do *not* occur in these conjugations: dirò and not *dicerò, etc. This is true also for the -rre verbs, but see below for more details. There are two new mutations that arise:

Contractions: These simply delete the type marker, for example potrò and potrei. A number of very common verbs have this mutation, for example *avere, dovere, andare, sapere, cadere, vedere, vivere.*

Stem degenerations: In this mutation a key consonant, usually "n" or "l" is dropped from the stem, leading to considerable confusion. It seems to be always accompanied by a secondary r-doubling mutation. For example *volere ⟶ vorrò, venire ⟶ verrò, tenere ⟶ terrò*. The trouble with this mutation for Italian learners is that the degenerate forms of the stem are in principle ambiguous: "vo" could come from volare as well as volere, "te" could come from temere as well as tenere, and so on. In the end there is no ambiguity, but it takes some getting used to. Other verbs with this mutation include *rimanere* and *valere*. The good news is that the replication law holds, so that the exact same mutation occurs in the conditional.

-rre verbs: The (conjecturally) anachronistic stems don't occur here, but the extra "r" is incorporated into the marker. Thus *condurrò* and not *conducerò, proporrò* and not *proponerò, trarrò* and not *traerò*. Once again, the exact same mutation occurs in the conditional.

6 First and second person plural

Rather than proceed tense by tense and mood by mood, it's worth noting that the first and second person plural are by far the most regular of all the person/numbers, with the regularity extending even to the passato remoto and to highly irregular verbs such as morire, udire, uscire. So we consider these two cases separately; this will free us to focus on the remaining four person/numbers in the sequel. Since we have already discussed the imperfect tenses and the future/conditional, we simplify further by listing only the present indicative/subjunctive and the passato remoto.

6.1 First person plural

The marker for the first person plural is m in all cases, doubled in the passato remoto. The first person plural is defective in that the present indicative and subjunctive are the same. There is not even a type marker in the present; we have *parliamo, crediamo, partiamo*. Apart from the usual orthographic and anachronistic stem mutations, there are only a few irregularities, but as usual including some of the most common verbs; for instance: *essere* $\longrightarrow$ *siamo*, *avere* $\longrightarrow$ *abbiamo*, *dovere* $\longrightarrow$ *dobbiamo*, *potere* $\longrightarrow$ *possiamo*, *volere* $\longrightarrow$ *vogliamo*, *dare* $\longrightarrow$ *diamo*, *stare* $\longrightarrow$ *stiamo*, *parere* $\longrightarrow$ *paiamo*. On the other hand even such bizarrely conjugated verbs as *morire*, *udire* and *uscire* are regular in the present indicative/subjunctive.

The passato remoto is blessedly simple: *parlammo, credemmo, partimmo*, etc. Apart from the anachronistic stem mutations *facemmo* etc., there are very few irregularities. Besides *essere* $\longrightarrow$ *fummo*, the most noteworthy is the odd $a \longrightarrow e$ mutation in *dare, stare*: *demmo, stemmo*.

6.2 Second person plural

The marker for the second person plural is in all cases *te*. In the present indicative the type markers are the regular a/e/i. while the marker for the present indicative itself is empty: e.g. *parlate/credete/partite*. Moreover, there are even fewer irregularities than in the first person; among the examples listed in the previous paragraph all are regular except for *essere* $\longrightarrow$ *siete*. The anachronistic stem mutations carry over except that *dire* $\longrightarrow$ *dite* and *fare* $\longrightarrow$ *fate*.

The second person plural present subjunctive is again extremely regular. The type markers are dropped and the subjunctive marker becomes *ia* in all types: *parliate/crediate/partiate*. A replication law holds in that the irregularities here are identical to those of the first person plural present, with very few exceptions. For example, *abbiamo* $\longrightarrow$ *abbiate*, and similarly *dobbiate*, *possiate*, *vogliate* etc.

The passato remoto has marker *s*: *parlaste/credeste/partiste*. Again there are very few irregularities, apart from the usual culprits *foste, deste, steste*.

Note the peculiar defect: the second person plural the passato remoto is the same as the imperfect subjunctive.

7   Present indicative and subjunctive

Having disposed of the first and second person plurals in general, we need only consider the three singular persons plus the third person plural.

7.1   Present indicative

The marker for the indicative is empty; in other words, one takes the stem alone and adds the person/number markers. For -are verbs these markers are o/i/a/ano, while for -ere/-ire verbs we have o/i/e/ono. Many mutations, occur, however, such as the anachronistic stem mutations discussed earlier: *faccio*, *dico*, *bevo*, for example. Further mutations in the indicative include the following:

sc-mutation. This occurs in many -ire verbs, e.g. capisco/capisci/capisce/capiscono. As far as I know, there is no way to predict from the stem alone whether a given -ire verb has this mutation.

g-transpositions. This curious stem mutation capriciously transposes $gn \longrightarrow ng$ and $gl \longrightarrow lg$, but only in the first person singular and the third person plural:

- spegnere: spengo/spegni/spegne/spengono

- togliere: tolgo/togli/toglio/tolgono

In the second case we also see some funny business with the disappearing "i". The *g-l* transposition is quite common, including for instance *cogliere*, *scegliere*, *sciogliere*. The *g-n* transposition seems to be rarer, and in fact I can't think of any other examples at the moment.

g-mutations. In these verbs a "g" not present in the stem mysteriously appears in the first person singular and third person plural. Perhaps this is fossil evidence of an anachronistic stem mutation?

- rimanere $\longrightarrow$ rimango/rimani/rimane/rimangono

- salire $\longrightarrow$ salgo/sali/sale/salgono

- tenere $\longrightarrow$ tengo/tieni/tiene/tengono

- venire $\longrightarrow$ vengo/vieni/viene/vengono

Note the second two examples have an additional *i-insertion* mutation in the second and third person singular. Other examples of g-mutations include *valere*, *dolere*.

-rre verbs: The (conjecturally) anachronistic stem mutations recur in *-urre* verbs, and in the second and third person singular of all three types. But in the first person singular and third person plural, the *-orre* and *-arre* verbs undergo a *g*-mutation as well.

- *condurre: conduco/conduci/conduce/conducono.*

- *proporre: propongo/proponi/propone/propongono.*

- *trarre: traggo/trai/trae/traggono.* The double "g" is a new twist.

7.2   Present subjunctive

Let's turn to the good news: The present subjunctive generally takes exactly the same mutations in all of the above cases. The singular persons of the present subjunctive are identical—a fact which has some practical utility, although it lacks the elegance we mathematicians are always seeking. In the singular one simply substitutes marker "a" for marker "o", and in the third person plural marker "ano" for marker "ono"—but wait, "a" and "ano" are already taken by the indicative in the case of -are verbs, so we use "i" and "ino" instead! Evolution always works this way; you have to build on what you've have already. Thus we have the regular cases:

parli/parlino, creda/credano, parta/partano.

To get the mutated cases we simply apply the Replication Law as above. So for example sc-mutation *capisca/capiscano*, g-transposition *tolga/tolgano*, and so on. It works even for some of the weirdest cases like *trarre: tragga/traggano.* There are, inevitably, a handful of exceptions: *essere ⟶ sia, avere ⟶ abbia, dare/stare ⟶ dia/stia, dovere ⟶ debba.* Notice, by the way, that a secondary replication law is in effect here. We don't need to list the third person plural case at all, since even in the maximally irregular cases one just adds *-no* to the first person singular: *siano/abbiano/diano/debbano* and so on.

8   A brief digression: stems ending in a vowel

Suppose the stem ends in a vowel. There are two ways this can happen, both with *-are* verbs: verbs ending in *-iare*, of which there are many, and verbs ending in *-eare*, of which there are few. This puts the Designer in a bit of a dilemma: What to do when the last letter of the stem agrees with the first letter of the marker? Put the vowel in twice, or not?

In the case of *-iare* verbs where the vowel is *i*, the problem arises in the present indicative and subjunctive (and the imperative, which will be ignored). The sensible solution is to use one *i*, and this is the Designer's most frequent choice: *cambiare, cominciare, mangiare, sbagliare, lasciare* and many others all use a single *i: tu cambi*, not **tu cambii, che loro sbaglino* and not **che loro sbagliino*, etc. But the Designer works in mysterious ways, and some verbs such as *inviare* double down: *tu invii, che loro inviino*, etc. To be consistent this doubling should occur in various other conjugations too, e.g. **noi inviiamo*, but the Designer isn't willing to take it that far.

In the case of *-eare* verbs—the only one I know of is *creare*—there is a problem only in the future and conditional, resulting from the type marker *e*. Here the Designer's choice is to go whole-hog and double the *e* in all person/numbers: *creerò/.../creeranno, creerei/.../creerebbero.*

9 Passato remoto

For some purposes, one could get by without knowing the passato remoto. If you want to read novels or write stories, however, then knowledge of the passato remoto is essential. As far as writing is concerned, one could of course choose to write only in the present or the passato prossimo. But writing only in the present tense is too limiting, while—at least to my eye and ear—the passato prossimo is too tedious because of the constant repetition of the auxiliaries *avere* and *essere*. When it comes to reading, there is no choice: The vast majority of novels are written in the passato remoto. A few are written in the present tense, which can be a nice change of pace, and hardly any in the passato prossimo. The only examples of the latter I've come across yet are *Io non ho paura*, by Ammaniti, and *È stato così* by Ginzberg.[3]

Unfortunately, the passato remoto (along with the past participle, to be considered later) is the most irregular by far of all verb forms, and even its regular cases come with a most peculiar and confusing choice of vowel markers. On the plus side, there are the following two striking facts:

1. Most *-are* and *-ire* verbs are regular; only the *-ere* verbs are pathologically irregular.

2. Even within the *-ere* verbs, the first person plural and both second persons are extremely regular; the mutations are concentrated in the first person singular and the third person.

These two patterns are so consistent and striking that they must have some evolutionary explanation. Why is it that the *-ere* verbs are so irregular and not the others? (This happens also with the past participle.) Why are certain person/numbers so irregular and not the others?

Regarding item 2, we have already noted that the first and second person plural are very regular in all tenses and moods. The second person singular keeps the standard type markers *a/e/i* and the *st* found in the plural, but with final marker *i* to indicate the singular: *parlasti/credesti/partisti*. There are very few exceptions (examples being the usual *fosti/desti/stesti*, not surprisingly). Alas, this is not very helpful because the second person passato remoto is hardly ever encountered in reading[4], or needed in writing. Novels narrated in the first person will at least have the easy second person plural now and again, but for the most part the irregularities occur precisely in the forms that are most commonly used: third person, and first person singular.

But that's the way life is, and one has to find a way to deal with it. We've already taken the first step, which is to limit the problem to the first person singular, third person singular, and third person plural; all conjugations below are listed in that order. I also find it helpful to assume the existence of a Designer, who I then pyschoanalyze in an attempt to understand his weird choices of markers—I say *his* because a woman surely would have been more sensible.

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[3]Whether the choice is remoto or prossimo, it is always combined with the imperfetto, in ways that have no direct parallel in English. This interesting phenomenon will be discussed in another chapter.

[4]Pratolini's *Cronaca familiare* is an interesting exception. It is in the form of a "letter" to his dead brother, and so much of it is in the second person singular passato remoto.

9.1 The regular cases

Let's begin with an example of what I mean by "weird marker choices". My favorite is one I came across by chance in *Il Silenzio dell'Onde*, by Gianrico Carofiglio. The novel is written in the third person.

> *Archiviò l'idea quasi subito. Uscì di casa e fece la strada...*

"He dismissed the idea almost immediately. He left the house and went out along the street..."

All three verbs are in the third person singular passato remoto. The first has marker *o*, normally associated with the first person. The second has marker *i*, normally associated with the second person. And the third—at last!—has marker *e*, normally associated with the third person. The first two have accents, it is true, and moreover these accents are easily recognizable in speech, i.e. when listening to audiobooks. But the unexpected use of *o* and *i* is disorienting, to say the least.

Here are the regular conjugations of the passato remoto (*fece* above is irregular, even after taking anachronisms into account). For some reason there are two alternatives for *-ere* verbs, but the second will henceforth be ignored.

- *parlare* ⟶ *parlai/parlò/parlarono*

- *credere* ⟶ *credei [credetti]/credé [credette]/crederono [credettero]*

- *partire* ⟶ *partii/partì/partirono*

The third person plural is gratifyingly simple: Drop the final *e* of the infinitive, then add *ono*. Of the remaining six the only one that makes any sense is *credé*, which is like its present indicative counterpart but with an accent added. But what the Designer was thinking with *parlò* is hard to imagine. Why not *parlà*? Or for that matter *parlu*; anything other than *parlò* which is the *first* person singular with an accent thrown in. Looking at the first person in the above table, it appears that the Designer was trying to be helpful by using the simple formula "stem + type marker + i" (to an English speaker the doubled *i* in *partii* both looks and sounds a little funny, but that's our problem). But why *i*? Clearly *o* would have been the logical choice in this formula: *parlao*, etc. For the *-ire* verbs the situation is almost comical: *parti/partì/partii* represent respectively the singular cases of second person present, third person passato remoto, and first person passato remoto.

So it's all a bit strange for the Italian learner, but you get used to it. Which is a good thing, because this is the easy part.

9.2 The irregular *-ere* verbs

Most *-ere* verbs are irregular in the passato remoto, and indeed are subject to stem mutations so violent that they might better be called stem mutilations. The one bit of good news is that the markers are very consistent: *si/se/sero*. Hence if you know the stem mutation, the rest is easy. The Designer's big mistake here was not putting a vowel at the front of the markers (and it would have been so easy!—he could have just put in the type marker);

the fact that they all begin with the consonant *s* forces a mutation in the stem; otherwise the conjugation would be unpronounceable. Presumably, this is why the stem mutations generally involve deleting its last consonant, or sometimes the last two consonants. The following lists of examples are generic; every rule has its exceptions.

- -cere verbs delete the c: *vincere* ⟶ *vinsi/vinse/vinsero*.

- -dere verbs delete the d: *chiedere* ⟶ *chiesi/chiese/chiesero*. Many common verbs have this form, e.g. *decidere, chiudere, perdere, mordere*.

- But some -dere verbs like to double the "s": *concedere* ⟶ *concessi/concesse/concessero*. *Succedere* is another example.

- -ndere verbs delete the nd: *prendere* ⟶ *presi/prese/presero*. *Rispondere* is another of this type.

Stems involving *g* in one of the last two positions generally delete it:

- -ngere verbs: *fingere* ⟶ *finsi/finse/finsero*. *Stringere* is also of this type.

- -gnere verbs: *spegnere* ⟶ *spensi/spense/spensero*

- -rgere verbs: *spargere* ⟶ *sparsi/sparse/sparsero*.

- -gliere verbs also delete the *i*: *togliere* ⟶ *tolsi/tolse/tolsero*.

One could continue the above list with other general cases of consonant deletion, but that's enough for now. Let's instead take a look at some of the more important and/or interesting exceptional cases. The most severe mutations involve vowels as well, making the stem almost unrecognizable. The one consistent feature is that the three forms end in *i, e, ero* respectively.

- *avere* ⟶ *ebbi/ebbe/ebbero*

- *dire* ⟶ *dissi/disse/dissero*

- *venire* ⟶ *venni/venne/vennero*. *Tenere* is the same.

- *rompere* ⟶ *ruppi/ruppe/ruppero*.

- *mettere* ⟶ *misi/mise/misero*

- *muovere* ⟶ *mossi/mosse/mossero*

- *vedere* ⟶ *vidi/vide/videro*

- *parere* ⟶ *parvi/parve/parvero*

- *volere* ⟶ *volli/volle/vollero*

- *sapere* ⟶ *seppi/seppe/seppero*

- *cuocere* ⟶ *cossi/cosse/cossero*

- *vivere* ⟶ *vissi/visse/vissero*

- *conoscere* ⟶ *conobbi/conobbe/conobbero* (Typical useage: Long ago, in a galaxy far, far away, conobbi Obe Wan Kenobe.)

- And last but not least, the out-of-the-blue q in *piacere* ⟶ *piacqui , piacque, piacquero*. Other verbs with *q*, and other mutations as well, include *nascere* ⟶ *nacqui, nacque, nacquero* and *nuocere* ⟶ *nocqui, nocque, nocquero*.

Naturally, *essere* is an exception to the exceptions: *fui/fu/furono* (the *e* is missing on *fu*). The -arre and -urre verbs take a doubled s: *condussi, trassi* etc. But don't get overconfident: the -orre verbs take a single s: *proposi/propose/proposero*.

10   The past participle

10.1   Regular cases

The basic marker is *to*, with type markers *a/u/i: parlato, creduto, partito*. So the Designer finally uses *u* as a marker, but it is totally out of place. What on earth was wrong with **credeto*? The funny thing is that when the chips are down, he cannot bear the thought of *u* after all; most *-ere* verbs are irregular and it rarely gets used.

In any case for the -are/-ire verbs the past participle is very regular; there are only a handful of exceptions that I know of. In fact for -are verbs I can only think of the barely irregular *fare* ⟶ *fatto*. For -ire verbs some important exceptions are *aprire* ⟶ *aperto*, *dire* ⟶ *detto*, *venire* ⟶ *venuto* (note the rare *u*).

10.2   Irregular -ere verbs

The past participle for -ere verbs almost always involves a stem mutation, and frequently a marker mutation as well. The marker mutations that occur are mainly the following, illustrated by example (beginning with the un-mutated marker *to*):

- no marker mutation: *vincere* ⟶ *vinto*

- s-mutation: *decidere* ⟶ *deciso*

- ss-mutation: *connettere* ⟶ *connesso*

- st-mutation: *chiedere* ⟶ *chiesto*

- tt-mutation: *leggere* ⟶ *letto*

As to the stem mutations, fortunately these are generally identical to the stem mutations in the passato remoto, as one can check by perusing the conjugations in [Larousse]. In some cases separating the stem and marker mutations is not so easy, but in any case there does

not seem to be a way to predict the marker mutations from the stems. For example *porgere* —→ *porto* (no marker mutation) but *spargere* —→ *sparso* (s-mutation). But the converse works fairly well, as we show in the next section.

10.3   One-way replication for *-ere* verbs

To some extent the past participle of an *-ere* verb *does* determine the stem for its passato remoto. Since the markers for the latter are very regularly *si/se/sero*, one can thereby economize on the number of neurons required to process the requisite data. I'll illustrate by example. Suppose you know *vincere* —→ *vinto*. Then you have the stem mutation *vin*, so the theory predicts *vinsi/vinse/vinsero* in the passato remoto. And it works! Similarly *chiesto* correctly predicts *chiesi/chiese/chiesero*, and even a really weird example such as *fondere* —→ *fuso* correctly predicts *fusi/fuse/fusero*. Notice also that in the *porgere/spargere* example given above, the past participle yields the right mutated stems *por/spar* and hence the passato remoto. So you can recover the passato remoto from the past participle, but not conversely.

But of course, there are many exceptions too. For example *mettere* —→ *messo* but *misi/mise/misero*. Then there are the really sneaky ones that set you up with a regular past participle—*saputo*, *conosciuto* for example—and then laugh in your face with *seppi*, *conobbi*. Finally, let's mention the -rre verbs: *tratto* is a tt-mutation and *proposto* is an st-mutation, while *condotto* slips in a vowel mutation u —→ o along with its tt-mutation.

11   The imperative

The first word of the first dialogue in my Italian 101 textbook confused me for quite some time: *Scusi, signora, è libero il posto?*

Scusi is the second person singular of *scusare*. So why is this fellow so informal with the signora? It turns out, of course, that *scusi* is the formal imperative. But I don't blame myself for the confusion, as in this case the Designer's choice of markers has degenerated into the outright perverse. Let's see how this came about.

In the first and second person plural—*noi* and *voi*—the imperative is the same as the indicative. So far, so good. In the formal second person one use the third person as though speaking to a woman (or women, in the plural). This peculiarity, found also in Hungarian, will be discussed in another chapter; for now we accept it and focus on the conjugation— which, as it happens, is the present subjunctive. There are reasons for this too, but in any case it sounds straightforward at first. Now, what about the informal second person singular *tu*? Can't we just use the indicative again? *-ire* verbs, check. *-ere* verbs, check. And then *-are* verbs...damn! Now the indicative second person *scusi* is the same as the subjunctive third person, which is already taken by the formal imperative. The Designer's solution: Keep *scusi* for the formal imperative, and use the third person *scusa* for the second person informal imperative. All of which is doubly confusing because for the *-ere/-ire* verbs the letter *a* is the marker for the subjunctive and hence for the *formal* imperative.

This system is frustrating for Italian learners because we would very much like to be polite when speaking to Italians, especially in Italy, and the scrambled set of imperative

markers makes this extremely difficult. In conversation there is little time to ponder, and even less so when imperatives are involved. The polite imperative might end in "i" and the informal in "a", or it might be the other way around. If you don't remember whether the verb in question is of type *-are*, *-ere*, or *-ire*, you're screwed. It's enough to make you want to shout: *Vattene signora! Questo posto è il mio!!*

Of course, the real culprit in all this is the defective set of conjugations for the present subjunctive. If the Designer had had the foresight to make the subjunctive effective, preferably through judicious use of the marker "u", all this trouble could have been avoided. A formal imperative *scusu*, for example, would have been perfect. I have proposed this solution to the Accademia della Crusca in Florence, but have yet to receive a reply.