Towards a Particularistic Metaphysics of Recipes

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Abstract

In this paper, I attempt to offer a new metaphysical account of recipes and to make sense of their relations with the authenticity of dishes. In doing so, I first show the untenability of any Platonistic characterisation of recipes, according to which recipes are universals instantiated by dishes. I do this by showing that recipes play a critical explanatory role for the sharing of culinary properties between dishes. That is, there are certain grounding relations between recipes and dishes that would not hold if recipes were Platonic universals. Then, by developing some of Andrea Borghini's constructivist insights, I offer a different account that identifies recipes with abstract cultural artefacts, which are tracked down through their history and recordings. According to this view, which draws on Kaplan's account of the metaphysics of words, recipes come into existence through a mental or written down introductory stage. Recipes are then shared and handed to future generations through new, mental or written down, stages. Recordings are stages of a particular recipe when they are historically connected to the introductory stage of the recipe in a proper way, and the dish they encode satisfies the authenticity judgment, as well as certain other underlying conditions. Finally, I discuss whether recipes should be identified with documents or artefacts and suggest that they are better suited to the latter.

Keywords: Recipes, Universals, Stage/continuant, Artefacts.

Introduction

When talking about food, we use many culinary terms, and largely interchangeably. Of course, because the goal of the present paper is to settle a precise metaphysical characterisation of recipes, the language must be regimented in order to avoid ambiguities and adequately show the relations between recipes and other entities. Following Borghini we can distinguish between dishes and recipes:

> In a nutshell, a dish is the stuff, a recipe is the idea. More precisely, a dish is a specific concoction of (typically perishable) edible stuff, such as those specific actions that led to this slice of pizza sitting on my kitchen counter. On the other hand, a recipe—in first approximation—comprises the array of repeatable aspects

of a dish whose replication would deliver a dish of the same sort (Borghini 2015: 721).

As well as stating what recipes consist of, Borghini states that recipes are ideas, yet the notion of 'idea' remains utterly ambiguous. An idea can be identified with either a psychological entity or, more generally, with some sort of abstract entity. In the first case, an idea would be identical with a mental state or a kind of mental state. However, this cannot be the meaning we require, since it is evident that a recipe can be written on a book or a website. Hence, recipes must be identified with some sort of abstract entity. When it comes to the nature of recipes and the relation between them and dishes, there are different theories in the literature (Borghini 2015: 723 ff.). In what follows, I will restrict the discussion to Platonism and constructivism. While the former will be my polemical target, the latter provides many insights that can be developed and integrated into the new theoretical position I defend.

As an account of recipes, Platonism can be inferred from Boorstin's (1964: ch. 3) work, which regards cultures, and bits thereof, as essentially static, and thus definable in terms of universal properties.[1] Recipes are characterised as eternal types, essentially defined by a list of ingredients and procedures, and they are considered to exist independently of the corresponding dishes.[2] Given their static and abstract nature, recipes are identified with universals,[3] that is, entities having instances (van Inwagen 2014: 30) and thus being repeatable (Loux & Crisp 2017). Platonism is a *prima facie* compelling theoretical position in accounting for recipes with an 'algorithmic' structure, such as cocktails, pastries, and some industrial foods. Moreover, the Platonistic identification of recipes with universals is consistent with the fact that one and the same recipe can be followed more than once, at different times and places, in the same way in which a book can be printed more than once, at different times and places. In other words, Platonism straightforwardly accounts for recipes being wholly present in distinct dishes. Lastly, it is associated with a strong form of instantiation-realism, in that a dish D instantiates a recipe R if and only if D has been prepared with the (kinds of) ingredients and procedures specified by R. That is, no entity distinct from those ingredients and procedures plays a role in the relation of instantiation.

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[1] For a critical discussion of Boorstin's understanding of cultures and their authenticity, see (Sims 2009: 324-26).

[2] Actually, Platonism also comes in a milder version, according to which, despite the possibility for a recipe to change all of its ingredients and procedures through time, there is still an essential core of ingredients and procedures for every version of the recipe (Borghini 2015: 724). I do not need to discuss the two strains of Platonism separately, since the argument I bring in the next section aims to undermine their shared trait of considering recipes, fine-grained as they like, as Platonic universals.

[3] I do not need to endorse any metaphysical view about the distinction between properties and universals. I will state that (i) there are perfectly natural properties (Lewis 1986a, 1986b), (ii) naturalness comes in degree, so that a property F is more natural than a property G iff the definition of F in terms of perfectly natural properties is simpler than the definition of G (Lewis 1986b: 61), (iii) natural kinds are universals identical with perfectly natural properties and some relatively natural property. Specifically, the relatively natural properties that are identical with natural kinds are all those whose naturalness is useful to the sciences which study and make use of them. I will thus use the terms interchangeably if not otherwise specified.

A competing approach is constructivism, according to which recipes are "the outcome of a selection process ultimately guided by human fiat" (Borghini 2015: 724). Although there are different sketches of it in the literature (e.g. Heldke 2012, Jackson 1999, Sims 2009), constructivism, as a metaphysical account of recipes, has been mainly developed by Borghini (2015). According to Borghini's constructivism, recipes are socially-dependent entities, constitutively dependent on speech acts for their existence (2015: 727). In this respect, then, constructivism critically differs from Platonism. A further difference concerns the relation of instantiation: according to Borghini's constructivism, a necessary condition for a dish to instantiate a recipe is that the author performs a speech act, consisting in a declaration of intention to replicate that recipe. Hence, not only recipes but also dishes are understood as socially-dependent entities. Moreover, recipes are characterised, in an Aristotelian fashion, as ontologically dependent on dishes: recipes do not existentially precede dishes, as in the Platonist framework, but they come into existence, and evolve, together with them (2015: 731). Lastly, the instantiation of the same recipe by any two distinct dishes depends on appropriate relations of imitation. The 'felicity conditions' of these relations of imitation require a cook's expertise, the (contextual) authenticity of dishes, and also the open-endedness of the recipe (2015: 732-36).

There are at least three *desiderata* for a proper metaphysical account of recipes. First, it should characterise recipes in such a way as to allow them to be kinds of entities which can bear the appropriate relation to dishes in order to perform specific theoretical tasks. Second, it should make sense of recipes as human cultural products, thus ontologically dependent on human minds. Third, it should be compatible with the persistence of recipes through time, change, and variations.

In what follows, I aim to fulfil these theoretical *desiderata* by developing a metaphysical account which sides with Borghini's constructivism, but, at the same time, seriously considers inscriptions of recipes and their role in accounting for the production of dishes. The result is a nominalistic view of recipes which, by foregoing any instantiation relation, qualifies as anti-Platonistic in the most robust sense. To this end, I first develop a case against Platonism arguing, in section 1, that, insofar as they are considered as Platonic universals, recipes cannot be characterised as performing the specific theoretical tasks they should be capable of carrying out. Moreover, Platonism would undermine the explanatory role of imitation for the sharing of properties between dishes. In section 2, I argue for a metaphysical account which does without universals by claiming that recipes are continuants made up of concrete recordings that encode dishes. As will become clear, such an account sides with Borghini's constructivism, since it characterises recipes as cultural items: more precisely, as abstract artefacts. Lastly, in section 3, I consider and reject a characterisation of recipes as social documents in favour of artifactualism.

1. Recipes Are Not Platonic Universals

A first difficulty with the identification of recipes with universals concerns the feature of open-endedness. The concept of open-endedness has its pedigree in the philosophy of art:

> A concept is open if its conditions of application are emendable and corrigible; i.e.
> if a situation or case can be imagined or secured which would call for some sort of

decision on our part to extend the use of the concept to cover this, or to close the concept and invent a new one to deal with the new case and its new property (Weitz 1956: 31).

It depends on a social decision for the concept PIZZA to cover pineapple pizza dishes. To say that recipes are open-ended means that extending them to cover some dish variation or not is dependent on a social decision. However, this characterisation does not entirely capture the open-endedness of recipes. Borghini also characterises recipes by their evolvability through time: "for each recipe, the possible trajectories of evolution are countless" (2015: 736). All in all, then, recipes are open-ended in that they admit variation, both horizontally and vertically.

However, it is not clear how to characterise universals in such a way as to account for the right kind of evolvability. Universals are generally considered to be abstract entities, while evolution seems to imply variation across time and space. Consider the analogous problem of the evolution of biological species. Biological species are natural kinds, thus abstract entities, but they undergo evolution.[4] One of the main solutions to this conundrum has been the development of a weaker conception of natural kinds, namely homeostatic property cluster kinds (Boyd 1991, 1999), according to which biological species are natural kinds whose associated clusters of properties are robustly instantiated by the respective instances due to causal homeostatic mechanisms.[5] Such a solution, however, does not seem to be available in the case of recipes. The main problem is that, differently from the case of biological species, the choice of the homeostatically clustered properties is fatally subjected to arbitrariness.[6] Consider the recipe for pesto: a property it necessarily seems seems to have is the prescription of the use of basil leaves in preparation. However, there are many varieties of basil, whose leaves significantly differ with respect to flavour, scent, and also colour (e.g. there are purple cultivars of basil). Hence, the property 'prescribing to prepare the corresponding dish with basil leaves' is too coarse-grained for being one of the properties among the supposed cluster associated with the recipe for pesto. Which property should be chosen? There is a bewildering variety: for example, 'being prepared with leaves of *Ocimum basilicum* cultivar 'Classic Italian'', 'being prepared with leaves of *Ocimum basilicum* grown up in Genoa Pra'', 'being prepared with leaves of *Ocimum basilicum* picked when the plant has just four little leaves', and so forth. The choice among one of the candidate properties would be utterly arbitrary: in a slogan, there is no non-conventional way to carve the culinary world at its joint.

However, there is a more significant flaw in any proposal of identifying recipes with Platonic universals, i.e. eternal types. The main problem with Platonism lies in its incompatibility with a tenet of any metaphysical characterisation of universals. Such an incompatibility arises given the existence of certain relations

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[4] To be sure, "evolution" has different meanings in culinary and biological usage. Anyway, what is at stake philosophically is that a universal admits instances that can vary relevantly (sometimes in a directional way) through time.

[5] Causal homeostatic mechanisms are mechanisms underlying a kind and such that they causally maintain the co-occurrence of the properties typically instantiated by the members of the kind.

[6] Another difficulty with such an account, on which I do not want to expand here, consists in identifying the proper homeostatic mechanism and explaining how such homeostasis works.

between recipes and dishes, and it relies only on the commitment to two generally accepted features of universals. The first is mind-independency: universals can not only be predicated of distinct objects, but such a predication is independent of the existence of minds (Carmichael 2010). In other words, it is legitimate to talk about dishes instantiating universals-recipes without further qualifications. The second is their metaphysical role: since Plato, universals have been used to account for the commonality of properties between distinct objects. Armstrong puts this nicely:

> The problem of universals is the problem of how different particulars can nevertheless have the very same properties and relations. It is the problem of generic identity. The Platonic Theory of Forms is intended to solve this problem (Armstrong 1978: 64).

Any Platonistic account should recognise and accept both of these trivial features of universals.

A further, metatheoretical, notion I need is the difference between accounting for a fact and metaphysically explaining it. Metaphysical explanation, as a kind of explanation, must exhibit different formal properties, such as irreflexivity, non-monotonicity, transitivity, asymmetry, and relevance constraints (see, e.g., Baron & Norton forthcoming, Schaffer 2017, Thompson 2016). Accountability, as I conceive it, must not. Consider the following example: there is a chair C in the room at time t_1. Suppose now the truth of composition as identity, namely the thesis stating that mereologically complex objects are plurally identical to their composing objects.[7] The fact that each of the proper parts at time t_1 of C is in the room will thus *account* for the fact that a chair C is in the room at t_1, but it will not *explain* it. This is because it would otherwise be a case of symmetric metaphysical explanation, given the truth of composition as identity.[8] Suppose, instead, that composition as identity is false: that a chair C is in the room at t_1 is now *explained* by the fact that each of the proper parts of C are in the room at time t_1, since, at the very least, the fact of the former is grounded in the fact of the latter (Cameron 2014). Note that grounding, inasmuch as it is an hyperintensional notion, is sufficient to furnish a metaphysical explanation of this kind.

Given this distinction, universals are such that they can account for, but not explain, the commonality of properties between entities. The reason, as given by van Inwagen (2016), is the following. Universals are supposed to explain facts such that both Fido and Lucky instantiate the property 'being a dog'. However, what would explain such a fact is the conjunction of (i) a theoretical identity or a conceptual analysis of 'being a dog', furnishing necessary and sufficient conditions to instantiate such a property, and (ii) the fact that both Fido and Lucky satisfy those conditions. Suppose that the natural kind property 'being a member of *Canis familiaris*' is theoretically identified with 'belonging to the clade having as last common ancestor the particular organism O': the fact that both Fido and Lucky belong to such a clade explain why they are dogs. The problem with

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[7] I will not discuss composition as identity further. The thesis enjoys both supporters and critics. Among the first, there are, e.g., Bohn (2019), Lewis (1991, ch. 3.6), Loss (2019); among the second, Calosi (2018), Carrara & Lando (2017), Yi (2018).
[8] This does not mean that identity statements cannot furnish any information at all: it suffices to consider Frege's case of the Morning Star and the Evening Star.

universals here is that (i) can never be an ontological analysis of properties such as 'being a dog' and, thus, universals simply cannot play a role in the supposed explanation. Hence, universals can *account* for the sharing (and not sharing) of properties between entities, but they can never *explain* it. Of course, a particular theory of universals should also be motivated by arguments and be consistent with other theories that could potentially be endorsed.

However, it is the case that recipes have not only an accountability role but also an explanatory role with regard to the sharing of properties between dishes. This role can be shown by employing the notion of grounding, which is very intimately bound to the notion of metaphysical explanation. Consider the case of a dish D_1 prepared by an author A_1:

(i) The fact that a particular dish D_1 made by an author A_1 has certain culinary features is (at least partially) grounded in the fact that A_1 acted in specific ways to prepare it.

(ii) The fact that A_1 acted in specific ways to prepare D_1 is (at least partially) grounded in the fact that the recipe R requires to act in specific ways.

These two statements are trivial. However, since the relation of grounding is transitive (Fine 2012, Schnieder 2011), from (i) and (ii) it follows that

(iii) The fact that a particular dish D_1 made by an author A_1 has certain culinary features is (at least partially) grounded in the fact that the recipe R requires to act in specific ways.

Since pointing to what grounds a particular fact provides an excellent metaphysical explanation for its subsistence, it follows, by generalisation, that recipes explain certain culinary features of dishes. This conclusion is enough to undermine standard Platonism: recipes perform a theoretical task that would be precluded to them if they were eternal types. Moreover, through the same pattern of grounding relations between facts, it is possible to show that recipes also explain the sharing of culinary properties between dishes.

A related problem concerns the inconsistency of Platonism with the possibility of explaining the sharing of certain culinary features of dishes through a relation of imitation, as often seems to be the case. The most appropriate way to characterise imitation here is as a relation involving two agents, e.g. a cook and an apprentice, and that it results in the resemblance between the dishes. Hence, correctly, imitation implies resemblance (Armstrong 1978: 66). Let us suppose that A_2 imitated A_1 and produced a dish D_2 resembling D_1 with respect to the salient culinary features. In any case of imitation, the following facts hold:

(iv) The fact that D_1 and D_2, made respectively by A_1 and A_2, share certain culinary features $f_1, f_2, \ldots, f_n$ is grounded in the facts that (i) D_1 has $f_1, f_2, \ldots, f_n$, and (ii) D_2 has $f_1, f_2, \ldots, f_n$.

(v) The fact that D_2 made by A_2 has certain culinary features is (partially) grounded in the fact that A_1 acted in specific ways.

The first statement can be considered as a straightforward conceptual analysis of what property sharing is meant to be. The second statement establishes a grounding relation between the instantiation of culinary properties by the imitator's dish and specific actions of the master. From (ii), (v), and the transitivity of grounding, it follows that

(vi) The fact that D_2 made by A_2 has certain culinary features is partially grounded in the fact that the recipe R prescribed to act in specific ways.

Lastly, from (iv), (vi), and the transitivity of ground, it follows that

> (vii) The fact that D_1 and D_2, made respectively by A_1 and A_2, share certain culinary features is grounded in the facts that (i) D_1 has certain culinary features, and (ii) R requires to act in specific ways.

Hence, by (vii) and subsumption of grounding (Fine 2012),

> (viii) The fact that D_1 and D_2, made respectively by A_1 and A_2, share certain culinary features is partially grounded in the fact that R requires to act in specific ways.

From the grounding relation between these facts, we get a metaphysical explanation. As we saw above, however, facts concerning universals cannot provide any metaphysical explanation of the sharing of properties between entities. However, (viii), by establishing a partial grounding relation between the sharing of culinary features between dishes and a fact concerning a recipe, furnishes exactly such an explanation, although partial. Again, it follows that, since they have some explanatory role for the sharing of properties between dishes, recipes are not Platonic universals.[9]

If this argument succeeds, the Platonistic account of recipes cannot be correct. Recipes are not eternal types or repeatable universals having dishes as instances. What are they, then? In what follows, I suggest that recipes should be considered as particulars. It seems in fact that any Platonistic characterisation of recipes as universals instantiated by dishes relies on a categorical error: recipes are *followed* by the author of a dish, not instantiated by the dish. Dishes do not instantiate recipes, in the same way that model aeroplanes do not instantiate the instructions for their construction. If recipes are accurately followed, the result of a plurality of events involving the cook and the proper kind of ingredients is the dish the recipe encodes. Thus, recipes are particular entities, which someway enter into causal relations with other particular entities, namely agents and dishes. Consider that people systematically memorise recipes, modify them following their own tastes, pass them through generations, present them in tv shows, and often misinterpret them, too.

If recipes are particulars, are they abstract or concrete? If they are concrete, where are they? A first idea suggests looking at the physical supports of their inscriptions: sheets of papers, cookbooks, digital documents. In the next section, I offer a metaphysical account which can straightforwardly explain many of these features of recipes.

2. Recipes as Abstract Particulars

There is a metaphysical account to which we can appeal that does not identify recipes with universals and is compatible with their social nature. This is the stage/continuant account, which was famously proposed by Kaplan as the correct metaphysical account of words (Kaplan 1990, 2011).[10] According to this account,

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[9] A rejoinder: recipes have no explanatory role in such cases because they are not that relevant. Maybe what is more relevant in the former scenario is how accurately the apprentice imitates its master. However, relevance comes in degree. So maybe recipes are not totally relevant in the former scenario. However, universals can never be relevant, neither partially, in such cases.

[10] I will not say anything more on the topic of the metaphysics of words. For a valuable entry on it, see Balletta 2018. Of course, recipes differ from words in many respects. For

a recipe is a continuant made up[11] of the proper stages recorded in, for example, cookbooks, grandmothers' minds, on scraps of paper and so forth.[12] Recipes are thus cultural objects, extended through space and time. Hence, from a metaphysical point of view, they are very similar to words: "They live in the world, not in Plato's heaven. They are cultural artefacts, created by us, transmitted by us, stored by us" (Kaplan 1990: 111).

The stage/continuant account delivers straightforward explanations of some of the most notable features of foods and recordings of recipes. Consider two independently invented, yet procedurally identical recipes:[13] the intuition is that they are two distinct recipes. It suffices to consider a world in which the first recipe is invented, but its doppelganger is not: this is a clearly metaphysically possible scenario, but it would not be if the two recipes were one and the same recipe. Anyway, since they have different introductory stages and are made up of unrelated, distinct stages, the stage/continuant account can easily explain the distinctness of the two recipes in historical and compositional terms.[14] For the same historical reasons, it is possible to distinguish virtually identical recipes such as *cecina* and *farinata*, on the grounds of having developed in distinct Italian *milieus* (Borghini 2019: 240). Alternatively, consider two dishes resulting from different interpretations or versions of the same recipe, such as tiramisu made with mascarpone cheese and tiramisu made with cream. According to the stage/continuant account, there is in principle no problem in stating that the two dishes are different

example, words are clustered in languages and are made up of letters from an alphabet. The claim here is just that recipes and words have a remarkably similar metaphysics.

[11] I am agnostic about the proper notion of composition (e.g., mereological or non-mereological) in this case.

[12] The content of such supports consists of sets of propositions. However, according to Borghini (2015: 729 ff.), such sets of propositions would merely be incomplete representations of recipes. For example, recordings do not express the implicit residual of recipes. As it will get clear, a necessary condition for a recording to be a stage of a recipe is that it is recognized as such by an authenticity judgment, whose accuracy requires the expertise of the cook following the content of the recording. Hence, according to the present account, stages are complete representations as they are, but their status as such ultimately depends on a social decision.

[13] Although it is more of a philosophical case, Krondl suggests that something similar could have happened to the recipe for the strudel dough, which would have been developed independently in Turkey and central Europe (Krondl 2011: 82).

[14] I assume the existence of an introductory stage of recipes, and thus the existence of its inventor. However, this is a controversial assumption: "Indeed, most times recipes do not have *an* inventor—who invented *prosciutto*, or *mozzarella*, or *jambalaja*?" (Borghini 2011: 96). I agree that recipes can have no single inventor: of course, a plurality of persons may introduce the first stage of a recipe. However, this does not imply that recipes do not have an origin, that is, an introductory stage. Recipes are cultural items, and as such, they have a temporal location: hence, a beginning in time for their existence. In the ideal case, the introductory stage of a recipe is intentionally produced and, at the same time, recognized as such by its inventor. In the vast majority of cases, though, the introductory stage should be identified with the first recording followed by an agent having the intention to produce a specific final food. Different cultural products seem to enjoy the same introductory pattern. Consider a musical genre, e.g., rockabilly. Its birth should be temporally located at the instant in which someone held certain propositional attitudes towards particular sound patterns. Among the propositional attitudes, there is the recognition that a specific kind of music is produced by reproducing those sound patterns. To be sure, it will be called 'rockabilly' and recognized as such only later.

interpretations of the same recipe since they are dishes resulting from the execution of two different stages of the same continuant.[15] Recipes admit 'forks', that is, stages remarkably different one from the other. In this respect, recipes are like words, which admit inscriptions and utterances that deviate far from the standard.[16]

Another feature of recipes that is captured by the stage/continuant account is their existence in space and time. Recipes have a history, and people modify some of their procedures or ingredients through time. Some modifications are brought about by technological progress (e.g., many cookbooks now prescribe to whisk eggs and sugar with the help of a kitchen aid), but many are introduced by people so that dishes are best suited for their own tastes. Consider that, on the one hand, it is quite evident that an expression such as 'the recipe for strawberry ice cream' is just an improper definite description, since there are countless different recipes for strawberry ice cream. However, on the other hand, there must be something in common between two different recipes for strawberry ice cream. Both facts have an elegant explanation when the focus is shifted from particular recipes to their stages, that is, physical objects which record them. Different recordings of the same recipe will often encode different dishes belonging, nevertheless, to the same kind of dishes.

The stage/continuant account, though, relies on the answer to the following crucial question: when are different recordings of recipes stages of the same recipe? To be sure, a simple vertical model, according to which it is necessary and sufficient for two recordings of recipes to share a common origin to be stages of the same recipe, cannot be adequate. It suffices to consider the following case in the history of desserts. The sponge cake that is known in Italy as *Pan di Spagna* was initially invented by the Ligurian pastry chef Giovan Battista Cabona at the Spanish court, around the 16th century (Coxall 2018: 48). Later, the recipe was substantially modified by French pastry cooks, who added butter to the preparation and increased the amount of sugar and eggs. The resulting dessert is now known as *génoise* (Krondl 2011: 152). *Génoise* and *Pan di Spagna* are certainly different dishes, even if the former was born as a slight alteration of the latter. Nevertheless, the corresponding recipes are now certainly distinct: a fork in the metaphysical structure of *Pan di Spagna* as it became a new entity. Recipes can change: subsequent recordings can encode quite distinct resulting dishes, but they cannot persist through any kind of change. As it is the case with biological species, a criterion must be found for segmenting lineages through time.

In this respect, however, recipes are very different from other kinds of entities that typically persist through change, namely organisms. The difference lies in the naturalness of the entities. Limits to the kinds and degree of change organisms can bear without ceasing to exist as their biological nature determines them.[17]

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[15] As I stated above, stages can be simply recorded in one's mind.

[16] Within limits, of course: "recipes are not infinitely flexible" (Heldke 1988: 24). The concept of tolerance has already been investigated in the debate on the metaphysics of words. Consider: how much can two utterances or inscriptions of the same word vary? (see, e.g., Hawthorne & Lepore 2011, Kaplan 2011).

[17] In the usual cases, an organism persists as such through all the changes that do not cause its death. However, there are more exotic cases in which an organism x can persist through change as numerically the same entity x, but not as an organism. Consider the males of many seadevil species, which parasitize a female by sticking to her belly thanks to modified teeth. Through complex processes of histological transformations, males turn, thus, from

Recipes, though, are cultural artefacts rather than natural objects. According to the stage/continuant account, recipes persist through time by having stages at different times. Their persistence conditions are thus identified with the necessary and sufficient conditions that a recording must satisfy to be the stage of a particular recipe. These conditions are largely socially determined:[18] which recordings should be considered stages of a particular recipe is up to a social, and often collective, judgement. Such a judgement declare the authenticity of recordings.

When it comes to dishes, Borghini offers two notions to capture the conditions for their authenticity: fit and approval rating. The fit of a dish is defined as "the ratio of two factors: resemblance and context" (Borghini 2015: 733). A poorly risen pizza easily fits a college party, but not *Gino Sorbillo's pizzeria*. The approval rating, on the other hand, points to the fact that "it is typically up to a collectivity of people to assess whether a dish authentically produces a recipe" (734). These two notions capture the authenticity of dishes given the satisfaction of two conditions, namely the *implicit residual* of a recipe and the *expertise*. The implicit residual of a recipe is the set of (kinds of) procedures that are not encoded by the recipe but that the cook must know to prepare the corresponding dish adequately (732). How and how much to knead dough is an implicit residual of a recipe for focaccia. On implicit residual, Borghini builds up the notion of expertise: "in order to deliver a dish that instantiates a given recipe, then, a cook must possess *expertise* in the relevant abilities required to prepare the dish" (732).

Borghini's remarks on the authenticity of dishes can be mostly maintained in the stage/continuant account of recipes and used as criteria for their persistence through time. Recipe-recordings are stages of a particular recipe that depend on authenticity judgments, and the positivity of authenticity judgments depends on the fit and the approval rating of the encoded dish. Some form of expertise is necessary in order to respect the instructions encoded on a stage of a recipe and produce the corresponding dish.[19] The implicit residual and expertise are, thus, necessary in order to guarantee the accuracy of authenticity judgements. If the cook is not an expert, she would not be able to follow the instructions on the recording adequately, and the authenticity judgments would perhaps be diverted. The relation between a recipe and an authentic dish, then, is indirect and grounded in the relation between a recipe-recording and the dish itself. Between a recipe-recording and the dish an expert can produce by following the content of the recipe-

freely swimming organisms into sperm-producing organs of the mate (Fairbairn 2013: 125-126).

[18] I say 'largely' because a necessary condition for the persistence of recipes is some causal connection between the recorded stage. Such a connection does not imply that recipes admit no gaps, that is, periods in which there are no available recordings of it. Consider the case of a cook discovering an inscription and reviving a long-gone recipe (Borghini 2015: 736). Furthermore, it should be noticed that the causal condition follows from the nature of recipes, not from the stage/continuant account. There are kinds of entities, such as persons, which do not respect that condition (see Patrone 2017 on the problem of defining such a relation between stages of persons). Lastly, it is interesting that social factors play a considerable role in identity judgments concerning other culinary categories, e.g., wine (see Borghini 2012).

[19] It should be noted that if respecting the instruction encoded on a stage of a recipe requires expertise, expertise cannot always require an apprenticeship, *contra* Borghini's suggestion (2015: 732). Otherwise, any case of the introduction of a recipe is a counterexample to such a suggestion.

recording, there is a causal dependence relation, in which the intentional actions of an agent play an ineliminable role, as well as the satisfaction of a social authenticity judgement.

To be sure, there must be some tolerance in the evaluation of the authenticity of a dish and, thus, of a recording. Intuitively, recipes can be placed on a continuum between low-standard and high-standard recipes. Such a continuum can be superimposed on the tolerance spectrum, that is, the degree of variation tolerated in authentic dishes of a given kind. On the low-standard side, there are everyday recipes such as the recipe for pasta with tomato sauce or fruit salad. On the high-standard side, there are autographic recipes, for example Massimo Bottura's *Chicken chicken chicken… where are you?*, and traditional recipes associated with particular *milieus* (Borghini 2011: 96 ff.). There is a link between the tolerance for variation and the open-endedness of recipes: if a recipe has a high degree of open-endedness, it has a high degree of tolerance for variation too and vice versa. High-standard recipes typically have a low degree of open-endedness, and thus a low degree of tolerance for variation; whereas, low-standard recipes exhibit a higher degree of open-endedness and tolerance for variation. However, again, the degree of variation tolerated by a recipe is up to the social judgement of authorities. The difference between the persistence conditions of low-standard and high-standard recipes is not metaphysical, but only epistemic: as far as low-standard recipes are concerned, it is more likely that the judgements of experts and non-experts are in agreement.

To sum up, the role of experts in determining the persistence conditions of recipes characterises recipes as social objects in at least two different ways. First and foremost, it is up to the authenticity judgments of experts to cut segments of causally connected recordings into distinct recipes. Second, such authenticity judgements depend on the proper execution of a recording, which requires that the cook possesses the expertise and can satisfy the implicit residual of the recording. Hence, the construction of recipes from recordings is socially influenced in two ways: it is up to experts, whose judgement cannot be considered trustworthy unless the cook can guarantee proper execution of the instructions in the recording, that is, adequate production of the encoded dish.

All in all, then, according to the reasons presented in this section, a recipe-recording is a stage of a particular recipe if and only if (i) it is its introductory stage or it is historically connected to such a stage, and (ii) the encoded dish is appropriately evaluated as authentic. 'Appropriately evaluated' means that the implicit residual and the expertise are verified, and the evaluation has been given (or confirmed) by experts.

3. Recipes as Artefacts

One last issue requires attention. I have claimed that the existence of recipes depends on human activities in specific ways. Among the philosophically relevant categories of entities, there are two suitable candidates with which to identify recipes.

The first is documents, a category of social objects which have recently been pointed to as the very bricks of the social reality (Ferraris 2015, Ferraris & Torrengo 2014). According to the documentality view, documents are identified as the supports of the content of social acts, and which are considered the entities grounding the existence (and persistence) of social reality (Ferraris & Torrengo

2014: 18). Such supports can be external, such as sheets of paper and digital documents, but also 'internal', such as the shared witness of a social act, e.g. a promise.

These seem to be features of recipe-recordings too: as we said in the previous section, recipe-recordings partially ground the existence of particular dishes, and particular dishes are characteristic of human cultures and so *a fortiori* of social reality. Recipes are always recorded on external supports, such as cookbooks or sheets of paper, but also internal 'mental supports', such as grandmothers' minds. However, two conditions must be satisfied for something to be a social object (Ferraris 2015: 425): (i) being the result of a social act, and (ii) being recorded on some external or internal support. Recipes satisfy (ii) since they are usually repeatedly recorded in such a way. Whether they satisfy (i) or not depends on our definition of social acts. Generally, social acts are considered as essentially linguistic acts, which must be addressed to someone and thus grasped in order to display their performative powers (Mulligan 2016: 19). But then, recipes are not the result of social acts. Consider that social acts, insofar as they are essentially linguistic, are different from individual intentional acts and, insofar as they are always directed to someone, require interactions among individuals (Ferraris & Torrengo 2014: 12). Recipes differ in this respect. The establishment of a recipe's persistence conditions requires interactions among individuals, that is, an agreement on the authenticity of a recording among experts. However, there seems to be no meaningful sense in which such an establishment can be characterised as essentially linguistic. Hence, recipes are not documents.

The second category of human-dependent objects I want to consider is the category of artefacts. Artefacts are usually identified with objects satisfying the following three conditions (Preston 2018): (i) being intentionally produced, (ii) involving modification of materials, (iii) being produced for a purpose. Recipes satisfy (iii): the purpose of a recipe is to encode a dish in an accurate manner (modulo its implicit residual). Concerning the satisfaction of (i), the following counterexample could be raised. The Negroni Sbagliato was invented in Milan in 1972 as a consequence of a mistake. The bartender Mirko Stocchetto was preparing a Negroni, but he confused prosecco with gin. Hence, the recipe for Negroni Sbagliato was not intentionally produced, and so recipes do not generally satisfy (i). However, such an objection misfires because it misidentifies the time of the introduction of the recipe. It is not the case that Negroni Sbagliato was invented the precise instant Stocchetto mixed prosecco instead that gin with the other proper ingredients: for a recipe to be invented, it is necessary that it is recognised as a particular procedure for a specific product. This is the rationale behind Borghini's claim that recipes must contain a performative utterance: for something to be recognised as a (recording of a) recipe, it must contain an identifying speech act of the form 'this is a (recording of a) recipe for Negroni Sbagliato' (Borghini 2015: 727). The introductory stage of Negroni Sbagliato, then, is Stocchetto's internal recording, which he purposely produced once he noticed the appreciation of his former error. The constitutive presence of such an identifying speech act into a recipe-recording implies it is intentionally produced. Therefore, recipes satisfy (i).

What about (ii)? The condition is intended to capture the idea that artefacts come into existence through human transformative actions, and merely using natural objects for specific purposes is not enough: to use the position of the North Star in the sky while navigating is not to create a compass. Prima facie, then, this

condition seems to imply the concreteness of artefacts, and objects such as statues, hammers, and smartphones easily fit the condition. Recipes are clearly not analogues to these standard artefacts in this respect. However, the condition of concreteness for artefacts is too strong. First, in order to avoid counterexamples such as the stone-hammer one, it is enough to state that for an object to be an artefact it must ontologically depend on human minds. This condition seems sufficient to imply that the hammer-stone, the very concrete object, is not an artefact. Second, many philosophers identify abstract, contingently existing objects of different cultural kinds with legitimate artefacts. In the words of Kaplan:

> These are objects that are natural, that were *created in nature*, by a (perhaps) human creator, at a time, in a place, and that live their lives in nature and can change over time—as we do, though we are not abstract objects—and that can, under certain natural conditions, cease to exist. (Kaplan 2011: 506).

Abstract, contingently existing objects such as words (Kaplan 1990, 2011), fictional characters (Evnine 2016, Kripke 2013, Thomasson 1998), musical works (Evnine 2016, Levinson 2013, Friedell 2020), languages (Evnine 2016, Frigerio 2018) are now widely recognized as artefacts. Recipes should be regarded as objects of the same kind. They are abstract, at least more abstract than recipe-recordings, in the same way words are more abstract than mere morphological shapes (Kaplan 2011: 506). They exist contingently: if Mirko Stocchetto had been more careful, Negroni Sbagliato would have never seen the light. Any procedurally identical recipe with a different history would just be a doppelganger. Lastly, recipes extend through space and time and can bear a certain kind of change, via the concreteness and causal connectedness of their recordings.

4. Conclusion

Recipes are cultural objects which inhabit the world and causally interact with people through their recordings. A Platonistic metaphysics struggles with preserving the right grounding relations between facts concerning recipes and dishes, and, ultimately, it appears to rest on a categorical error. For these reasons, it should be rejected and replaced with a particularist metaphysics. According to the stage/continuant view, recipes come into existence through an introductory stage, that is, a mental or written down recording. Such a recording is pointed out as the introductory stage, spawned by a speech act. Recipes, then, extend through space and time and can be tracked down by their constituting recording. Which recordings constitute a recipe is ultimately a matter of expert judgement. It is, thus, clear that recipes are strongly social objects because their very persistence conditions are the result of social judgements. Therefore, the present stage/continuant account should be regarded as a constructivist theory of recipes.

Recipes are particular objects, extended through space and time, and dependent for their existence and persistence on human minds. Which kind of objects are they? Their identification with artefacts seems correct. Philosophers have recently broadened the notion of artefact in order to include entities such as words, languages, and musical compositions.

I have not focused much on the abstractness of recipes. I suspect the topic has not much to do with recipes as such, but with two different and more general metaphysical questions.

First, how should the line between abstractness and concreteness be drawn? This question has been around since its discussion by Lewis (1986b: 82 ff.). In a nutshell, there are many non-equivalent ways to draw the line. According to some of these, recipes turn out to be concrete; according to others, they turn out to be abstract. Without independent reasons supporting a specific way of drawing the line, the question of abstractness or concreteness of recipes is mostly a terminological issue.

The distinction between abstract and concrete entities is intimately connected with the second question, concerning the compositional nature of recipes. Throughout the paper, I have been careful in stating that recipes are "made up" of recipes-recordings, without further qualifying the compositional relation between them. Again, the choice of a compositional relation over another should be independently motivated and considered in the light of other principles and notions. Consider, for example., the principle of the location of the whole (Costa 2018: 113), according to which, if x is part of y and x occupies a spatiotemporal region, then y occupies a spatiotemporal region too. If the relation between recipe-recordings and recipes is the parthood relation, then the principle of the location of the whole implies that recipes occupy spatiotemporal regions. According to the Lewisian Negative Way, being abstract amounts to not having a spatiotemporal location (Lewis 1986b: 83). It would then follow that recipes are not abstract. Nevertheless, a fruitful discussion of these and similar topics needs much more space and argumentation.

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