Between the General and the Unique

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Between the General and the Unique

Overcoming the Nomothetic versus Idiographic Opposition

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Abstract. In accordance with Windelband's original proposal, the notions of *nomothetic* and *idiographic* are complementary terms, rather than an oppositional dyad. Given their dynamic and field-dependent nature, psychological phenomena are inherently unique—the relationship between their way of being and their constant becoming is mediated by the contingent conditions of the field. Therefore, science cannot be anything but idiographic—always facing a new unique event—while it is aimed at producing general knowledge of the nomothetic kind out of the ever-changing processes that unfold through irreversible time. The uniqueness of psychological phenomena makes it unfeasible for science to rely exclusively on inductive generalization that works through accumulation of empirical evidence provided by aggregated collections of specimens either within a single case (accumulation over time) or by assuming equivalence of exemplars across single cases subsumed under the same general class (a category viewed as a population). Abductive generalization can be a solution to the class←→individuals relationship problem as it allows characterizing the dynamics of the unique case while it arrives at generalization.

Key Words: abduction, aggregation, generalization, idiographic, nomothetic

Reaching an anniversary provides one an impetus to look back—and see one's future in the past. The discourses in *Theory & Psychology* over these

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two decades have been filled with efforts to innovate the discipline's theoretical core, keeping our unresolved problems in focus. The relations between the uniqueness of any experience and its lawfulness as expressed by its uniqueness has been a mind-boggling topic. Its solution has been hindered by the fixation of the social representation that equates aggregation with generality (Lamiell, 1998, 2003), which has dominated psychology over the last 60 years (Toomela, 2008; Toomela & Valsiner, 2010).

It is mildly ironic how easily psychologists create theoretical dualities and treat these as mutually exclusive opposites—while actively fighting the ghosts of dualisms, mostly elsewhere. The framework of the nomothetic–idiographic distinction—through the use of which the relations of the unique features of phenomena and their general lawfulness were discussed over the 20th century—became viewed as a dichotomy. This was quite contrary to the goals of its originator, Wilhelm Windelband (1904/1998; see also Lamiell, 1998), for whom such separation made no sense.

Psychology as *geistige Naturwissenchaft*: The Legacy of Wilhelm Windelband

It is not surprising that when the sciences in Germany were partitioned between *Naturwissenschaften* and *Geisteswissenschaften* in the second half of the 19th century, psychology was caught in the middle. It was Wilhelm Windelband who in 1894 attempted to sort out the mindscape of sciences, and to locate psychology within it. It was not his first effort (cf. Windelband, 1876).

It was a hard task, and the German intellectual terrain was filled with fierce fights between materialist and idealist philosophical credos. Psychology, as the study of the soul (*Seele*), was an ambiguous *Gegenstand* (object) on such a battlefield. It ended up in the middle, with its subject belonging "to the realm of *Geist*", yet "formally or methodologically [it was] to be included among the natural sciences" (Mos, 1998, p. 41). The liminality of psychology was particularly visible in the efforts to give the discipline a hybrid label ("spiritual natural science"—*geistige Naturwissenschaft*—cf. Windelband, 1904, p. 10).[1]

Psychology as a discipline was deemed sufficiently relevant—in the 19th-century German context—to need a clearly defined place among other sciences. Up to the beginning of the 1920s, psychologists in Germany occupied philosophy professorships—and were expected to contribute to science more than some empirical accumulation of data. The problem—where to put psychology in the pantheon of sciences—was largely a matter of worldview, rather than that of the well-being of the discipline through economic resources devoted to it. Windelband's efforts to see psychology as a special case of

natural sciences (*Naturwissenschaft des innere Sinnes*) brought it to the realm of general knowledge construction.

A Misleading Neologism: Idiographic and Nomothetic Perspectives

Windelband introduced the contrast between knowledge construction that emphasizes the general (*nomothetic*) and that which focuses on the particular (*idiographic*) (Windelband, 1904/1998, p. 13). His own context of introducing these terms is informative about the confusions that have raged in psychology around the issues of the reality of the phenomena observed in a single case:

> the empirical sciences seek in the knowledge of reality either the general in the form of natural law or the particular in the historically determined form. They consider in one part the ever-enduring form, in the other part the unique content, determined within itself, of an actual happening. The one comprises sciences of law, the other sciences of events; the former teaches what always is, the latter what once was. If one may resort to neologisms, it can be said that scientific thought is in one case nomothetic, in the other idiographic. (Windelband, 1904/1998, p. 13)

Windelband's contrast was built on classical philosophical grounds: as Plato focused on the general immutable character of phenomena, Aristotle sought the same generality in the purposefully developing individual being (Windelband, 1904/1998, p. 12).

Thus, both nomothetic and idiographic perspectives—in their different ways—strive towards gaining generalized knowledge. Furthermore, remembering the inevitability that any experience of anything is a singular phenomenon (as it unfolds for the living individual in irreversible time), the basis of all human knowledge is inevitably idiographic—all that is *is experienced once*. On the basis of such unique experiences it is our mental systems that create knowledge either by ongoing comparison of another unique experience with the previous one (retaining the time parameter), or by accumulating such experiences into collections of similarly classified objects (losing the time parameter). Thus, *all science is idiographic* as it strives towards generalization about its phenomena through time—yet the *outcomes* of such efforts can become nomothetic in the sense of generalization based on evidence that "once was" and "another time was as well."

Interestingly, this necessary primacy of the unique-to-be-made general was missed by Windelband, who—contrary to Hegel—did not focus on the notion of infinity, or on development. Instead, he—perhaps unwillingly, as his 1894 speech was meant to bring peace to warring ideologies of disciplines—fed further into the fight between materialist (identified by *Naturwissenschaften*) and idealist (assumed to belong to *Geisteswissenschaften*) camps. The notion

of nomothetic became synonymous with the former, that of idiographic with the latter. The further fight that ensued—exemplified by the controversy between Windelband and Dilthey—led psychology to the need to position itself on one or the other side of the divide. This was further escalated when the nomothetic←→idiographic parallel as it was mapped onto the *Naturwissenschaften*←→*Geisteswissenchaften* contrast was transported into English speaking countries.[2] There the latter—*Geisteswissenschaften*—were replaced by the notion of the humanities—with a complete loss of any implication of general knowledge or science.[3] The fragmentation of contemporary psychological science (Toomela, 2008; Yurevich, 2009) has led to the transformation of what originally were seen as two constitutive dimensions of scientific knowledge into two adversative and incommensurable credos: on one side the mainstream of psychology that uncritically interprets its findings concerning samples as indicative of universal laws (for a criticism of this interpretation in the field of theory of personality, see Lamiell, 1998, 2003) and, on the other side, students who assume the idiographic idea as if it was meant to assert the invalidity of any kind of generalized knowledge in the case of human affairs.

The (Misunderstood) Nomothetic Faith of Contemporary Psychology

Our starting point is a very simple claim. Social sciences deal with living systems: that is, with self-organizing open systems.[4] In the case of this kind of system, each individual system is unique, and such uniqueness is due to general laws that make it possible. *Generality in uniqueness is not a contradiction in terms*, but the basic operating principle in all nature, *psyche*, and society. Idiography, indeed, by no means has to be considered equivalent to the rejection of nomothetic knowledge (Allport, 1962, 1966; Molenaar, 2004). Rather, it means the pursuit of nomothetic knowledge *through the singularity of the psychological and social phenomena*. This idea is central to our contemporary *idiographic science* (Molenaar, 2004; Salvatore & Valsiner, 2009, Salvatore, Valsiner, Travers, & Gennaro, 2010). This new direction in science transcends the traditional inductive ("evidence-based") model of generalization in favor of its abductive counterpart.

Possibility of Knowledge

The question of how it *is possible to derive general knowledge from single specimens* creates a major epistemological problem for psychology, where—since the 1930s (Toomela, 2007, 2008, 2009; Toomela & Valsiner, 2010)—the social acceptance of the axiom of knowledge based on inductive generalization from accumulation of specimens has been the rule. Our

idiographic science rejects that axiom, and builds on a new epistemological stance (Valsiner & Sato, 2006)—rather than enter into a battle with the axiomatic acceptance of the truth value of accumulation.

Aggregation of Data Does not Lead to Generalization

Consensual acceptance of the notion AGGREGATE = GENERALITY (see its critique in Lamiell, 1998, 2003) is much more than a matter of the conceptual purity of the discipline (Yurevich, 2009). The reliance upon inductive generalization has assumed the valence of a credo and a value—an identity marker. Inductive generalization has become *the* generalization, then the way of doing science—the ground and the guarantee of the social role of the scientists. The making of such identity markers happens through the semiotic act of *hyper*-generalization (Beckstead, Cabell, & Valsiner, 2009; Valsiner, 2007) that transforms an axiom (i.e., general belief from which inquiry starts—yet one that can be doubted, and replaced by another) into an identity base (where the axiom is no longer doubtable, nor replaceable). This process often involves the social constructions of "schools"—where the original axioms of the thinker who sets up the perspective (e.g., Piaget, Vygotsky, Freud) are turned into identification bases by their followers. In short, the end of the productivity of the ideas of Freud, Piaget, or Vygotsky is the proliferation of communities of "Freudians," "Piagetians," or "Vygotskians" who set up their intra-disciplinary community organizations with their social inclusion/exclusion rules.

One such (meta)community in psychology is the church of "*true* science." Contemporary psychology has progressively identified itself with the image of a nomothetic science. Yet, in doing so, it has enacted a reductionist interpretation of the nomothetic idea. *Nomotheticity has been taken to mean ergodicity of psychological phenomena*—that is, the assumption according to which the individual's variability of the psychological flow over time is structurally identical to the inter-individual variation within a given population. This assumption is untenable—psychological phenomena are non-ergodic (Molenaar & Valsiner, 2005/2009; Salvatore & Valsiner, 2009). In this way, psychology has produced a split between the individualistic ontology, defining the object/aim of investigation—the transcendental human being—and the socio-typical methodology, defining the conceptual machine generative of the data: the *population*.

This population-centeredness of psychology has allowed the triumph of empiricism. Populations are conglomerates. Different from embodied human beings, populations are time-and-space-unconstrained conceptual machines, whose boundaries are very volatile [5] Populations are the inherent product of generalization: every time one defines a property, one is implicitly construing a collection of the objects that are clustered by that property. It is presumed that such property *as quality* is present in each and every member ascribed to the given collection. In terms of the *presumed quantity* of the property, the

individual members of the collection are allowed to vary as long as the quality is set as permanent. The step to considering this collection a "population" is easy to perform—sometime as result of negotiation, often as the hypostatized gift of the researcher's preferred or society's prescribed ideology. And thus psychology is populated by an infinite set of possible populations: males, females, homosexuals, extrovert people, field-dependent people, managers, soccer supporters, and the like. In sum, for the sake of producing data, the reference to the concept of population makes the affair enormously easy: to select a criterion, consider it an essence present in each and every "member of the population," then proceed to study a sample from the population with a pre-set knowledge that the posited property is in each of them—even if barely visible through the procedure created (e.g., a test). This nature of such artifacts of inductive generalization provides the basis for critique of contemporary psychology for its *pseudo-empiricism* (Smedslund, 1988, 1992, 1995, 2009)—pretending to prove empirically what is already presumed in the conceptual framework of the researchers. Thanks to this conceptual machine, psychologists have bypassed the very difficult and never completely and definitively solved methodological issue of modeling and interpreting intra-individual (temporal) variability—which entails the relation between the individual and its context. This methodological challenge has been reduced to the less critical technical task of elaborating procedures of data analysis, enabling the researcher to put the context aside. This is done by assuming that the unit of analysis is the individual him- or herself—who separates the context from him- or herself directly in the act of responding to a particular probe.[6]

There has been a historical shift in this transformation. The social practice of methodology has lost its conceptual status as the theoretical bridging between the general theory and the procedures of data construction. Contemporary psychology conceives of methodology in technical terms: as a repertoire of procedures of measurement and data analysis. And in so doing it legitimates its empiricism (Matusov, 2008; Toomela, 2007, 2008, 2009), pretending as if the findings produced by the studies had an inherent and self-evident theoretical meaning. In sum, the population-*ization* of psychology[7] has paved the way to the system of mass production of data of which contemporary psychology consists.

Idiography as the Ground for Any Generalization

Our claim of the complementarity of idiography and nomotheticity does not mean that we can simply anchor to the original meaning of idiographic, because the scientific scenario we live with is very different from that in Windelband's times. Therefore, we need to re-invent the term, in accordance with the present and the future of psychology we are interested in.

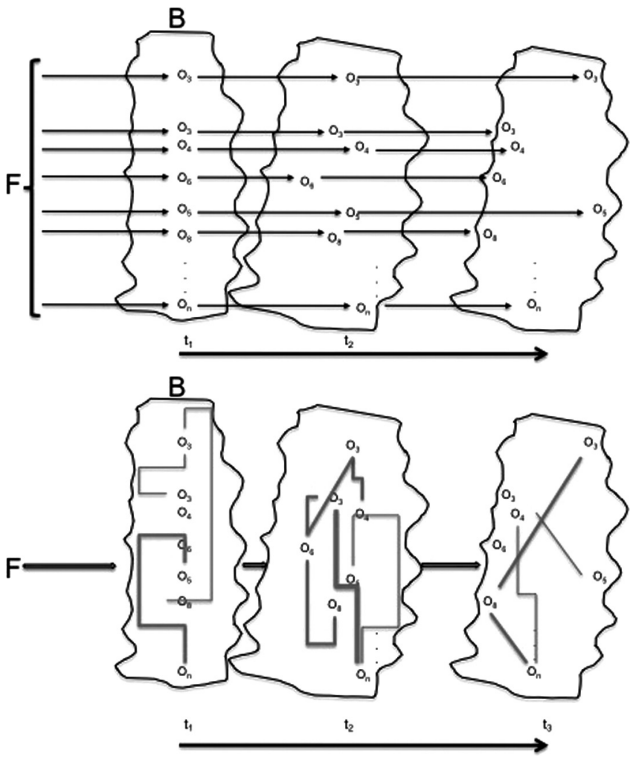
We propose conceiving of idiography as the methodological approach that entails: (a) an ontological assumption concerning the object of knowledge, (b) an epistemological constraint consequent to the ontological statement, and (c) a methodological strategy fitting the epistemological constraint.

The Ontological Assumption

We assume that the phenomena that psychological science takes as its objects of investigation are contingent upon the context and always occur only with a frequency of 1. Each event is unique. We consider this an ontological assumption because it is concerned with the inherent nature of the object—in this case a self-organizing open system—and it is given as a premise.

Let us consider an object as the target of the psychological investigation: e.g., emotion, the construction of identity, child development, and so forth (henceforth, Psychological Object: PO). Any particular local exemplar of the psychological object (po) expresses itself in terms of a given manifest content (B_{po}), representing in terms of a set of diachronic and synchronic combinations of an infinite set of occurrences (we name this infinite set: O_{po}).[8] B_{po} is the instantiation of a given modality of functioning (F_{po}) of the given exemplar. For instance, imagine the psychotherapy process as a possible po: one given exemplar of psychotherapy (po) can be accounted in terms of a set of many events and characteristics (O_{po}), e.g., the patient's and therapist's speech, bodily movements, etc., whose combination provides one of the possible representations of what happened in that psychotherapy process (B_{po}), in its turn interpretable as the expression of the way such given cases of psychotherapy function (F_{po}).

In accordance with this terminology, asserting the contextual contingence of the PO means that for any po, O_{po} is *field-dependent*—that is, O_{po} in a given instant t_x results in the local combination of the infinite set of occurrences O_{po} constituting the field in the time t_{x-1}—i.e., constituting $B_{po(x-1)}$—in its turn resulting from the condition of the field on the instant t_{x-2} $[B_{po(x-2)}]$. In brief, po is systemic and dynamic (Lauro-Grotto, Salvatore, Gennaro, & Gelo, 2009; Salvatore, Lauro-Grotto, Gennaro, & Gelo, 2009). In the case of a systemic and dynamic object, F_{po} is not linearly instantiated by discrete occurrences. Rather, F_{po} defines the set of conditions according to which a given combination of occurrences constituting the content of the psychological object (B_{po}) works as a field eliciting another combination as the most probable to follow. In other terms, F_{po} concerns the dynamic of the field, not the content of the singular occurrences (see Figure 1). For instance, according to a dialogic model of sensemaking, any utterance and any thought is endowed with an inherent valence of responsiveness and addressivity (Linell, 2009). This F_{po} can help us to understand why a given combination of signs, e.g., the use of the first person plural, the reference to a shared frame, etc., produced by a participant in a communicational exchange has elicited a given set of



Not-field-dependent phenomenon

The role F works on singular occurrences (or discrete sets of occurrences).
Therefore every one of them has a stable meaning, provided by its relationship with F.
This relationship is invariant through time and independent of the within-field relationships. That is, it is constant regardless of the transformation of the field.

Field-dependent phenomenon

In field-dependent processes, F defines how the global state of the field (B) develops in time t_i.
The global state is given by all the relationships among all the occurrences of the field, whether or not they are observed. Therefore the functioning and the meaning of any occurrence do not depend directly on F. Rather, they depend on how F regulates the whole interaction among the occurrences. This means that the relationship between F and O is mediated by the field B.

FIGURE1. Not-field-dependent vs field-dependent phenomenon

further occurrences—e.g., the other participant's attunement of the syntactic mode, the reduction of interpersonal distance, etc. Yet, this F_{po} does not tell us anything of the specific content of any occurrence taken singularly.

The field-mediated linkage between F_{po} and O_{po} has a consequence for the sake of our discussion. It entails that *there is not an invariant relationship between a given set of occurrences (O_{po}), however large it may be, and F_{po}*. In fact, insofar as one assumes that F_{po} concerns the combination of all the infinite occurrences sustaining the field, one has to conclude that the meaning of any subset of occurrences depends on what relations it keeps with the whole. Changing the whole, the meaning of any occurrences changes. To put it in other terms, take the field defined by the infinite set of occurrences (o_1, o_2, o_3, …. o_∞). Moreover, assume that the F of this field consists of a simple rule: *"the meaning of any singular occurrence is given by its position in the sequence."* Consider now the subset ((o_{11}, o_{12}, o_{13}, …. 0_{100})): according to the F, the meaning of this subset is given by the portion of ranking |11-100|. Well, imagine now another field, being similar to the former but not identical, say

(o_9, o_{10}, o_{11}, …. o_∞). In this case the meaning of the same subset of occurrences ((o_{11}, o_{12}, o_{13}, …. O_{100})) is changed in |392|, even if their phenomenological content has not changed. Finally, imagine another field (s_1, s_2, s_3, …. s_∞), very different from the previous, yet functioning according to the same F. In this case we will have that the subset of occurrences ((s_{11}, s_{12}, s_{13}, …. s_{100})) will have similar meaning of ((o_{11}, o_{12}, o_{13}, …. 0_{100})), regardless of its descriptive diversity. In brief, the assumption of the systemic and dynamic nature of the psychological object leads to the claim that psychological science cannot consider the set of occurrences as having an invariant linkage with the modality of functioning of the object. Rather, according to the global state of the field, the same occurrence can be the expression of different functioning while different occurrences can be associated with the same functioning. Isomorphism is not a viable rule for living systems.

The Epistemological Constraint

This constraint refers to *the uniqueness of the specimen of psychological object—no psychological object may be aggregated to a general class according to its phenomenological similarities* (i.e., according to O_{po}) *with the other exemplars of the class* and consequently be treated as being qualified by the way of functioning of that general class of exemplars. This is the sense we conceive of PO as unique. Aggregation—as Lamiell (1998) pointed out—is no road to generality. For example, consider a researcher who is interested in studying how people elaborate their own sense of identity in the context of a new community. Well, imagine that the researcher has found two or more individuals who share many features (nationality, gender, age, place of living, some psychological traits, attitudes, etc.. Despite the many characteristics the two individuals share, they cannot be considered equivalent because of the fact that their shared characteristics will be a finite and limited subset of the whole set of occurrences sustaining the field of which the dynamics of the phenomenon consists. Consequently, the researcher may not pool the two individuals, treating them as member equivalents of the same general class of PO.

The most immediate consequence of the uniqueness of psychological objects is the *necessity to renounce the population* as the conceptual tool that has made it possible for the researcher to confuse the individual and population levels of analysis (Valsiner, 1986) and overlook the issue of human intra-individual variability (Molenaar & Valsiner, 2005/2009; Salvatore & Valsiner, 2009).

Logics in psychology: tools for understanding and non-understanding. The traditional conception of idiography transforms the uniqueness in irreducible incommensurability (Salvatore & Valsiner, 2009). Once operated by such transformation, the uniqueness of the psychological objects brings the more general issue of the logic of generalization into question.

On the other hand, generalization is entailed in many dimensions of the construction of scientific knowledge, not only in the classification of individuals in terms of membership of a population. The choice itself to define a given piece of world as the target of an activity of investigation consists of a process of generalization—the researcher has to classify the piece of world as an exemplar of the psychological object whose study motivated the investigation. Therefore, negating the possibility of generalization means negating the very possibility of scientific knowledge.

Actually, in the cases of open systems, what does not fit with the scientific task is the ClassicalAristotelian/Boolean inductive logic of generalization (Valsiner, 2009), not generalization itself. This is because in the case of open systems it is variability—rather than the central tendency—that is the name of the game (Maruyama, 1963, 1995).

Beyond Inductive←→Deductive Modes: The Abductive Generalization

Considering idiography as the negation of the possibility of generalization is a symptom of how inductive generalization has been generalized to the point of being considered the only model of categorization—that is, of producing scientific knowledge. A possible alternative to inductive generalization is abductive inference. In the usual description of abduction in the words of Charles S. Peirce (1935),

> there are but three elementary kinds of reasoning. The first, which I call *abduction* ... consists in examining a mass of facts and in allowing these facts to suggest a theory. In this way we gain new ideas; but there is no force in the reasoning. ... The second kind of reasoning is *deduction*, or necessary reasoning. It is applicable only to an ideal state of things, or to a state of things in so far as it may conform to an ideal. It merely gives a new aspect to the premises. … The third way of reasoning is *induction*, or experimental research. (Vol. 8, p. 209)
>
> It must be remembered that abduction, although it is very little hampered by logical rules, nevertheless is logical inference, asserting its conclusion only problematically or conjecturally. It is true, but nevertheless having a perfect definite logical form.
>
> ... The form of inference, therefore, is this
>
> The surprising fact, C, is observed;
>
> But if A were true, C would be a matter of course,
>
> Hence, there is reason to suspect that A is true. (Vol. 5, pp. 188–189)

Note that such a model is local in its content, because it refers to the specific po under investigation, moving "backwards" from it—the unique exemplar under investigation—to the underlying possible causal system of that

exemplar.[9] This "backward move" is universal in its format, since it is produced in terms of some theoretical language and on the ground of the set of general scientific rules of that language. It is thanks to this general rule that the occurrences are connected in an organic picture—Peirce speaks of the "reunification of the predicates"—and in this way meant as the consequence of a given cause. In this sense, the abductive modeling of the occurrence can be seen as the semiotization of the experience of the phenomenon through the mediation of scientific language. Once elaborated, the model (F_{po}) is used as criterion of categorization: the modeled exemplar is projected in the class of exemplars that share a similar F_{po}. In this mode, the knowledge of the single exemplar po can be generalized to the class of exemplars PO.

Let us add some specifications: First, it is evident that it is not possible to fully model each exemplar, because its manifest content (i.e., B_{po}) consists of the combination of an infinite set of occurrences while the process of investigation can take into account only a finite subset of it. Consequently, one could claim that the same constraint to use the occurrences as index of the functioning of the exemplar should be addressed to our idea of modeling too. In other terms, if, as our ontological assumption states, any finite set of occurrences of any psychological phenomenon cannot be considered an index of its way of functioning, then how is it possible to model it, given that such a model cannot but be performed from and through a finite subset of occurrences? Actually this objection would make sense if one intended the model as an exhaustive representation of the exemplar. On the contrary, if one assumes that the model is one of the possible forms of conveying the exemplar in the language of the science, the objection is not pertinent. In other terms, for definition, the model of the exemplar is the local model of the subset of occurrences conceived as pertinent. Incidentally this is consistent with our interpretation of the model in terms of semiotization—human sign-construction leads to the proliferation of uniqueness in human conduct, precisely as the principles of the "second cybernetics" predicted decades ago (Maruyama, 1963, 1995).

The abduction is driven from a complementary point of view too. Indeed, before selecting the occurrence of the exemplar interpreted as pertinent, the researcher has to assume that a given unit of the world (an event, a fact) is an exemplar of the psychological object she intends to address. For instance, imagine that one intends to study if and how psychotherapy is able to change the way of thinking and feeling of people. To do so the researcher obviously has to identify a certain piece of world as a suited and valid exemplar of the psychological object "psychotherapy." This means that she could have to decide if Buddhist meditation, yoga, brief counseling provided by a teacher, as well as psychoanalysis or behavior therapy, are exemplars of the PO "Psychotherapy." Now, as said, this issue cannot be solved through reference to the phenomenological similarities between the exemplars. In that case the abductive generalization would be grounded on an inductive generalization.

Rather, it is the theoretical background that defines what part of the world is allowed and is worthy to be considered an exemplar of the target psychological object. On the other hand, one ought not to confound this type of classification with a form of deductive categorization. The researcher does not derive the exemplar from an already defined general category of the psychological process—i.e., given that this is what psychotherapy means, then this is a good exemplar of psychotherapy. Rather, the theory orients the researcher to pick exemplars as probable useful cases for the sake of the scientific enterprise. In other terms, the research creates a *collection*: that is, a category of scope encompassing the objects that are clustered in order to a specific function/project (e.g., the project of studying psychotherapy). Only in the moment and on the condition that the model works can the collection be considered a category. That is, only when the model of the investigated case of psychotherapy process fits the analysis of another case member of the collection (incidentally, this entails paying particular attention to the exploration of the borderline case) can the researcher arrive at the conclusion that the collection can actually be conceived of as a general class. That is, the researcher can conclude that it is legitimate to consider the model elaborated as general knowledge of Psychotherapy. In sum, the transformation of the collection in a category means that the F_{po} acquires the theoretical status of $F_{PO.}$

This last consideration leads to an interesting point**.** *In the abductive logic, theory and evidence are circularly bonded within an open-ended cycle.* Abduction leads to the creation of new knowledge—arrival at new general rules. In particular, one can identify several types of emergence from the dynamic interactions between the evidence, the local modeling of it, and the general theory mediating it. A first type is given by the *discovering*: that is, when the researcher has to elaborate *ex nihilo* a new general rule in order to model the local exemplar. A second type is given by the *generalization* of the already available general theory. It is the case that in order to abductively understand the evidence, the researcher has to elaborate the theory, making it more abstract and general. For instance, the researcher could have been able to model a case of psychotherapy only after having considered the process of psychotherapy as a specific specimen of human communication and thereby using the general knowledge concerning the latter as grounds for modeling the case. A third type is the *extension*. In this case the analysis of the exemplar leads to widening the domain of application of the general theory. Differently from generalization, in this case the theory does not change, but it is applied to new phenomena. For instance, the researcher could have modeled her analysis of innovation in a work context in terms of a local model grounded on the Piagetian model of equilibrium between assimilation and accommodation. In this way this model is pushed toward a further enlargement of its boundaries of application. Finally, we have *differentiation*. In this case the study of the exemplar highlights the limit of the present general theory to

produce understanding, leading to the development, further elaboration, even abandonment of the general theory, for the sake of promoting innovation.

As we have seen, abduction is theory-guided, yet the theory is created on the basis of a single specimen through generalization. It creates theoretical novelty since the general category PO is not given a priori; instead it emerges as result of the process of construction. Moreover, it is worth noting that this new category is a theoretical abstract class. In other terms, it is not defined by the empirical similarities among the exemplars. Rather, it groups the exemplars according to the fact that they share a model that—always from the point of view of the theory—makes them equivalent. In this sense, the abduction generalization entails the theoretical—rather than empirical—construction of the psychological object (Salvatore, 2006).

Final Word: Idiographic Generalization Reconsidered

We have provided what we consider to be a basic interpretation of the idiographic tenet, with the aim that it could contribute to the development of further discussion among those in the human sciences. According to our proposal, idiography is the recognition of the dynamic and systemic nature of psychological objects and therefore of their uniqueness (yet not irreducible incommensurability). This recognition does not entail renouncing generalization—which is at the core of the scientific knowledge—but requires that we forgo the exclusive priority of *inductive* generalization in favor of the abductive model of generalization. In abductive methodology, theory and data are circularly connected and the construction of general knowledge is pursued through modeling the local phenomena.

We want to highlight some implications of the idiographic methodology we have above briefly pictured.

First, the idiographic orientation is a methodological stance—it does not have a specific object of investigation. The idiographic approach can address any kind of psychological object (Salvatore & Valsiner, 2009).

Second, we propose a mutually inclusive vision of the dichotomy idiographicnomothetic (Valsiner, 2007). They are not in competition: idiography is the way to pursue generalized knowledge—albeit through the means of the study of single specimens in their dynamic contexts.

Third, the traditional idiographicnomothetic dichotomy does not concern any of the oppositions in contemporary psychological debates (quantitative versus qualitative, emic versus ethic, hermeneutic versus positivist, individualism versus collectivism, etc.). One can follow an idiographic strategy of research by adopting both quantitative and qualitative methods of analysis (Salvatore, Valsiner, Strout, & Clegg, 2009; Salvatore et al., 2010). And one can adopt a hermeneutic intensive analysis of a single case and nevertheless develop a study inconsistent with the idiographic assumptions we have proposed in this paper.

Fourth, there is the issue of the validation of idiographic studies. The idea of the purely nomothetic study—bypassing its idiographic basis—as the way to produce universal and valid knowledge is a myth. If one goes beyond the myth, it is evident that the model of psychological science based on induction is a self-referential process, a game where one finds what one looks for (Smedslund, 1988, 1995, 2009). Peirce conceptualized it as the acquisition of a habit. Falsificationism is the fig leaf covering this game. How many articles are published that conclude with the acceptance of the null hypothesis? How many theories have been abandoned as consequence of the results of an experiment?

On the other hand, abduction entails a specific logic of validation that is inherently interwoven with the process of construction of knowledge itself. In the case of abduction, the validation of general knowledge is itself a possible part of a further process of knowledge construction. In fact, abduction works in terms of modeling the single case and generalizing from it. Thus, this process can go on insofar as the model elaborated fits the case analysed—that is, it is consistent with the model emerging from the new case. If this consistence is not given, the researcher is compelled to revise the model and/or to revise the theoretical framework grounding it. In our final analysis, the idiographic imperative moves research from the logic of the confirmation to the logic of the construction of the knowledge.

Notes

1. More precisely, in the case of psychology,

   > to judge by its subject, it can only be characterized as a humanity, and in certain sense as the foundation to all others; but its entire procedure, its methodological arsenal, is from beginning to end that of the natural sciences. For this reason, psychology has had to allow itself to be characterized at times as "the natural science of inner sense" or even as "the natural science of the mental". (Windelband, 1904/1998, p. 11).

   Windelband's double characterization repeats Lotze's "medical psychology" or "physiology of the soul" (cf. Lotze, 1852). For Windelband's original German address, see http://www.psych.ucalgary.ca/thpsyc/windelband.html.
2. The nomothetic ⟷ idiographic contrast appeared in English in 1899 (Münsterberg, 1899, see Hurlburt & Knapp, 2006). It was actively utilized by Gordon Allport (1962) later—albeit without success—in encouraging North American psychology to take a reasonable look at this contrast, not to speak of its use.
3. In fact, this translation leads to not only non-scientific but a positively anti-scientific surplus meaning (Lamiell, 1998, p. 27). It is no surprise that the notion of idiographic—and the use of single cases—was either absent or ridiculed as "soft" in 20th-century psychology as the term moved to the dominant zone of the English language (Toomela, 2009).
4. Systems that exist due to their exchange relationships with their environments, elaborated through and in the terms of their own inner organization. By means of

their self-organizing dynamics, open systems are capable of reproducing and developing their own organization (Maturana & Varela, 1980).

5. As Loevinger (1965) has pointed out: "The term population implies that in principle one can catalog, or display, or index all possible members, *even though the population is infinite and the catalog cannot be completed* [emphasis added]" (p. 147).
6. The act of asking general questions that get unitary answers—"*how happy are you with your life?"*; *"I am moderately happy*"—(overlooking day-to-day or moment-to-moment variations) and treating the answer as if it is an approximate estimate of a "true state" makes the respondent eliminate the temporal context in the very act of first response. This use of unitary answers hides all the complexity of psychological processes that led to the generation of such answers (Rosenbaum & Valsiner, in press).
7. We invent this admittedly inelegant term to stress the corresponding lack of beauty in the usual trust in "large numbers" and the belief in general knowledge arising from the sample-to-"population" generalization.
8. Actually, there is no PO as a general class of exemplars; rather, we meet only occurrences whose combination we interpret in terms of exemplars of the psychological object, thanks to a super-ordered theory that orients our observation.
9. In some of his works Peirce use the term "retroduction" to indicate the abductive inference, since it consists in a backward movement from the effect (i.e., PO) to its cause (i.e., F_{po}).

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