Dear Friends of the Department,

Greetings, and welcome to this window upon the Department. Peering in, you’ll see that this has been a good year at many levels. Here are a few highlights before I launch into details.

In the face of economic trends that sometimes push students to seek more practical–seeming areas of concentration, Michigan students continue to show their lively interest in the world of ideas, and the number of majors and minors in Philosophy continues to grow, as does the total number of credit hours of Philosophy taught. Our concentrators are a committed and rewarding group of students to teach, and we are pleased to report that this past year we had an unusually strong group of graduating Philosophy concentrators – so much so, in fact, that for the first time we found the undergraduate records of no fewer than three seniors so strong that we awarded the Frankena Prize to each.

A similar trend–bucking commitment to Philosophy can be seen at the graduate level. The number of applications for graduate studies at Michigan is climbing, making selection of the small number we are able to admit difficult but exciting. The result has been strong entering classes full of philosophical accomplishment and promise, and a delight to work with.

It seems that Philosophy, despite its venerable age, remains in robust good health.

One source of this robustness is the renewal Philosophy receives from interaction with other disciplines. Philosophy is sometimes said to be the Queen of the Sciences, an image that suggests a gracious aloofness. But developments in other areas of inquiry have often been key sources of philosophical challenges and innovations. We’re fortunate to have in this Department faculty representing a broad range of perspectives on the relationship of philosophy and other disciplines, as well as faculty with a diverse array of involvements with on–going work in fields as diverse as physics, evolutionary theory, linguistics, mathematics, psychology, psychiatry, and law. This makes for a lively atmosphere with many sources of new questions as well as many new ways of looking at some perpetual questions.

This year’s Michigan Philosophy News features a faculty contribution by Jessica Wilson, who joined us in 2001, and specializes in metaphysics and the philosophy of science. Her contribution describes a project, supported by a grant from the National Science Foundation, to deepen her understanding of contemporary physics and permit her to work directly with theoretical physicists in developing an interpretation of the basic elements of the world and their laws. We hope you’ll enjoy reading it.
I’m sure we all join together – current members of the Department, Alumni, Alumnae, and Friends – to congratulate the 2003 Graduates and Ph.D.s, and send them best wishes for the future. And let me personally wish you all a rich and rewarding year!

Sincerely,

Peter Railton
Chair
John Stephenson Perrin Professor of Philosophy

Faculty News

This year saw a number of faculty receive special recognition. David Velleman has been named a Collegiate Professor in acknowledgement of the remarkable stature his work has swiftly achieved, and of his many contributions to the Philosophy program at Michigan. Prof. Velleman, whose research has ranged widely over fundamental questions in the philosophy of mind, theory of action, and theory of practical reason, will become the G.E.M. Anscombe Collegiate Professor, in honor of the well-known English philosopher. “Miss Anscombe”, as she was known in the sometimes stuffy atmosphere of post-war Oxfbridge, played a seminal role in 20th-century philosophy of mind; her work remains essential reading, and we were fortunate to have had her come to Michigan as a visiting faculty member. A list of only a few titles from among Prof. Velleman’s many papers gives some impression of the diversity and daring of his interests: “The Guise of the Good”, “Identification and Agency”, “Don’t Worry, Feel Guilty”, “Narrative Explanation”, “A Rational Superego”, and “Love as a Moral Emotion”. And some idea of the gathering influence of his work can be gained from the fact that both Oxford and Cambridge University Presses have recently assembled collections of his papers, under the titles *The Possibility of Practical Reason* (Oxford) and *Self to Self* (Cambridge), while a colloquium was organized around his work at the University of Gottingen last January. He also gave the Jerome Simon Memorial Lectures at the University of Toronto last October.

Larry Sklar, last year named the C.G. Hempel and W.K. Frankena Distinguished University Professor, this year presented his inaugural lecture, “Dappled Theories of a Uniform World”. Professor Sklar is only the second current member of the Department to be named a University Professor, and he thus joins the most elite rank of the Michigan Professoriate. The recipient of many awards and honors, and author of numerous books and scores of articles, Professor Sklar’s work in the philosophy of science and philosophy of physics is internationally recognized as setting a standard for philosophical clarity, historical nuance, and appreciation of essential issues. Indeed, the underground ironic classic *Philosophical Lexicon* gives as the meaning of the adjective ‘sklar’, “Balanced and comprehensive”, as in “He made everything sklar for us”.

Stephen Darwall, will present his inaugural lecture as incoming President of the American Philosophical Association, Central Division, this coming April. His important recent book, *Welfare and Rational Care* (Princeton University Press), was the subject of a symposium at the University of Rome in June. A pioneer in the contemporary philosophical study of autonomy, he now is continuing his groundbreaking work on the interpersonal side of moral life in a forthcoming book, *The Second-Person Standpoint*, the subject of a series of seminars given as Grean Distinguished Visiting Professor of Philosophy at Ohio University this past spring.

Last year, we took pleasure in announcing the appearance of Louis Loeb’s much-awaited book, *Stability and Justification in Hume’s Treatise*, a major contribution to the scholarship on Hume’s controversial views on belief and skepticism. Professor Loeb’s work, which seeks to find in Hume not only skepticism, but the basis for a constructive contribution to the theory of justified belief, was this year the subject of two lively symposia at the American Philosophical Association’s Central Division Meetings. This year also saw the appearance of a collection of Peter Railton’s papers in ethics, *Facts, Values, and Norms* (Cambridge University Press).

Next year, in addition to Jessica Wilson’s interdisciplinary project in ontology and theoretical physics, Jim Joyce will begin his active collaboration with statistician Michael Woodruffe and astronomer
Mario Mateo on the value of certain methods of statistical analysis as aids to research on the fundamental question of dark matter, that seemingly “missing mass” that must exist if the expansion of the universe is not to go on without end, but which is proving exceptionally difficult to observe! Their project seeks to develop more powerful techniques of data analysis to infer the distribution of dark matter from what can be observed of the distribution and motion of stars. Meanwhile, Peter Ludlow, Jason Stanley, and Rich Thomason continue their work straddling philosophy and linguistics, an intensity of research that has quickly made Michigan one of the leading programs in the field. Together, they organized a Semantics Workshop at Michigan last November, a successful event which will be repeated this year as well. Prof. Thomason additionally was co-editor of the 25th anniversary issue of *Linguistics and Philosophy*. Prof. Stanley, a wide-ranging philosopher, was recognized by the *Philosopher’s Annual* for the year 2001 as co-author of “ten best” article, “Knowing How”. Finally, Elizabeth Anderson, whose research extends from social epistemology and feminism to the philosophy of law, received both the John D’Arms Award for Distinguished Graduate Mentoring in the Humanities, and honorable mention in the Berger Prize competition of the American Philosophical Association for her article, “Expressive Theories of Law”.

**Distinguished Visiting Faculty**

We were delighted to welcome to Michigan a veritable string of distinguished faculty visitors from—of all places!—sunny Palo Alto. In the Fall Term, Professor Debra Satz of Stanford, a rising new talent in ethics and political philosophy, came as the **Weinberg Distinguished Visiting Professor of Philosophy**. In addition to teaching a course in political philosophy and a graduate seminar, she presented the Weinberg Lecture on “Noxious Markets: Why Some Things Should Not Be For Sale”. In the Winter Term, Professor John Perry, also of Stanford, was **Nelson Philosopher-in-Residence**. His work is familiar to philosophers in many fields for surprising insights into the relations of individuals, thoughts, language, and the world. He presented a series of seminars on his current work, and in his public lecture, he asked, “Is There Any Hope for Compatibilism?” Happily, there is at least some, he concluded. And this past year’s **Tanner Lecture on Human Values** was given by Professor Claude Steele, a former colleague in Psychology here at Michigan who is now the Lucie Stern Professor in the Social Sciences at Stanford. He presented his widely-cited research on stereotype effects, “The Specter of Group Image: Its Unseen Effects on Human Performance and the Quality of Life in a Diverse Society”. Commentators on the lecture were Professor Anita Allen Castellito (Law, University of Pennsylvania), who will be known to a number of you as a former Michigan graduate student, Professor Glenn Loury (Economics, Boston University), and Professor James Sidanius (Psychology, UCLA). Thanks to the generosity of donors, these distinguished visitors have provided the Department, and the wider University of Michigan community, with a striking array of food for thought.

**Graduate Student News**

The climax of graduate career is completion of a successful Ph.D. dissertation, often the culmination of years of thought and writing. This past year saw that summit reached by three students: **Blain Neufeld**, who defended his thesis on “Civic Respect and Political Plural Subjects”;; **Kevin Toh**, trained in both Law and Philosophy, defended his dissertation, “Essays on Normativity and Describability of Law”; and **Stephen Peterson** presented his completed work, “Belief-Desire Coherence”.

Among the Michigan Ph.D.'s who ventured out onto this year’s difficult job market, most found safe harbors: **James Bell** (who will be on a special 2-year fellowship at Oberlin), **Charles Goodman** (who will be an Assistant Professor at SUNY-Binghamton), **Edward Hinchman** (Assistant Professor, University of Wisconsin-Milwaukee), **Kevin Toh** (Assistant Professor, University of Indiana-Bloomington), **Andrea Westlund** (Assistant Professor, University of Wisconsin-Milwaukee), and **Rivka Weinberg** (Visiting Assistant Professor, Scripps College).
The annual John Dewey Prize for excellence in graduate-student teaching went to Christie Hartley, for remarkable success conveying the substance of philosophy, a quality repeatedly emphasized in student evaluations of her courses. And the Stevenson Award for an outstanding candidacy dossier went to Stephen Daskal for his papers on “Innocent Mistakes” and “Why Have a Welfare State?”

The graduate students also plan and organize an annual Graduate Colloquium in Philosophy on a topic of their choosing. This past year the theme was “Moral Responsibilities”, and the Colloquium brought together three external philosophers, each of whose papers received a public comment from one of our own graduate students. As always, the professionalism of the graduate students helped make this an effective and valuable event. Professors Gideon Yaffe (University of Southern California), Gary Watson (University of California-Riverside), and Gideon Rosen (Princeton, a former Michigan colleague) brought three distinctive perspectives to bear on the difficult topic of responsibility.

Undergraduate News

As mentioned above, the undergraduate program at Michigan continues to prosper impressively, attracting fresh interest and yielding highly accomplished graduates. The annual graduation reception affords the Department a chance to recognize these students before an appreciative audience of friends and family. In particular, it is the occasion for awarding the William K. Frankena Prize (made possible by a grant from Marshall Weinberg) for overall excellence in the Concentration. The prize was well-earned by David Baker (a double-major in Physics and Philosophy who will enter the graduate program at Princeton this fall), William Campbell (with a minor in German Studies, he will go on to Berkeley), and Ryo Kikuchi (who will go on to Stanford). The Haller Prize for the best undergraduate paper is awarded each term. The Fall 2002 Prize went to David Baker for his paper, “Spacetime Ontology and Einstein’s Cosmological Constant”.


With all this formal intellectual effort going on, members of the Undergraduate Philosophy Club nonetheless continued a time-honored tradition of informal meetings in a local coffee house for philosophical discussions, their topics ranging from the existence of God to the nature of consciousness.

Finally, even as we are going to press with Michigan Philosophy News, so is Meteorite, our handsome undergraduate journal. For this issue, Issue 4, eight papers were chosen from over 150 that were received from undergraduates around the world in response to their call for submissions. The papers selected to appear will appeal to a broad range of philosophical interests, and concern topics that include vagueness, aesthetics, and Adorno. Issue 4 also features an interview with Allen Wood (Stanford University), an internationally known scholar of the history of philosophy. More than a publication, Meteorite has also served as an active forum of philosophical exchange among our undergraduates.
Naturalist Metaphysics
Jessica Wilson

There are not only metaphysical foundations of physics, but also physical foundations of metaphysics. For science and philosophy are, at least genetically, interrelated and they exert mutual influence upon each other.

(Max Jammer, Concepts of Force, p. 149)

Two conceptions of metaphysics

Metaphysics is commonly characterized as the study of the most general features of reality: existence, identity, dependence, causation, change, modality, and so on. But since such features have specific manifestations—there are specific existences, dependencies, causes, changes, possibilities—it would be more accurate to say that metaphysics is the study of these features at a certain general level of investigation. Metaphysicians seek to understand, in general terms, what exists (properties and substantial particulars?), what dependency relations there are (composition? logical entailment?), what causation is (a relation whereby one event raises the probability of another?), and so on. Hence it is that metaphysics is defined not only by its subject matter, but also by its aspirations to provide general accounts of this subject matter. And indeed, to the extent that one can give metaphysical accounts of less general features of reality—say, of garbage, fictional characters, or political institutions—by identifying the general characteristics of these features, there is a case to be made for metaphysics being defined primarily by the distinctively general approach it takes, to understanding pretty much any subject matter you like.

So far, most metaphysicians would probably agree. It seems to me, however, that there is room for disagreement about how one should go about arriving at an appropriately general metaphysical account of some feature of reality.

On the usual conception, a general metaphysical account is the product of conceptual analysis, proceeding roughly as follows. One starts with the concept associated with the feature in question—that is, by thinking about the feature—with the goal of determining the contours of application of the concept—that is, of determining when the feature in question does or does not occur, across a wide range of candidate scenarios. These contours are determined primarily via conceivability considerations, of the sort characteristic of “thought experiments”: the metaphysician imagines, or conceives, a given scenario (as taking place in a “possible world”), and assesses her intuitions regarding whether the feature in question does or does not occur in the scenario. On the assumption that such conceivings represent genuine possibilities for the feature in question, the goal is then to provide an account of the feature (usually, in terms of conditions that are necessary and sufficient for its occurrence) that appropriately tracks the contours of the concept, as revealed by conceptual analysis.

This, for example, is how David Lewis goes about arriving at his account of causation. He aims for his account to track the application of causal concepts across a wide range of possible worlds, including worlds where the laws of nature are completely different, or where there is magical causation, of the spell-casting variety. Lewis thinks he can conceive of such worlds, and of causation existing in such worlds; and he generally endorses inferences from conceivability to possibility. Hence his account aims to accommodate these supposed possibilities: causation, he ultimately suggests, is a matter of counterfactual dependence between events, or between the ways in which these events occur (if Merlin hadn’t cast the spell, the prince either wouldn’t have changed into a frog, or in any case wouldn’t have changed into a frog in quite the way he did).

Since the conceptual analysis approach attempts to track the occurrence (or non-occurrence) of a given feature of reality across a wide range of conceivable scenarios, it will certainly give rise to a general account of the feature—assuming it is methodologically sound. One might, however, be suspicious of the methodology of conceptual analysis, insofar as it requires (as usually practiced) a considerable degree of faith in inferences from conceivability to possibility, concerning what worlds are supposed to be possible, and what goes on in such worlds. Supposing we can conceive of a world containing magical causation, does this show that such a world is genuinely possible (such that an adequate account of causation must accommodate this possibility)? Or supposing that we can conceive of a world with completely different laws of nature, where negatively charged electrons behave just like actual protons do, does it follow that properties like negative charge could be governed by completely different laws (such that an adequate account of the nature of scientific properties must accommodate this possibility)? I personally am not inclined to accept the latter inferences. And indeed, one might think that it’s easy enough to conceive of the impossible. Supposing
that mathematical propositions are necessarily true, if true, and necessarily false, if false, then can’t I conceive, first, that Goldbach’s conjecture is true, and then that it is false? One or the other of these times, it seems, I conceived of the impossible.

Of course, we needn’t require of our philosophical methodology that it never go wrong. Perhaps it would be good enough for most metaphysical purposes if conceivability were generally a good guide to possibility. But notwithstanding a considerable amount of debate on the topic, it remains unclear whether this general reliability is in place, and even more importantly, whether principled means exist for distinguishing conceivings that do track genuine possibilities from those that don’t.

For philosophers suspicious of the methodology of conceptual analysis, there is an alternative approach to arriving at a general metaphysical account of some feature of reality. Rather than start with the concept associated with the feature, one rather starts by canvassing the relevant (apparent) facts and theses concerning the feature, as diverse actual practices take these facts and theses to be. What practices are appropriate sources of the relevant facts and theses will depend on what feature of reality is at issue, of course. Investigation into extremely general features may need to canvas data from all areas of experience—the natural and social sciences, linguistics, and ordinary experience, among others. Accounts of more specific features—art or artifacts, or scientific phenomena— may focus on distinctly human areas of experience, or on scientific facts and theses. And of course, properly philosophical facts and theses may also be relevant (e.g., those concerning one’s prior philosophical commitments or views). Relevant facts and theses in hand, the desired general account of the feature in question is then arrived at by triangulation on these facts and theses.

The process of triangulation might take place in a variety of ways (and of course the process could iterate, to reflect incoming data). So, for example, one might arrive at a general account by abstracting from the relevant facts, in something like the way one arrives at the definition of a genus, by abstracting from its species. Or one might do so via an inference to the best explanation of the relevant facts. In any case, such a process will bear many of the marks of a typically empirical investigation, in ascending from facts, many of which are likely to be determined \textit{a posteriori}, to theory. As such, this approach to metaphysics, which so far as I know doesn’t have a name, might be appropriately called \textit{naturalist metaphysics}, reflecting the naturalist philosophical methodology according to which philosophical methodology should be consonant with that endorsed by the sciences.

Some clarifying remarks about this approach are in order. First, being a naturalist metaphysician is not to be confused with being an \textit{actualist} metaphysician. Naturalist metaphysicians may profitably reason about worlds different from the actual world (and indeed, may even endorse the concrete existence of non-actual possible worlds). However, a naturalist approach does require that one’s reasoning about what is possible be appropriately sensitive to the relevant facts and theses about modality as these are taken to be in various actual areas of experience. This may require some reading between the lines. Supposing, for example, that scientists do not explicitly pronounce on what is possible or impossible for scientific entities, it is the naturalist metaphysician’s job to discern, via attention to scientific facts and theses, what is plausibly (even if tacitly) taken to be the scientific view on this matter—again, perhaps as an inference to the best explanation of what scientists actually do or believe. And the same goes for modal facts and theses as they show up in other areas of experience.

Second, to be a naturalist metaphysician is not to hand over all authority to science, ordinary experience, or whatever the relevant areas of data input might be, to determine one’s metaphysical accounts or theses. A naturalist metaphysician needn’t take anything on faith, either from science or the person on the street. What this approach does require is that the general account of the feature in question accommodate the facts and theses of the relevant areas of actual experience, which means (as is usual in metaphysical contexts) that these facts and theses need either to be explained or explained away.

An example of someone who I take to be implementing a naturalist metaphysics approach is Phil Dowe. In arriving at his account of causation, he starts with various actual facts and theses concerning causation: in the main, what is thought to cause what, in various areas of experience. He then abstracts from the facts and theses he takes to be most relevant (namely, those associated with fundamental physics), suggesting that causation involves the exchange of conserved quantities (e.g., energy and momentum); and he has a story that attempts to accommodate causal claims outside of the physical sciences, according to which these reduce to claims about transfers of conserved quantities. Dowe’s account (which, by the way, I don’t endorse) privileges the view from physics,
but of course a proponent of a naturalist metaphysical approach might give a less- or non-physics-centric account (just as a conceptual analysis of causation might proceed in any number of fashions). In any case, it’s clear that Dowé’s account is still an account that is properly speaking metaphysical, in providing a more general account of causation than any associated with the sciences, in particular.

My own bent is for naturalist metaphysics; and I am drawn to this approach both because I am suspicious of conceptual analysis and because I am drawn to naturalism. My goal here is not, however, to legislate between these approaches. Moreover, I don’t mean to deny that the two approaches might profitably overlap. What I aim rather to do is twofold.

First, I want simply to make explicit (as I hope to have just done) that there are different conceptions of how metaphysical investigation might proceed, which are more or less sensitive to empirical considerations. Metaphysicians have not, I think, been sufficiently aware of the options here. For example, while philosophers recognize that Dowé’s account contrasts with a conceptual analysis approach, his account tends to be classified as a “physicalist reduction”, which classification, while accurate, misses the broader point that Dowé’s account implements a conception of metaphysics as naturalist metaphysics (which needn’t be either physicalist or reductionist).

Second, in what follows I want to provide two case studies illustrating two ways in which a naturalist metaphysics approach can have bearing on contemporary metaphysical debate. The first illustrates, by considering the question of how to formulate physicalism, how attention to certain scientific theses can suggest metaphysical resources needed to formulate a given metaphysical position in a plausible and contentful way. The second illustrates, by considering the question of whether scientific properties are essentially dependent on their actual governing laws, how a naturalist approach to a metaphysical question can provide grounds for favoring one answer over another.

The broader moral of these case studies is that doing naturalist metaphysics is likely to require more attention to empirical goings-on than is usual in contemporary metaphysics, especially when scientific facts and theses bear upon the feature of reality under investigation, as they so often do. Here it’s useful to recall that not so long ago, metaphysics and science were unified under the rubric ‘natural philosophy’.

Given the methodological worries associated with the conceptual analysis approach, it’s worth considering the advantages of a partial reunion.

**Case study 1: Formulating physicalism and emergentism**

Physicalism is the thesis, endorsed by many philosophers, according to which all broadly scientific entities (more specifically: all particulars, properties, states, processes, etc. studied in any of the sciences, from physics through psychology and the social sciences) are nothing over and above physical entities (particulars, properties, etc.). Emergentism, currently less popular but arguably physicalism’s best rival, is the view that while all scientific entities are dependent upon physical entities, some (e.g., qualitative mental states such as ‘seeing blue’) are nonetheless over and above, or ‘emergent from’, these physical entities. (Note that the emergence at issue here is supposed to be of a stronger variety than that at issue in, e.g., chaotic or complex systems, which are sometimes said to have features that are ‘emergent’, in being unpredictable, but where the emergent features are uncontroversially physically acceptable.)

Formulating these positions more precisely requires getting clear on the physical/non-physical and the nothing/something over and above distinctions. What is wanted are accounts of these distinctions on which physicalism and emergentism each turn out to be doctrines that are neither trivially true, trivially false, nor question-begging; and that contrast with each other in an appropriate and illuminating way, as they traditionally have been taken to do.

Worries about whether these doctrines can be viably formulated have focused on the physical/non-physical distinction. But on a plausible understanding this distinction is not especially problematic. Both physicalists and emergentists agree that physical entities are either those studied (approximately accurately) by contemporary fundamental physics, or are entities relevantly similar to these, in respect, most importantly, of not being fundamentally mental: both parties reject panpsychism, the thesis that mentality is had or bestowed by entities at extremely simple levels of organization. On this characterization, the physical/nonphysical distinction is sufficiently clear to allow debate to proceed over the real issue dividing physicalists from emergentists: whether there are any entities over and above the entities that all parties agree are physical.
In my view, the real worry concerning whether physicalism and emergentism can be viably formulated
has rather to do with the nothing/something over and
above distinction. I won’t go through all the ways
philosophers have tried to get at this distinction, and
the inadequacy of these attempts for purposes of
formulating the theses at issue. I’ll just consider one
particularly plausible and common suggestion, show
how it fails, and then show how it can be fixed up, by
appeal to a scientific concept not usually considered in
philosophical contexts.

For convenience, let’s focus on over and aboveness
as attaching to scientific properties, and on the cases
of primary interest in the physicalism debates: cases
of what I call “same subject necessitation”, where a
physical or physically acceptable property of a subject
brings about an apparently distinct property of the
subject, as a matter of lawful necessity (that is, in accord
with the operative laws of nature). A stock case—and
the most important case—is where a brain property,
instanced in a subject, necessitates a mental property
in that subject; and for convenience I’ll focus on this
case in what follows.

According to the plausible suggestion I have in
mind, what it is for a mental property $M$ to be over and
above its necessitating brain property $P$ is for $M$ to
bestow a causal power that $P$ doesn’t bestow. That is,
in virtue of having $M$, the subject $S$ can cause effects
that $S$ can’t cause simply in virtue of having $P$. There
is surely something plausible about taking over and
aboveness to involve new causal powers; and indeed,
emergentists have often characterized emergent
properties in roughly these terms.

However, the suggestion faces the following
difficulty. On the not uncommon “nomological
sufficiency” account of when it is that a property
bestows a causal power, this is a matter of the
property’s being lawfully sufficient, in the
circumstances (henceforth assumed), for the effect $e$
(and where the circumstances alone aren’t lawfully
sufficient for $e$). So, consider the emergentist claim
that an emergent mental property $M$ bestows a causal
power to produce a certain effect $e$, that its necessitating
brain property $P$ doesn’t bestow. Since the brain
property $P$ lawfully necessitates the mental property
$M$ (since this is a case of same-subject necessitation),
$P$ is lawfully sufficient for $M$. And $M$ is lawfully
sufficient for the effect $e$, by assumption. But then, by
the transitivity of lawful sufficiency, so will $P$ be
lawfully sufficient for the effect $e$. That means, on the
present account of causal power bestowal, that $P$
bestows the causal power to produce $e$, contrary to
the assumption that $M$ bestows a new causal power to
produce this effect. And in fact, on the given
assumptions a same-subject necessitated property will
never bestow a causal power that its necessitating
property doesn’t bestow, and so can never be emergent;
hence emergentism turns out to be trivially false for
the most important class of cases at issue in the
physicalism/emergentism debate.

There are various moves one can make here,
including rejecting the nomological sufficiency account
of causal power bestowal. But supposing one wants
to retain this weak, but useful account of bestowal, a
naturalist attention to scientific detail can provide an
alternative response.

The response proceeds by noting that, according
to our best science, the causal powers of properties
are grounded in particular fundamental forces, or
interactions. The causal power bestowed by the
property being negatively charged, to attract a
positively charged particle, is grounded in the electro-
magnetic force; the causal power bestowed by certain
quantum color properties, of being able to bond with
other atomic nuclei in a stable configuration, is
grounded in the strong nuclear force; the causal power
of being able to sit on a chair without falling through it
is grounded (at least) in the gravitational and the
electromagnetic forces; and so on, and so on. In virtue
of grounding the causal powers bestowed by properties,
fundamental forces explain, organize and unify vast
ranges of natural phenomena.

The above facts and theses are ones that a
naturalist metaphysician can take into account in their
theorizing. Of course, philosophical work needs to be
done to ensure that the operative notions—of
fundamental forces/interactions, and of the “grounding”
relation holding between fundamental forces and causal
powers—make sense, from a metaphysical point of
view. But assuming all goes well on these fronts, these
notions can provide the resources needed to fix up the
new causal powers account, as follows.

As per the truisms above, it apparently makes sense
to speak of the causal powers of a property relative to
a particular set of fundamental forces/interactions. So,
we can speak of the causal powers a property has
relative to the set of fundamental physical forces—
the only forces that physicalists think exist. What I
propose, then, is that we see the emergentist as claiming
that emergent properties bestow at least one causal
power that is not grounded only in physical forces—
that is, in other words, partially grounded in some non-
physical force (i.e., a force operative only under conditions of a high level of complexity—for example, those associated with mentality). This allows the emergentist to grant that, taking all fundamental forces into account, the brain property \( P \) bestows every causal power the mental property \( M \) bestows, while still maintaining that \( M \) is emergent, in virtue of bestowing a causal power that is “new” relative to those causal powers of \( P \) grounded only in fundamental physical forces.

Elsewhere I have argued that this sort of “force-relative” account of over and aboveness is capable of serving as a basis for viable formulations of physicalism and emergentism; and I have also argued that fundamental forces/interactions can be appropriately understood as collections of interacting fields (which understanding in turn suggests a particular account of the grounding relation, holding between fundamental forces and causal powers). Here it’s worth noting that in spite of the fact that our best-confirmed scientific theories are field theories, associated with distinct fundamental interactions, there are no fully-developed metaphysical accounts of either fundamental interactions or fields. This may be, in part, because our main handle on forces and fields is primarily through the sciences; and hence the contours of the associated concepts are less likely to be amenable to the tools of conceptual analysis, at least as usually practiced. In my view, this is further indication of the usefulness of naturalist metaphysics: since it takes the facts and theses of our actual practices as a starting point, it is perfectly suited to investigate into the primarily theoretical concepts of the sort at work in contemporary physics; and it is also less likely to neglect these extremely important features of reality.

**Case study 2: The nature of scientific properties**

I next want to consider the dispute over whether it is essential to scientific properties that they be governed by the causal laws that actually govern them (or laws relatively similar to these). This dispute is closely related to that over whether the laws of nature are necessary or contingent, since these laws for the most part express causal interactions among properties (instanced in substantial particulars, events, or what-have-you). One can be extreme in either direction here, with some philosophers (e.g., Sydney Shoemaker) saying that (with certain exceptions) all its actual governing laws are essential to a scientific property, and some (like Lewis and David Armstrong) saying that (with certain exceptions) none of them are. And of course there are intermediate positions. In what follows, I’ll canvass some considerations indicating that a naturalist approach supports something much closer to the “essentialist” or “necessitarian” position on the spectrum than to (what I’ll call) the “extreme contingency” view.

Philosophers endorsing the extreme contingency view tend to cite the conceivability of scenarios in which the same properties are governed by completely different laws (as does Alan Sidelle) or else appeal to philosophical principles, such as Hume’s principle that there are no metaphysically necessary connections between distinct existences (that is, connections holding in all possible worlds, of the sort that the essentialist believes to exist between properties), as entailing the view. So, for example, Lewis and Armstrong each appeal to Hume’s principle along the way to motivating a ‘principle of recombination’ that is to guide deliberations about what is or is not possible: roughly, the idea is that (with few exceptions) anything can exist, or not exist, with anything else. So Lewis says:

> Another use of my principle is to settle—or as opponents might say, to beg—the question of whether laws of nature are strictly necessary. They are not; or at least laws that constrain what can coexist in different positions are not. Episodes of bread-eating are possible because actual; as are episodes of starvation. Juxtapose duplicates of the two, on the grounds that anything can follow anything; here is a possible world to violate the law that bread nourishes. So likewise against the necessity of more serious candidates for fundamental laws of nature [...] . (On the Plurality of Worlds, p. 91)

I’ll shortly argue that these motivations are suspect from the perspective of naturalist metaphysics. But first, it’s worth noting that the usual philosophical arguments for the essentialist view (or views closer to that end of the spectrum) do conform to a naturalist approach. One argument for the essentialist view proceeds by citing the fact that our main reason for positing properties, in both ordinary experience and in science, is to track similarities and differences in the causal potentialities and actualities of substantial particulars: for a substantial particular to have a given property is just for the particular to be able to engage (in appropriate circumstances) in certain causal
interactions rather than others. In other words, properties (of the sort characterizing natural phenomena, at any rate) appear to be defined by reference to fairly specific causal laws. A related epistemological motivation for essentialism proceeds by noting that if the identity of a property depends on something entirely distinct from its governing causal laws (as the extreme contingency view assumes), then we will not be able to know things we take ourselves to know; for example, whether something has a particular property or not, or whether two substantial particulars resemble in virtue of sharing a property. Since we do take ourselves to know these things, the argument goes, we should reject the extreme contingency view and allow that the nature of scientific properties depends, to some significant extent, on the causal laws that actually govern them.

These arguments reflect a naturalist methodology, according to which one’s metaphysical account should be sensitive to the facts and theses of actual experience bearing upon the feature under investigation. Moreover, since what is at issue here is the nature of scientific properties, naturalist metaphysicians will want also to consider what scientists and science have to say, explicitly or implicitly, about the matter. Those few scientists who have addressed the question seem to favor something in essentialism’s ballpark, as does Bohm:

[Ca]usal laws are not like externally imposed legal restrictions that, so to speak, merely limit the course of events to certain prescribed paths [...] rather, they are inherent and essential aspects of these things [...] Likewise, the general mathematical laws of motion satisfied by bodies moving through empty space (or under any other conditions) are essential properties of such bodies, without which they could not even be bodies as we have known them. Examples of this kind could be multiplied without limit. They all serve to show that the causal laws satisfied by a thing [...] are inextricably bound up with the basic properties of the thing which helps to define what it is. *(Causality and Chance*, p. 14)

Bohm’s view is supported by the interesting, and in my view crucial, fact that we never experience (or posit) properties as apparently persisting through changes in the causal powers. On the contrary: whenever a substantial particular S comes to have different causal powers at t, than it did at a previous time t, (when in the same circumstances), we uniformly assume, both in ordinary and in scientific contexts, that S came to have one or more different properties at t, than it had at t, not that the properties S had at t, came to be governed by different laws at t. This fact is one of the things that any account of the nature of scientific properties should accommodate, and it is straightforwardly explained by something in the ballpark of the essentialist view.

Extreme contingency theorists may claim that their view also explains this fact, since they suppose, as a rule, that the laws governing scientific properties remain the same within a world. One may wonder what right they have to suppose this; but let’s put that issue aside here. In any case, since their further claim that scientific properties could be governed by completely different laws at different worlds is not obviously supported by ordinary experience or science, a naturalist metaphysician will want some reason for believing it, as an appropriate triangulation on the range of our practiced beliefs about scientific properties. So let us now return to the reasons usually given in support of the extreme contingency view, and assess these from the point of view of a naturalist metaphysics.

First, what of support for the view stemming from our being able to conceive of worlds where properties (such as having negative charge) are governed by completely different laws (such as those actually governing having gravitational mass m)? As previously indicated, the naturalist metaphysician will not be much persuaded by the mere fact of conceivability alone, as a guide to possibility. They will want some evidence, again grounded in relevant actual facts and theses, that such imagined scenarios are genuinely possible. To the extent that those appealing to conceivability considerations do cite such actual facts and theses, however (and they usually don’t), these don’t support the extreme contingency view. For example, in discussing “intuitions” that scientific properties could be governed by different laws, Armstrong cites the fact that scientists consider a range of possibilities when constructing hypotheses concerning what laws actually govern a scientific property. While a naturalist metaphysician will appreciate Armstrong’s attempt to find support for his view in scientific practice, the attempt doesn’t succeed; for while scientists do consider multiple such hypotheses (and putting aside the worry that these hypotheses represent merely epistemic, as opposed to
genuine, possibilities), the range of these is not broad enough to support the extreme contingency view. When scientists were fishing about for the laws governing having negative charge, for example, they presumably did not consider the hypothesis that the laws were just like those actually governing having gravitational mass m.

Second, consider the philosophical principles usually cited for the extreme contingency view: Hume’s principle that there are no metaphysically necessary connections between distinct existences, and the modal principle of recombination that Hume’s principle inspires. It’s worth recalling that Hume’s reasons for endorsing his principle derived from his acceptance of a limited set of acceptable forms of reasoning, which did not include inference to the best explanation (so that one is barred from so inferring to the existence of explanation, if any method is. (Indeed, contemporary advocates of Hume’s principle don’t accept Hume’s constraints, either, but seem mainly to accept his principle as an interesting constraint on their theorizing.) Moreover, it appears that scientists do infer to the existence of metaphysically necessary connections between distinct existences, though presumably they wouldn’t put it that way. For example, contemporary expositions of particle physics and field theory are rife with talk of “essentially determined” force laws and “compulsory” existences. Why not take these claims at face value? In any case, the usual motivation for the extreme contingency claim rests on a principle based in denying what is arguably the primary tool of scientific methodology; hence a naturalist metaphysician has at least prima facie reason to reject this principle.

What about the principle of recombination that more directly motivates the extreme contingency view? Again, keeping in mind that what is at issue here is the nature of scientific entities, a naturalist metaphysician will want their modal reasoning about such entities to accommodate the facts about how scientists reason about the possibilities for such entities. On this score, it seems likely that scientists would respond with an incredulous stare to Lewis’s claim that, for example, “[I]f there could be a talking head contiguous to the rest of a living human body, but there couldn’t be a talking head separate from the rest of a human body, that [...] would be a failure of plentitude. (I mean that plentitude requires that there could be a separate thing exactly like a talking head contiguous to a human body)” (On the Plurality of Worlds, p. 88); and similarly for Lewis’s claim that plentitude requires that (with few exceptions) any fundamental physical property might or might not be paired, as a matter of law, with any other. Of course, philosophers often say things that surprise scientists. Beyond the incredulous stare, however, it seems likely that scientists will reasonably deny that there are these sorts of gaps in the space of possibilities, such that the principle of recombination is required in order to fill them. It is, at the least, extremely unclear how to reconcile the principle of recombination with scientific practice, insofar as it is evident that scientists do not modally reason in accordance with this principle. Hence a naturalist metaphysician also has prima facie reason to reject this principle, and the extreme contingency view it entails.

Of course—and this is why I say only that a naturalist metaphysician has prima facie reason to reject the above principles—an account in line with naturalist methodology need not deem all the relevant facts and theses in the “data set” correct. As previously noted, it is only required that such an account accommodate these facts and theses, which is compatible with rejecting them, while explaining them away. However, two points. First, other things being equal, philosophical accounts of a given feature of reality that do not require extremely revisionary understandings of wide ranges of actual practice (that, in particular, have bearing upon this feature) are to be preferred to those that do require this. Second and relatedly, the more revisionary the account, the heavier the burdens incurred when it comes to (a) motivating the revisionary account and (b) explaining away the facts and theses that the account deems misguided or incorrect. The above principles are revisionary in the extreme, insofar as they are at odds with pervasive facts concerning scientific methodology and modal reasoning; but so far as I can see, advocates of the extreme contingency view neither satisfactorily motivate the principles, nor satisfactorily explain away the pervasive facts the principles undermine.

Finally, extreme contingency theorists might attempt to support their view on grounds that scientific properties have an intrinsic aspect or identity, that enables properties to be the same, in spite of being governed by completely different laws. Both Armstrong and Lewis accept that properties have intrinsic (Armstrong also says: primitive) identities. But what facts or theses support thinking this?

One answer, due to Armstrong, is posed in the form of a question: “[W]hy need properties have essential features at all? Perhaps their identity is primitive. To uphold this view is to reject the Principle
of the Identity of Indiscernibles with respect to Properties. Properties can be different, in the same way that, many of us would maintain, ordinary particulars can just be different although having all their features in common [...] properties can be their own essence" (What is a Law of Nature?, p. 160). More to the present point, to allow that properties can have primitive identities (that are intrinsic in being independent of the relations—in particular, causal relations—properties enter into) is also to reject the Distinctness of Discernibles: properties can be the same, in spite of being governed by completely different laws, in the same way (we might see Armstrong as suggesting) that ordinary substantial particulars can be the same, in spite of having none of their properties in common.

However, if the argument for properties' having primitive identities is supposed to turn on an analogy to substantial particulars, having primitive identities, then the argument will fail. First note that there is a case, in line with a naturalist metaphysics approach, for thinking that some substantial particulars, at least, have primitive identities. For in the case of some substantial particulars, there is something to explain—namely, our common experience of these particulars persisting through relatively extreme changes in their properties (as when a single human moves from infancy to adulthood, for example)—for which the posit of a primitive identity is the best, or in any case a reasonable explanation.

But—and here we return to the aforementioned crucial fact about properties—we do not have experience of properties apparently persisting through extreme changes in their governing laws; nor do the relevant facts and theses of actual practice provide any ground for thinking this is genuinely possible. So there is no motivation here, as there arguably might be in the case of substantial particulars and their properties, for thinking that properties have an identity completely independent of their governing laws. There is nothing to explain, such that the thesis that properties have primitive identities would be the best, or in any case a reasonable, explanation of it. So the analogy fails, and the extreme contingency view remains unsupported, by naturalist metaphysics' lights.

Of course, it might be that there is some other justification for this view, besides those considered here, that would make sense by these lights; and moreover I don't claim that my necessarily brief argumentation here is decisive. But it is, I think, suggestive. As usually motivated, the extreme contingency view appears not to appropriately line up with the relevant areas of our experience. By way of contrast, the view that does triangulate well both with ordinary experience and scientific practice is something in the vicinity of the essentialist view.

This concludes my mini-manifesto in support of naturalist metaphysics. It may be that philosophers have continued to operate with a conception of metaphysics as conceptual analysis, in spite of its evident methodological difficulties, because they thought the alternative was to give up doing philosophy and start doing empirical science. Here I hope to have convinced you that a greater sensitivity to empirical considerations is compatible with the metaphysical goal of providing distinctly general accounts of interesting features of reality. Naturalist metaphysics provides a position intermediate between the sciences (and more generally, the diverse areas of actual experience) and "armchair" metaphysics, where science and philosophy can exert an appropriate mutual influence on each other.
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MAJOR EVENTS

September 29 - October 3, 2003
Timothy Williamson - Oxford University, New College
Nelson Philosopher-in-Residence Lecture
“Knowledge, Context, and the Subject’s Point of View”
in the Vandenberg Room, Michigan League
3pm to 5pm

February 6, 2004
Tanner Lecture on Human Values
Christine Korsgaard - Harvard University
“Kant and Moral Questions Concerning Non-Rational or
Defectively Rational Beings”
4pm to 6pm

February 7, 2004
Tanner Lecture Symposium
Marc Hauser - Harvard University
Seana Shiffrin - University of California, Los Angeles
Allen Wood - Stanford University
9:00am - 12:30pm

March 18, 2004
Daniel Stoljar
Australian National University
Marshall Weinberg Distinguished Visiting Professor Lecture
Pendleton Room, Michigan Union
3pm - 5pm

April 2-3, 2004
Spring Colloquium Lectures
“Topics in Naturalized Epistemology”
Richard Feldman - University of Rochester
Peter Graham - University of California, Riverside
Paul Thagard - University of Waterloo, Ontario
Vandenberg Room, Michigan League
Friday 1pm - 5pm
Saturday 10am - 12 noon