

Michael Frauchiger (Ed.)

Modalities, Identity, Belief, and Moral Dilemmas

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Themes from Barcan Marcus

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Themes from Barcan Marcus

The contributions to this collection, which hark back to the 3rd International Lauener Symposium in honour of Ruth Barcan Marcus, open up originary and stimulating perspectives by leading thinkers on a broad variety of Barcan Marcus's concerns, ranging from the systematic foundation and interpretation of quantified modal logic, identity and indiscernibility, nature of extensionality, intensional languages, necessity of identity, direct reference theory for proper names, notions of essentialism, second-order modal logic, modal metaphysics, properties, classes and assortments, substitutional and objectual interpretations of quantification, actualism, the Barcan formula, possibilities and possible-world semantics to epistemic and deontic modalities, states of affairs, non-language-centered theories of belief, theories of rationality, consistency of a moral code, moral dilemmas, and much more. The fully revised and reworked contributions to this volume are critically directed toward various aspects of thorough Marcusian approaches and argumentations, and they demonstrate that Barcan Marcus's highly original and clear ideas have had a formative, determining influence on the direction in which certain themes central to today's philosophical debate have developed. Further, the collection includes an orientating, insightful and detailed intellectual autobiography from Ruth Barcan Marcus herself as well as an informal interview with her containing her unfiltered, frank and open answers, both of them revealing impressive facets of the rich life and the keen, honest thinking of this extraordinary philosopher and courageous person. The book brings together contributions by Ruth Barcan Marcus, Timothy Williamson, Dagfinn Føllesdal, Joëlle Proust, Pascal Engel, Edgar Morscher, Erik J. Olsson, Michael Frauchiger.

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Michael Frauchiger

Proem: Highlighting Ruth Barcan Marcus's Courageous Philosophical Life and Work

The present collection on themes from Barcan Marcus had its source in the 3rd International Lauener Symposium held in Bern, Switzerland, in 2008, during which the Lauener Prize for an Outstanding Oeuvre in Analytical Philosophy for that year was presented to Ruth Barcan Marcus at a special award ceremony. The event was sponsored by the Lauener Foundation, which had been founded and endowed by the Swiss philosopher Henri Lauener (1933–2002), a long-standing academic friend of Ruth Barcan Marcus's and the organizer of a memorable, much-valued series of international Philosophy Colloquia in Biel and Bern, in which Barcan Marcus had been involved at one time. This special constellation enabled the Lauener Foundation to realize in Bern a demanding symposium on themes from Barcan Marcus in which she herself participated actively, even though at this point she had not traveled abroad any more for a decade¹.

Henri Lauener had much respect for Ruth Barcan Marcus as a pioneer of quantified modal logic and its philosophical reflection and, moreover, for her line of persistent, refined resistance to W. V. Quine's acute retorts to her systematic contributions to improving the formal structure, semantics, ontology, and thus intelligibility, of modal logic. Lauener – despite being critical of important aspects of Quinean philosophy (in particular of strongly naturalist ones) – considered Quine the leading contemporary American philosopher and one of the subtlest and, at the same time, deepest thinkers in the history of modern philosophy.² In comparison, Barcan Marcus's reactions to the longstanding controversy in which she became entangled with Quine concerning modal logics reflect a somewhat more ambivalent appreciation of Quine the philosopher and the man. For one thing, Barcan Marcus acknowledged that Quine's early [I quote] "criticisms and the continuing debate were a catalyst for some of my subsequent work."³ For another thing, she points out annoying parts of Quine's continuous countermoves to her own logical and philosophical

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1 Cp. Barcan Marcus (2010), 90. (Also, this volume, 37.)

2 Cp. Lauener (1982), 11.

3 Barcan Marcus (1993), x.

work. In the present volume, both Barcan Marcus's autobiographical piece "A Philosopher's Calling" and the interview bear witness of her displeasure at Quine's animadversion against her pioneering systematic studies of quantified modal logic, as expressed e.g. in the following passage from "A Philosopher's Calling", which indicates some concern about an inclusive attitude towards opponents in cooperative inquiry: "Quine's negative views had been expressed immediately on the heels of my publications (...) It was as if such efforts needed to be nipped in the bud. (...) My name is Ruth and I was in alien corn".⁴

It's worth noting, though, that there were not only points of divergence, but some points of agreement as well in the course of this long-running debate between Barcan Marcus and Quine. For instance, both of them reject (mere) possibilia, i.e. merely possible, nonactual objects, though the details of their respective justifications of the critique of possibilia differ considerably. – In accordance with Barcan Marcus's causal, or historical-chain, account of direct reference for genuine proper names (limiting ourselves here to Barcan Marcus's reasons for her rejection of possibilia), such putative merely possible objects are not (empirically) encounterable and thus cannot be objects of reference and cannot be genuinely named at all. In line with this, Barcan Marcus defends an actualistic modal semantics with objectual quantification⁵ and the domains (of

4 Barcan Marcus (2010), 85. (Also, this volume, 29f.) – In this passage, Barcan Marcus tells of an almost legendary colloquium at Harvard in February 1962, of which she was apprehensive at the time. In Quine's sphere, she felt like her biblical namesake, standing in alien corn. Barcan Marcus there presented her paper "Modalities and Intensional Languages", in conjunction with comments by Quine. Participating in the discussion following Barcan Marcus's lecture were (in addition to Quine and Barcan Marcus) Kripke, Føllesdal and McCarthy. (Cp. Barcan Marcus (1993), 3, 222f.) – It is important to bring in, at this point, the perspective of Dagfinn Føllesdal, who had in the previous year submitted his Ph.D. thesis to the Harvard Department of Philosophy. Føllesdal's thesis advisor was Quine and yet Barcan Marcus's innovative work in quantified modal logic was carefully and accurately discussed in his dissertation. Føllesdal's recollections of the Harvard colloquium lecture by Barcan Marcus do not justify Ruth Barcan Marcus's apprehensiveness of a lack of respect and inclusiveness for philosophical opponents within Quine's sphere of influence at Harvard in those days. Towards the end of his contribution to this volume, "Ruth Marcus, Modal Logic and Rigid Reference", Føllesdal writes: "Ruth describes in her book *Modalities* the discussion at Harvard in 1962 as if she were in a lion's den, where she appreciated Saul Kripke's support. She clearly believed that being a student of Quine I sided with Quine in his rejection of the modalities. (...) She might have been relieved in 1962, when she visited Harvard, if she had known that she had one more ally in that group". (This volume, 47f).

5 At many points in her anthology of collected essays entitled *Modalities*, Barcan Marcus advocates a substitutional semantics for quantification. At one point, however, she acknowledges that objectual interpretation of quantification remains ultimately indispensable for

individuals) of the alternative possible worlds coextensive with or included in the domain of this actual world, hence validating the Barcan formula and ruling out possibilia.⁶ – Getting to the heart of her critique and rejection of possibilia and, in addition, encapsulating “the central truth in Quine’s critique of possibilia”⁷, Barcan Marcus writes: “It seems harmless in formal semantics to speak of assigning an object from this or any other world to a variable or to a name. But we are in this actual world, users of our actual language. (...) Naming relates a word introduced into an actual language in the actual world to a thing that is there to be encountered in the world when the event of naming occurs. (...) That one has no general criteria of identity for possibilia is not sufficient for rejecting them. As we noted, even general criteria of identification for actual material objects seem, also, to elude us. (...) It is not the absence of criteria that makes us dubious. It is rather that what is absent is the individuals. They are not there to be objects of reference at all. (...) There are no individual objects, which are what is required for an identity relation. There are no traceable histories, origins, futures, and so on. Criteria aside, Quine is correct when he says, “The concept of identity is inapplicable to ‘unactualized possibles’.” No identity, no entity.”⁸

Notwithstanding the varying pitch of their reactions to Quine’s giant philosophical shadow, Barcan Marcus and Lauener looked at each other with much mutual appreciation and inquisitiveness. Henri Lauener respected Ruth Barcan Marcus not only for her acute and subtle mind, but also for her personal courage, and he associated Barcan Marcus’s remarkable courage with her dogged commitment to integrity and honesty⁹. I feel it is appropriate at this point to add that in the academic milieu – and probably in the world of work or

possible-world semantics; for, even if substitutional quantifiers are used in quantified modal logic, objectual quantification is also required in the final analysis. On p. 213 of Barcan Marcus (1993), Marcus writes with regard to substitutional possible-world semantics: “Identity, which is a feature of *objects*, cannot be defined in such a semantics. Intersubstitutivity of *syntactical* items *salva veritate* does not generate objects, which must be *given* if identity is to hold. (...) Substitutional semantics may have some uses for nonobjectual discourse, but, as I now believe, only in conjunction with objectual quantification for the domain of actuals.” – So, on a substitutional interpretation of quantifiers, which does not assign any domains to possible worlds and, accordingly, no objects to names, the relation between linguistic expressions and actual objects in the world is neglected and left out of account.

⁶ Cp. e.g. Barcan Marcus’s illuminating paper “Possibilia and Possible Worlds”, in Barcan Marcus (1993), 189–213.

⁷ Barcan Marcus (1993), 204.

⁸ Barcan Marcus (1993), 207f.

⁹ Cp. Lauener (1999), 177.

rather in the day-to-day realities of life generally – it takes indeed a lot of courage and resistance, on the part of women in particular, to maintain high levels of autonomy and genuineness. This is reflected in many pertinent passages throughout Barcan Marcus’s autobiographical piece reprinted in this volume, a few of which are cited here: “We were now a family of four females, which I mention because I believe I had an easier time following an unconventional path than if there had been a strong male presence in the family.”¹⁰ – “There were recurrent discriminatory episodes. I’ll mention one graphic incident among many. Yale had a philosophy club open to undergraduate and graduate students. I was elected president but then received a letter from the chair of the department suggesting that I decline. The reasons given were that Yale was predominantly and historically a male institution and that my election may have been a courtesy. Also, the club’s executive committee met at Mory’s which was closed to women. I did not respond to the letter and did not decline. It was, to me, obviously unreasonable. When the letter was discussed in the graduate dining room, several students said it was imprudent to have revealed it since the chair influences job placement. My response was as before: I wasn’t thinking about a job. I assumed the presidency and the executive committee did *not* meet at Mory’s (which was not “liberated” until the seventies).”¹¹ – “It seems I was not a unanimous choice of the search committee. The protest was that there never had been a woman chair at the University of Illinois! But it happened, and I embarked on one of my careers as a proper “professional.”¹² – “But I am essentially a loner. One of the changes in academic style in recent years is the distribution of papers by an author for comment by large, sometimes astonishingly large, numbers of contemporaries, which is then noted in the acknowledgments. That was not my style. There was often no point, in any case, since I characteristically defended positions contrary to received views, if there were received views.”¹³

At last, Lauener’s high respect for Ruth Barcan Marcus’s inventive, accurate, far-sighted philosophical oeuvre resulted in a *Festschrift* for her¹⁴, which he edited and published in *Dialectica* (a journal of philosophy that was originally founded in 1947 by Ferdinand Gonseth, Paul Bernays and Gaston Bachelard and which Henri Lauener had been editing for over twenty years at that point in

¹⁰ Barcan Marcus (2010), 76. (Also, this volume, 19.)

¹¹ Barcan Marcus (2010), 80f. (Also, this volume, 24.)

¹² Barcan Marcus (2010), 86. (Also, this volume, 31f.)

¹³ Barcan Marcus (2010), 90. (Also, this volume, 36.)

¹⁴ Lauener (1999).

time, establishing it as an international platform for contributions to analytical, accurate philosophy). – Lauener's appreciation of Ruth Barcan Marcus's lucid and forceful writing in sparing doses that have a strong, positive effect is shared by many, and her most elaborate papers thus often serve as models for incisive philosophical writing. Barcan Marcus herself comments on her writing thus: "I am not driven to publish. Papers are submitted where I think I have a useful account of or solution to a clear question of logical or philosophical interest. The questions usually originate in some common sense observations, couched in our common, ordinary language."¹⁵ Always an unbending critic of her own work, Ruth Barcan Marcus wrote with exceptional prudence and her continuing [I quote] "worry about the best way to make my exposition clearer"¹⁶ sometimes led to a considerable deferral of the publication¹⁷ – or even to the complete withdrawal¹⁸ – of certain papers she had already completed previously. Barcan

¹⁵ Barcan Marcus (2010), 82. (Also, this volume, 26.)

¹⁶ Cp. Barcan Marcus (1993), 89.

¹⁷ For example, Barcan Marcus's remarkable paper "Classes, Collections, Assortments, and Individuals" (Barcan Marcus (1993), 89–100) had quite a protracted publication history. Marcus submitted it in 1965, but it was not published until 1974, when the journal's [I quote] "patient editor presented me with an ultimatum" (p. 89). The delay was due inter alia to a prolonged [I quote] "struggle with arriving at a salient vocabulary for the distinctions I wanted to make among notions that are often conflated in varying ways, such as attribute, class, collection, set, and what I have in the present paper called "assortment."" (p. 89). This struggle for improved terminology indeed goes back to Marcus's contribution to the influential 1962 Helsinki *Colloquium on Modal and Many-Valued Logics*. And that contribution of Barcan Marcus's was in turn based on her early, pivotal studies of quantified modal logic; that is, her colloquium contribution was [I quote] "an application of "A Functional Calculus of First Order Based on Strict Implication," *Journal of Symbolic Logic*, XI (1946) and "The Identity of Individuals in a Strict Functional Calculus," XII (1947)" (p. 97). – In the relevant Helsinki Colloquium paper, published in 1963, as well as in the abbreviated and improved 1974 and 1993 versions of it, Barcan Marcus has developed a still thought-provoking modal theory of classes, which takes into account that assortments, unlike classes, are not given by defining conditions for membership, but by inventory. She points out that a bracketed list of tags which designates an assortment does – analogously to the tags (i.e. genuine proper names of physical objects) themselves – have a purely referential (i.e. not a predicative) function. Equivalent assortments are thus strictly identical, whereas classes may be contingently equivalent and may differ in modal contexts.

¹⁸ Barcan Marcus was invited to contribute to each of the two *Festschriften* for Henri Lauener, which were published in 1993 in *Grazer Philosophische Studien* and in 1995 in *Dialectica* respectively. Yet, whereas Barcan Marcus's well-known article "The Anti-Naturalism of Some Language Centered Accounts of Belief" appeared in the latter (Furrer/Hottinger (1995), pp. 113–129), she withdrew her already completed contribution to the former at the last minute because she considered it "not sufficiently worthy" (cp. "Vorbemerkung/Preface" of Burri,

Marcus, therefore, did certainly not believe in streamlined publication planning. Clearly, she took a distinctive, individual path to her original publications which subsequently have advanced the philosophical debate. – And on a more general note, Barcan Marcus did not believe in personal life planning. In her lively extemporized autobiographical talk at the Lauener Symposium in her honour, Ruth Marcus said: “I remember being in a legal theory workshop (...) going on about life’s plan. (...) I bet a lot of people here have a life plan. I never had a life plan. I just sort of did what I wanted to do from day to day. Maybe I had a plan for the next week, or for the next month; but the odd view of having a life plan ... So I said (...): “I don’t have this huge projection of my future.” – “You don’t?!” – I was amazed. And there was a tremendous discrepancy in the audience between those people who sort of have a life and then those who had a – plan.”¹⁹

Barcan Marcus is probably best known as a logician and a philosopher of logic in the analytic tradition who has critically and productively improved the existing approaches in the development of modal logic and its philosophical interpretation throughout her life. Barcan Marcus was not, however, confined to the philosophy of logics related to the logician’s interest she had in modal, deontic and other intensional formal languages²⁰. Her philosophical thought soon spilled over to include metaphysics, epistemology, and moral philosophy. – Thus she was, for instance, very influential in the development of a revisionary conception of beliefs as cognitive attitudes to possible states of affairs (rather than relations to linguistic or quasi-linguistic entities). Such a non-language-centered account of belief apparently offers various advantages over the still dominant language-centered accounts of belief. For instance, it *disallows* to grant beliefs exclusively to language users (and to deny beliefs to

A./Freudiger, J., eds., (1993) *Relativism and Contextualism: Essays in Honor of Henri Lauener*, in: *Grazer Philosophische Studien* 44 (1993).).

19 This is my transcript of what Ruth Barcan Marcus said about *life plan* during her talk titled “Recollections” at the 3rd International Lauener Symposium on Analytical Philosophy in honour of herself (on 30 May 2008 in Bern). At this point in her talk, Barcan Marcus told of a legal theory workshop in which she had participated along with Ronald Dworkin and others, plus an audience.

20 In her path-breaking paper “Modalities and Intensional Languages” (Barcan Marcus (1993), 3–23), Marcus discusses, inter alia, the issue of identity in intensional contexts, beginning with a definition of the notion of an intensional language, which remains illuminating up to the present day by clearly setting out degrees of intensionality: “A language is explicitly intensional to the degree to which it does not equate the identity relation with some weaker form of equivalence.” (p. 5).

animals and babies thereby) or to ascribe to agents beliefs in the impossible. At the same time it *allows* to draw a parallel between belief and knowledge²¹ and to divorce beliefs from acts of sincere verbal assent (thus accommodating, e.g., the possibility of unconscious beliefs) and, moreover, to link the account of the rationality of belief with a wider, more general account of the rationality of action.²² – Furthermore, Barcan Marcus's contributions to moral philosophy and deontic logic have gained considerable attention and impact. Most notably, Barcan Marcus maintains, *pace* Kant, that moral obligations can and do conflict in reality. She holds that moral dilemmas arise when obligations can in practice not be jointly fulfilled owing to contingent circumstances. And she argues that such dilemmas are real (not merely apparent) and usually do not indicate inconsistency of the relevant set of moral principles nor inconsistency of the particular moral judgments that originate from those principles. This claim is underpinned by the definition of consistency for a moral code proposed by Barcan Marcus: a set of moral principles is consistent if and only if there is some possible world in which those principles are all obeyable in all circumstances in that world. On this basis, Barcan Marcus makes the point that the recognition of the reality of ethical dilemmas (and also of the appropriateness of attendant feelings of regret, remorse or guilt) ought to motivate and reinforce the striving of rational agents to avoid, or minimize, such moral conflicts by trying their best to bring about circumstances in which all their obligations can in future be jointly fulfilled.²³

Through her originaive work in these diverse philosophical areas – work which is characterized by her unremitting concern about the clarity of her concepts, about the reliability of her evidence (which requires due consideration of

21 Barcan Marcus's following statement puts this in a nutshell: "Briefly, a proper object of believing is a possible state of affairs, and a proper object of knowing is an actual state of affairs." (Barcan Marcus (1993), 153).

22 Cp. e.g. Barcan Marcus's innovative paper "Some Revisionary Proposals about Belief and Believing" (Barcan Marcus (1993), 233–255). – A more general account of the rationality of action presumably amounts to a wide-ranging view of the rationality of an agent in his diverse actions, i.e. in his activity on the whole, which requires quite a strong notion of coherence (far beyond logical consistency) of all the agent's verbal and nonverbal acts. The wider notion of rationality of action which Barcan Marcus calls for indeed goes beyond the deductive or inductive relations among sentences or (quasi-linguistic) propositions assented to, that is, beyond logical relations, in terms of which language-centered theories of belief tend to define their unduly narrow notion of rationality, which, according to Barcan Marcus, lacks explanatory force.

23 Cp. esp. Barcan Marcus's influential paper "Moral Dilemmas and Consistency" (Barcan Marcus (1993), 125–141).

results of research in other disciplines) as well as about the soundness of her argumentation – Ruth Barcan Marcus has exemplified and advanced the value of analytical, accurate, clear philosophizing.

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Finally, I am deeply grateful to Ruth Barcan Marcus herself for the spirit of collaboration she showed with regard to the preparations for the Symposium in her honour and with respect to the plans for the present anthology on themes from her as well as, beyond this, for her optimism and goodwill even when she was in poor health towards the end of her days. – At the end of her autobiographical piece reprinted in this book, Barcan Marcus dedicates a passage to her participation in the Lauener Foundation’s 2008 Symposium honouring her oeuvre, where she notes: “There were challenging papers, to which I have still to respond.”²⁴ In fact, all the papers originally presented during the Symposium have thereafter been thoroughly revised and, in part, completely reworked and expanded for inclusion in the present book. All in all, this entire reworking process extended over a period of several years. Initially Ruth Barcan Marcus’s

²⁴ Barcan Marcus (2010), 90. (Also, this volume, 37.)

intention was to respond to all the final versions of papers in one detailed, long commentary. But after a time she wrote me that her optimism of recovering sufficiently to write the in-depth responses which the very interesting papers deserved was unwarranted. Ultimately Barcan Marcus was still eager to frame brief, sketchy responses to those finalized papers she had received by then, and she actually gave her responses to those contributions thought, but her illness persisted and her frail physical health remained a severe impediment, so that she did not have opportunity to write down her thoughts in even a sketchy manner (as has been confirmed to me by Barcan Marcus's assistant). About a quarter of a year before she died, in the last e-mail which I received from her personally, Ruth Barcan Marcus wrote: "I have not been well, but I am delighted that the book will be coming out. Thank you for your patience".

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Timothy Williamson

Laudatio: Ruth Barcan Marcus (1921–2012)

The central methodological advantage that analytic philosophy enjoys over all other forms of philosophy, past and present, is the rigorous framework of formal logic within which it can conduct its inquiries. Although different systems of logic are needed for different branches of philosophical inquiry, in the core area of metaphysics and surrounding fields for the past forty years the most natural and fruitful setting for inquiry has been *quantified modal logic*, in which we not only have the resources of first-order logic with identity but can also raise explicit questions of possibility and necessity with elegantly perspicuous generality.

The first published study of quantified modal logic as a branch of formal logic appeared in March 1946 in *The Journal of Symbolic Logic*, under the title ‘A functional calculus of first order based on strict implication’, by Ruth C. Barcan, a logician whose identity with Professor Marcus is of course necessary. The system that she presented there did not simply combine pre-existing non-modal quantified logics with pre-existing unquantified modal logics. It identified a crucial axiom about the interaction of the two sides, the interchange of modal operators with quantifiers. The axiom says that if there *can* be something that has a certain property, then there *is* something that can have that property. This is the famous Barcan formula; most logicians can only dream of having a formula named after them. Its converse is also derived in the paper. The Barcan formula and its converse are neither obviously correct nor obviously incorrect (on the intended interpretation), but they are of the utmost importance, both technical and philosophical, to the distinctive nature of quantified modal logic. Technically, their presence or absence makes a large strategic difference to the ways in which the proof theory and formal semantics of quantified modal systems can be developed. But this is closely connected to their philosophical significance too, for together they are tantamount to the claim that it is non-contingent what individuals there are. Although that non-contingency claim may sound implausible on first hearing, it can be given a sustained defence in more than one way, either by taking a narrow view of what individuals there can be or by taking a broad view of what individuals there are. In metaphysics there are disputes whose content is notoriously hard to pin down, for example