

Exhibit A

(Redacted)

United States District Court
Northern District of California

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

IN RE: MACBOOK KEYBOARD
LITIGATION

Case No. [5:18-cv-02813-EJD](#)

**ORDER GRANTING MOTION TO
CERTIFY CLASS; GRANTING IN
PART AND DENYING IN PART
APPLE’S MOTION TO STRIKE
EXPERT OPINIONS OF HAL J.
SINGER; GRANTING MOTION TO
STRIKE EXPERT OPINIONS OF
DAVID V. NIEBUHR**

Re: Dkt. No. 229, 238, 239

Plaintiffs Kyle Barbaro, Joseph Baruch, Steve Eakin, Lorenzo Ferguson, Benjamin Gulker, Michael Hopkins, Adam Lee, Kevin Melkowski, and Zixuan Rao (“Plaintiffs”) bring this proposed class action against Defendant Apple, Inc. (“Apple” or “Defendant”) on behalf of purchasers of MacBook laptops equipped with allegedly defective “butterfly” keyboards. There are several motions currently before the Court: (1) Plaintiffs’ Motion for Class Certification (Dkt. No. 233-21, “Class Certification Motion”);¹ (2) Apple’s Motion to Strike the Expert Opinions of Hal J. Singer, Ph.D. (Dkt. No. 237-46, “Singer Motion to Strike”); (3) Apple’s Motion to Strike the Expert Opinions of David V. Niebuhr, Ph.D. (Dkt. No. 237-49, “Niebuhr Motion to Strike”); (4) Apple’s Objections to New Evidence Submitted With Plaintiffs’ Reply in Support of Class Certification (Dkt. No. 261, “Objections”); and (5) Apple’s Administrative Motion for Leave to File a Surreply and Expert Report in Support of Opposition to Plaintiffs’ Motion for Class

¹ All docket numbers cited in this order refer to the unredacted document filed under seal. Case No.: [5:18-cv-02813-EJD](#)
ORDER GRANTING MOTION TO CERTIFY CLASS; GRANTING IN PART AND DENYING IN PART APPLE’S MOTION TO STRIKE EXPERT OPINIONS OF HAL J. SINGER; GRANTING MOTION TO STRIKE EXPERT OPINIONS OF DAVID V. NIEBUHR

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1 Certification (Dkt. No. 279-4, “Motion for Surreply”).

2 On February 4, 2021, the Court held a hearing on the pending motions. At that hearing,
3 the Court indicated that the Objections would be overruled for the purpose of the Court’s
4 consideration at the class certification stage, without prejudice to renewal. Likewise, the Court
5 indicated that Motion for Surreply would be denied given the robust discussion at the hearing.

6 Having considered the parties’ submissions and oral arguments on the remaining motions,
7 the Court hereby **GRANTS** Plaintiffs’ Class Certification Motion, **GRANTS** in part and **DENIES**
8 in part the Singer Motion to Strike, and **GRANTS** the Niebuhr Motion to Strike.

9 **I. Background**

10 Plaintiffs are eleven consumers from California, Massachusetts, New York, Illinois,
11 Florida, Washington, New Jersey, and Michigan. Second Amended Consolidated Class Action
12 Complaint, Dkt. No. 219 (“SAC”) ¶¶ 8-18. Plaintiffs bring this proposed class action against
13 Apple on behalf of purchasers of MacBook laptops equipped with allegedly defective keyboards,
14 known as “butterfly” keyboards. Specifically, Plaintiffs request that this Court certify a proposed
15 class consisting of “all persons who purchased, other than for resale, within California, New York,
16 Florida, Illinois, New Jersey, Washington, or Michigan, an Apple MacBook from any of the
17 model years 2015-2017, an Apple MacBook Pro from any of the model years 2016-2019
18 (excluding the 16 [inch] MacBook Pro released in November 2019), or an Apple MacBook Air
19 from any of the model years 2018-2019” (the “Class”). Plaintiffs also seek to certify subclasses of
20 purchasers in the seven states listed in the Class definition, to appoint Plaintiffs as Class and
21 subclass representatives, and to appoint the law firms of Girard Sharp LLP and Chimicles
22 Schwartz Kriner & Donaldson-Smith LLP as class counsel.

23 **A. The Butterfly Keyboard**

24 In the spring of 2015, as part of its release of an all-new MacBook, Apple released the first
25 ever Apple-designed keyboard, the butterfly keyboard. Declaration of Claudia M. Vetesi In
26 Support of Apple Inc.’s Opposition to Plaintiffs’ Motion for Class Certification (Dkt. No. 236,
27 Case No.: [5:18-cv-02813-EJD](#)
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1 “Vetesi Decl.”) Ex. A (Rule 30(b)(6) Deposition of Laura Metz (“Metz Dep.”)) at 125:6-16. The
2 butterfly keyboard is nicknamed for the stainless steel switch under the keycap, which bears a
3 resemblance to butterfly wings. The butterfly switch acts as a mechanical lever, which exerts
4 pressure on the other key components to activate the key. [REDACTED]

5 [REDACTED]
6 [REDACTED]
7 [REDACTED]

8 [REDACTED] Vetesi Decl. Ex. B (Rule 30(b)(6) Deposition
9 of Shelly Goldberg (“Goldberg Dep.”)) at 131:1-4.

10 Before the butterfly design, Apple had always used the industry-standard “scissor”
11 mechanism. *Goldberg Dep.* at 36:10-14. The scissor mechanism registered keystrokes through a
12 rubber dome and two pieces in the switch housing that interlock in a “scissor” or “X” shape. *See*
13 *Vetesi Decl.*, Ex. C. The key difference between the scissor design and the butterfly design is the
14 travel distance of the key stroke, *i.e.* how far the user must press the key before the electrical
15 circuit is completed and the computer registers the user’s keystroke. *Goldberg Dep.* at 37:1-3.

16 The butterfly keyboard utilizes a low-travel design, [REDACTED]
17 [REDACTED] *Goldberg Dep.* at 38:11-14. [REDACTED]
18 [REDACTED]
19 [REDACTED]

20 The low-travel design allowed the butterfly keyboard to be 40% thinner than the prior
21 scissor mechanism keyboards, which in turn allowed Apple to produce its thinnest and lightest
22 MacBook ever. *Metz Dep.* at 125:6-8. Following its release in 2015, the butterfly keyboard was
23 incorporated into 16 new MacBook models, including the MacBook released in 2016 and 2017, as
24 well as the MacBook Pro models released between 2016 and 2019, and the MacBook Air models
25 released in 2018 and 2019 (together, the “Class Laptops”). *Id.*, Ex. H at Suppl. Resp. to Interrog.
26 Nos. 7-8, Ex. D.

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B. The Alleged Defect

Plaintiffs allege that the butterfly keyboard is defective. Specifically, Plaintiffs allege that the low-travel design of the butterfly mechanism makes the keys prone to fail when minute amounts of dust or debris enter the sensitive area beneath the switch. [REDACTED]

[REDACTED] Class Certification Motion at 3 (citing Goldberg Dep. at 105:16-106:3).

Although it is common for debris to accumulate in a keyboard of any type, Plaintiffs allege that

Id. at 3-4. According to Plaintiffs, it is this phenomenon that caused the various issues Plaintiffs experienced with their laptops.

There are three main issues that Plaintiffs and other consumers experienced with the butterfly keyboard: (1) keys failing to register (“no make”), (2) keys registering multiple times with a single press (“double make”), and (3) keys exhibiting a sticky behavior when pressed (“sticky keys”).

C. Design Iterations

Within a short time after the release of the butterfly keyboard, Apple noticed that customers were returning the butterfly-equipped MacBook at a higher rate than predecessor products. Dkt. No. 224-5, Class Certification Motion at Ex. C (Deposition of Jeffery LaBerge) at 70:6-22. Apple began working on modifications to the design to address reported issues with debris affecting keyboard performance. For example, [REDACTED]

[REDACTED] Goldberg Dep. at 103:1-20. [REDACTED]

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[REDACTED] The design iterations in these and subsequent models are summarized in the chart below:

Model	Design Components
Early 2015 MacBook	[REDACTED]
Early 2016 MacBook	
2016 MacBook Pros	
2017 MacBook and MacBook Pros	
2018 MacBook Pros and MacBook Air	
2019 MacBook Pros and MacBook Air	

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See Dkt. No. 237-11, Apple Inc.’s Opposition to Plaintiffs’ Motion for Class Certification (“Opp.”) at 5-7; Vetesi Decl. Ex. H (Suppl. Resp. to Interrog. Nos. 7-8). The parties dispute whether and the extent to which these design changes had an impact on keyboard issues attributable to the butterfly design.

In addition to these incremental design changes, in June 2018, Apple also introduced a special Keyboard Service Program (“KSP”), which provides free keyboard repairs and replacements of butterfly keyboards for four years. See Dkt. No. 224-6 at Ex. 35. The KSP covers all 16 models of the Class Laptops at issue in this case. Through the KSP, Apple may replace a butterfly keyboard that is not working properly with the [REDACTED] of the butterfly keyboard, but the Class Laptops are not compatible with non-butterfly keyboards.

D. Plaintiffs’ Claims

Plaintiffs each purchased a new MacBook with a butterfly keyboard that failed in some capacity. Plaintiffs all testify that had they known of the butterfly keyboard defect, they would not have bought these computers or would have bought them only at a much lower price. Rao Decl., ¶¶ 2-3, 7; Baruch Decl., ¶¶ 2-3, 9; Laurent Decl., ¶¶ 2-3, 12; Marin Decl., ¶¶ 2-3, 8; Barbaro Decl., ¶¶ 2-3, 8; Eakin Decl., ¶¶ 2-3, 11; Hopkins Decl., ¶¶ 2-3, 8; Lee Decl., ¶¶ 2-3, 10; Melkowski Decl., ¶¶ 2-3, 9; Ferguson Decl., ¶¶ 2-3, 10; Gulker Decl., ¶¶ 2-3, 10.

Plaintiffs move to certify the Class defined above as to their claims for (1) breach of implied warranty in violation of the Song-Beverly Consumer Warranty Act, Cal. Civ. Code § 1792 et seq., and for violations of (2) the Unfair Competition Law, Cal. Bus. & Prof. Code § 17200 et seq. (“UCL”); (3) the Consumers Legal Remedies Act, Cal. Civ. Code § 1750 et seq. (“CLRA”); (4) the Washington Consumer Protection Act, Wash. Rev. Code § 19.86.010 et seq.; (5) the Florida Deceptive and Unfair Trade Practices Act, Fla. Stat. § 501.201 et seq.; (6) the Illinois

1 Consumer Fraud and Deceptive Business Practices Act, Ill. Comp. Stat. § 505/1 et seq.; (7) the
 2 New Jersey Consumer Fraud Act, N.J. Stat. Ann. § 56:8-1 et seq.; (8) the New York General
 3 Business Law § 349; and (9) the Michigan Consumer Protection Act, Mich. Comp. Laws §
 4 445.901 et seq. Plaintiffs also propose certification of the seven constituent state subclasses for
 5 purposes of case management.

6 II. Daubert Motions

7 Federal Rule of Evidence 702 permits opinion testimony by an expert if the proponent
 8 demonstrates that: (i) the expert is qualified; (ii) the evidence is relevant to the suit; and (iii) the
 9 evidence is reliable. *See Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 589–90, 113 S. Ct.
 10 2786, 125 L. Ed. 2d 469 (1993); *Young v. Cree Inc.*, No. 4:17-CV-06252-YGR, 2021 WL 292549,
 11 at *4 (N.D. Cal. Jan. 28, 2021). An expert witness may be qualified by “knowledge, skill,
 12 experience, training, or education.” Fed. R. Evid. 702. To be considered reliable, scientific
 13 opinions must be based on scientifically valid principles. *Daubert*, 509 U.S. at 589. The
 14 proponent of expert testimony has the burden of proving admissibility in accordance with Rule
 15 702. Fed. R. Evid. 702, Advisory Committee Notes (2000 amendments).

16 At the class certification stage, the Court does not make an ultimate determination of the
 17 admissibility of an expert’s opinions for purposes of a dispositive motion or trial. *Dukes v. Wal-*
 18 *Mart Stores, Inc.*, 603 F.3d 571, 602 (9th Cir. 2010), *rev’d*, 564 U.S. 338, 131 S. Ct. 2541, 180 L.
 19 Ed. 2d 374 (2011); *Millenkamp v. Davisco Foods Int’l, Inc.*, 562 F.3d 971, 979 (9th Cir. 2009).
 20 Rather, the court considers only whether the expert evidence is “useful in evaluating whether class
 21 certification requirements have been met.” *Tait v. BSH Home Appliances Corp.*, 289 F.R.D. 466,
 22 495–96 (C.D. Cal. 2012) (citing *Ellis v. Costco Wholesale Corp.*, 657 F.3d 970, 982 (9th Cir.
 23 2011)); *see also Rai v. Santa Clara Valley Transportation Auth.*, 308 F.R.D. 245, 264 (N.D. Cal.
 24 2015). At class certification, “the relevant inquiry is a tailored *Daubert* analysis which scrutinizes
 25 the reliability of the expert testimony in light of the criteria for class certification and the current
 26 state of the evidence.” *Id.*

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1 **A. Dr. Singer**

2 Plaintiffs submitted the expert report of Dr. Singer to support their Class Certification
3 Motion, and in particular, to support their argument that economic injury and aggregate damages
4 can be determined on a class-wide basis. Dr. Singer is a Managing Director at Econ One, a Senior
5 Fellow at George Washington University’s Institute for Public Policy, and an Adjunct Professor at
6 Georgetown University’s McDonough School of Business, where he has taught Advanced Pricing
7 to MBA candidates since 2014. *See* Dkt. No. 224-10, Class Certification Expert Report of Hal J.
8 Singer, Ph.D. (“Singer Rpt.”) ¶ 4. Apple does not challenge Dr. Singer’s qualifications and the
9 Court finds that he is well-qualified to testify as an expert economist.

10 Dr. Singer offers two methods of calculating economic injury and damages using data and
11 methods common to the Class: a hedonic regression analysis and a choice-based conjoint analysis.
12 The Court considers the relevance and reliability of these methods separately.

13 **i. Hedonic Regression Analysis**

14 Hedonic regression analysis is commonly used in economics to isolate the contribution of a
15 particular attribute to the price of a product that has many attributes. *See* Singer Rpt. ¶ 10. In this
16 case, Dr. Singer uses a regression analysis comparing Apple desktop computers and Apple laptop
17 computers in order to isolate what he calls the “mobility premium,” the impact of an Apple
18 computer’s mobility on its market price. *Id.* ¶ 12. The theory on which this method rests is that
19 the alleged keyboard defect results in an unreliable built-in keyboard, requiring consumers to
20 purchase and utilize an external keyboard. The need to use an external keyboard impairs the
21 mobility of the laptop because external keyboards are awkward, costly, or infeasible to transport
22 and use in many situations. *Opp.* at 12-15. In other words, “if a laptop computer’s keyboard stops
23 working, requiring the use of an external keyboard, the laptop effectively becomes a desktop
24 computer.” Singer Rpt. ¶ 12. Thus, Plaintiffs argue that the mobility premium can be used to
25 measure the diminution in value of the Class Laptops attributable to the alleged keyboard defect.

26 Apple makes a number of arguments as to why the regression analysis is unreliable in its

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1 design, but also argues that even if the mobility premium is reliably calculated, it does not
 2 accurately relate to Plaintiffs' theory of damages in this case. The Court agrees. Calculating
 3 damages based on the mobility premium operates on the assumption that when the alleged
 4 keyboard defect manifests, it leads to a total inability to use the built-in keyboard. As Apple
 5 points out, this assumption ignores the fact that a number of the named Plaintiffs themselves
 6 testified that they were still able to use their laptops, albeit in a limited capacity, despite the
 7 keyboard issues they experienced. *See* Vetesi Decl. Ex. Q (Deposition of Kyle Barbaro) at 29:7-
 8 17, 56:5-8 (girlfriend has been using MacBook at issue since end of 2019); *id.*, Ex. X (Deposition
 9 of Joey Baruch ("Baruch Dep.") at 50:20-21 (still uses MacBook at issue); *id.*, Ex. O (Deposition
 10 of Michael Hopkins) at 61:12-19 (same); *id.*, Ex. V (Deposition of Steve Eakin ("Eakin Dep.") at
 11 123:3-14 (continues to use MacBook at issue without external keyboard approximately 33% of
 12 time time); *id.*, Ex. W (Deposition of Bo Laurent ("Laurent Dep.") at 99:4-17 (continues to use
 13 MacBook at issue without external keyboard approximately 50% of the time). Thus, it is not
 14 factually accurate to assume that whenever the keyboard defect manifests, the user must rely on an
 15 external keyboard.

16 Moreover, even if a consumer is forced to use an external keyboard, the regression analysis
 17 operates on the second misconception that using an external keyboard renders a laptop completely
 18 immobile. While transporting an external keyboard may be more difficult than transporting a
 19 laptop alone, it is still possible to do so in many circumstances. Again, many of the named
 20 Plaintiffs testified to using their laptops with an external keyboard in a way that maintained at
 21 least some of the mobility of the laptop. *See, e.g.*, Laurent Dep. (Plaintiff Laurent testifying that
 22 he uses his laptop with an external keyboard at his desk and without an external monitor elsewhere
 23 in the house, and that he travels with the laptop and external keyboard at times); Eakin Dep.
 24 (Plaintiff Eakin testifying that he uses his laptop with the external keyboard about two-thirds of
 25 the time); Dkt. No. 237-33, Ex. Y (Deposition of Benjamin Gulker) (Plaintiff Gulkin testifying
 26 that his wife uses an external keyboard at her office and transports the laptop to and from home).

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1 In none of these cases would it be accurate to measure Plaintiffs’ damages as a total loss of the
2 mobility of their laptop, as Dr. Singer’s regression analysis does.

3 Because the Dr. Singer’s regression analysis relies on the untenable assumptions that the
4 keyboard defect inevitably requires an external keyboard and that an external keyboard leads to a
5 complete loss in laptop mobility, the Court does not find this theory relevant to the ability to
6 calculate class-wide damages. Therefore, the Court **GRANTS** Apple’s Motion to Strike as to Dr.
7 Singer’s regression analysis.

8 **ii. Choice-Based Conjoint Analysis**

9 Choice-based conjoint (“CBC”) analysis is a well-recognized economic method used to
10 study and quantify consumer preferences. *In re Arris Cable Modem Consumer Litig.*, 327 F.R.D.
11 334, 373 (N.D. Cal. 2018) (“conjoint analysis is a generally reliable, well recognized method for
12 estimating how consumers value different attributes of a product.”). A CBC analysis is based on a
13 survey in which consumers are asked to pick between two products, each of which is comprised of
14 a bundle of features. Singer Rpt. ¶ 32. Through a series of these choices, respondents indirectly
15 reveal the value they attribute to an individual feature, without knowing what feature was being
16 tested. *Id.*

17 In this case, Dr. Singer designed a survey in which consumers age 18-59 who had
18 previously bought an Apple laptop were presented with a “choice set” of alternative laptops, each
19 with a set of attributes including the model, price, and presence or absence of a defect. *Id.* ¶¶ 35-
20 40. By determining the price at which a consumer would choose a laptop with a keyboard defect
21 over laptops with no defects, Dr. Singer’s model measures the discount a customer would demand
22 before purchasing a MacBook with a disclosed keyboard defect. *Id.* ¶¶ 41-42.

23 Apple argues that the CBC method is irrelevant because it measures a consumer’s
24 willingness to pay for a laptop with a keyboard defect that is certain to manifest, rather than a
25 defect that manifests only a small percentage of the time. The survey instructions stated that if
26 respondents selected a MacBook with a defect, they should “assume the defect will appear

1 sometime after [their] purchase” and that once the defect appears, Apple would attempt to repair it
 2 at no cost to the consumer. Singer Rpt. ¶ 36. In his deposition, Dr. Singer explained that this
 3 design was intentional because economic literature suggests that respondents are likely to be
 4 confused by a disclosure of risks or probabilities that a defect will manifest. Vetesi Decl. Ex. K
 5 (Deposition of Hal J. Singer, Ph.D (“Singer Dep.”)) at 226:19-227:7. In order to account for the
 6 risk that the defect will manifest, Dr. Singer instead discounted the survey results after-the-fact by
 7 the probability of the defect arising. Singer Rpt. ¶¶ 45-54.

8 Apple argues that if consumers are unable to accurately assess what they would pay for a
 9 computer with a risk of a keyboard defect, then a CBC analysis is an unreliable method for
 10 measuring damages. Singer Motion to Strike at 8. The Court disagrees. Dr. Singer chose not to
 11 incorporate the risk of manifestation in the survey, but rather to apply that risk to the survey
 12 results instead. While there may be more than one reasonable way to account for the risk of
 13 manifestation, the Court finds that Dr. Singer’s choice is supported by legitimate economic
 14 literature and is reliable. *See* Singer Dep. at 110:19-111:11; Reply Report of Hal J. Singer, Ph.D.
 15 (“Singer Reply Rpt.”) ¶¶ 22, 29-32, 68-69, 77.

16 Moreover, in his reply report, Dr. Singer provided the results of a modified version of his
 17 CBC analysis in which he incorporated the risk of manifestation in the survey itself. *See* Singer
 18 Reply Rpt., ¶¶ 32-36. According to the results of this modified survey, informing respondents of
 19 the probability of failure, as Apple suggested, actually generates a higher damages estimate
 20 because consumers are fundamentally risk averse. *Id.* at ¶ 34. Apple objected to the Court’s
 21 consideration of Dr. Singer’s Reply report and the results of the second survey. The Court
 22 overruled Apple’s objection at oral argument. At the class certification stage, Plaintiffs need only
 23 demonstrate that damages are capable of being determined on a class-wide basis. *See Just Film,*
 24 *Inc. v. Buono*, 847 F.3d 1108, 1121 (9th Cir. 2017) (holding that, “[a]t this stage, Plaintiffs need
 25 only show that such damages can be determined without excessive difficulty and attributed to their
 26 theory of liability”); *Roy v. Cty. of Los Angeles*, No. CV1209012ABFFMX, 2018 WL 3436887, at

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1 *4 (C.D. Cal. July 11, 2018) (stating “the question is only whether Plaintiffs have presented a
2 workable method for calculating class-wide damages.”) (alteration and citation omitted).
3 Plaintiffs rely on Dr. Singer’s reports not for the damages figures they produce, but for the
4 conclusion that a CBC analysis offers a workable method to calculate class-wide damages. On
5 this point, the Court finds both the Singer Report and the Singer Reply Report relevant and
6 helpful.

7 Apple separately argues that Dr. Singer failed to consider supply-side factors that would
8 affect the CBC analysis, including “[Apple’s] own costs and the offerings, pricing and promotions
9 of competitors,” or “reactions by Apple’s competitors.” Singer Motion to Strike at 9. Although
10 the parties dispute the extent to which the analysis should include competitive behavior, the Court
11 is satisfied that it is possible for such factors to be accounted for within the CBC analysis, even if
12 they are not included in the analysis Dr. Singer already conducted. Singer Rpt. ¶¶ 45-54
13 (describing how his analysis accounts for supply-side considerations by using Apple’s cost and
14 price-cost margin data); *see Smith v. Keurig Green Mountain, Inc.*, No. 18-CV-06690-HSG, 2020
15 WL 5630051, at *10 (N.D. Cal. Sept. 21, 2020) (finding sufficient, at the class certification stage,
16 a hypothetical scenario showing how the model worked).

17 The Court finds Dr. Singer’s CBC analysis reliable and relevant to Plaintiffs’ theory of
18 class-wide damages. Therefore, the Court **DENIES** Apple’s Motion to Strike this portion of Dr.
19 Singer’s Expert Opinion.

20 **B. Dr. Niebuhr**

21 Plaintiffs also engaged Dr. David Niebuhr, a metallurgical engineering specialist to review
22 and assess the existence of the alleged keyboard defect. Dr. Niebuhr is an Adjunct Professor in
23 the Mechanical Engineering department at California Polytechnic State University in San Luis
24 Obispo, California, with 25 years of experience in the field of mechanical engineering and
25 metallurgy. Apple moves to exclude Dr. Niebuhr’s report pursuant to Rule 702 on the grounds
26 that he is unqualified and that his opinions are unreliable and irrelevant.

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1 **i. Qualifications**

2 Apple argues that Dr. Niebuhr’s testimony should be precluded because he is not qualified
3 to offer an opinion on the design or performance of the keyboards at issue in the case. Niebuhr
4 Motion to Strike at 3. Apple points out that Dr. Niebuhr has no experience inspecting, testing,
5 designing, or performing failure analysis on keyboards or laptops. *Id.* Nor has he ever served as
6 expert related to keyboards, laptops, or computers. *Id.*; Vetesi Decl. Ex. P (Deposition of David
7 Niebuhr, Ph.D. (“Niebuhr Dep.”)) at 28:7-29:6. Apple argues that keyboards are one of the most
8 complex components of a computer and that prior experience with keyboards is thus particularly
9 important. *Id.* Given his lack of keyboard specific experience, Apple argues that Dr. Niebuhr’s
10 testimony “did not ‘grow[] out of pre-litigation research’ and does not otherwise satisfy the first
11 prong of Rule 702.” Niebuhr Motion to Strike at 3 (citing *Daubert v. Merrell Dow Pharm., Inc.*,
12 43 F.3d 1311, 1318 (9th Cir. 1995)).

13 “Experts are not required to have previous experience with the product at issue[.]”
14 *Czuchaj v. Conair Corp.*, No. 313CV01901BENRBB, 2016 WL 4414673, at *3 (S.D. Cal. Aug.
15 19, 2016); *see also Abaxis, Inc. v. Cepheid*, No. 10-CV-02840-LHK, 2012 WL 2979019, at *3
16 (N.D. Cal. July 19, 2012) (“Rule 702 imposes no requirement that experts have personal
17 experience in an area to offer admissible testimony relating to that area.”). Dr. Niebuhr has
18 experience in performing failure analysis involving contamination of electrical devices such as
19 hard drives, which Plaintiffs argue qualifies him to offer his opinion on the cause of failure in the
20 butterfly keyboard design. The Court agrees. Given Dr. Niebuhr’s indisputable experience in
21 materials science, mechanical engineering, and failure analysis, he need not have specific
22 experience with keyboards in order to offer expert testimony on the electro-mechanical
23 components and cause of failure of the butterfly keyboards in this case. *See, e.g., In re Silicone*
24 *Gel Breast Implants Prod. Liab. Litig.*, 318 F. Supp. 2d 879 (C.D. Cal. 2004) (“A court abuses its
25 discretion when it excludes expert testimony solely on the ground that the witness’s qualifications
26 are not sufficiently specific if the witness is generally qualified. A lack of specialization affects

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1 the weight of the expert’s testimony, not its admissibility.”) (internal citation omitted); *Asetek*
2 *Danmark A/S v. CMI USA, Inc.*, No. 13-CV-00457-JST, 2014 WL 5590699, at *2 (N.D. Cal.,
3 Nov. 2, 2014) (finding expert sufficiently qualified in engineering and thermodynamics even
4 absent specific experience in liquid cooling for computer systems).

5 The Court finds that Dr. Niebuhr is generally qualified to offer testimony on the cause of
6 the alleged keyboard defect in this case.

7 **ii. Relevance and Reliability**

8 Apple next argues that Dr. Niebuhr’s testimony is irrelevant and unreliable because he did
9 not inspect each of the 16 models of MacBook designs at issue in this case, nor did he conduct any
10 “root cause failure analysis” to determine whether the alleged defect exists. Apple points to the
11 fact that Dr. Niebuhr inspected ten laptops then “cherry picked” the five laptops that exhibited
12 keyboard issues to include in his report. Those five laptops represented only 3 of the 16 models at
13 issue in the case. Dr. Niebuhr did not address the potential effects of any design changes in the
14 later models but nevertheless concluded that the 16 MacBook models had a “materially similar
15 butterfly mechanism keyboard design.” Niebuhr Rpt. ¶ 23. According to Apple, Dr. Niebuhr’s
16 limited inspection of these keyboards is not representative of the MacBooks at issue in the case,
17 does not take into account design differences, and therefore, renders the report unreliable.

18 Apple additionally argues that Dr. Niebuhr did not perform any root cause failure analysis,
19 even on the laptops that he did inspect. Plaintiffs contend that Dr. Niebuhr was engaged to
20 “evaluate Apple’s conclusions regarding the failures in the butterfly keyboards,” not to conduct his
21 own root cause analysis. Dkt. No. 264-106, Plaintiffs’ Opposition to Apple’s Motion to Strike
22 Expert Opinions of Dr. Niebuhr at 10-11.

23 “Expert testimony may be based upon an analysis of testing performed by others.” *Doyle*
24 *v. Chrysler Grp. LLC*, No. SACV 13-00620 JVS, 2015 WL 353993, at *6 (C.D. Cal. Jan. 21,
25 2015) (citing Fed. R. Evid. 703); *see Apple iPod iTunes Antitrust Litig.*, No. 05-CV-0037 YGR,
26 2014 WL 4809288, at *7 (N.D. Cal. Sept. 26, 2014) (expert properly relied on “internal Apple

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1 documents, employee testimony, and discovery responses.”). However, if Dr. Niebuhr’s report
 2 simply relays his own interpretation of Apple’s internal testing, it is unclear why his testimony is
 3 necessary at all. Plaintiffs maintain that Dr. Niebuhr’s opinion will assist the Court and the jury in
 4 understanding Apple’s complex technical data and test results. Plaintiffs cite *In re Arris Cable*
 5 *Modem Consumer Litig.*, where the Court permitted expert opinion “to help the Court and the jury
 6 interpret Defendant’s . . . own test results and technical data[.]” 327 F.R.D. at 363 (“The fact that
 7 Newman relied on the results of tests that Defendant and Intel had already performed rather than
 8 running his own tests does not render his opinion unreliable, particularly because Defendant does
 9 not dispute the reliability of the underlying data.”) (citing *Sementilli v. Trinidad Corp.*, 155 F.3d
 10 1130 (9th Cir. 1998), *as amended* (Nov. 12, 1998)). Regardless of whether Dr. Niebuhr’s
 11 opinions will ultimately prove useful in reaching factual findings or conclusions on the merits, the
 12 Court finds it irrelevant at the class certification stage. At this stage, Plaintiffs must show that
 13 there is a common defect across the Class Laptops such that their claims may be adjudicated on a
 14 class-wide basis. Having not conducted separate root cause analysis to support his conclusions
 15 about the alleged defect, the Court finds Dr. Niebuhr’s opinions duplicative of the other evidence
 16 before the Court and therefore, unhelpful for the purposes of class certification.

17 The Court **GRANTS** Apple’s Motion to Strike the Expert Opinions of Dr. Niebuhr for the
 18 purposes of class certification and without prejudice to Plaintiffs offering Dr. Niebuhr as an expert
 19 witness for other purposes at trial.

20 **III. Class Certification**

21 Under Federal Rule of Civil Procedure 23(a), a court may certify a class only where “(1)
 22 the class is so numerous that joinder of all members is impracticable; (2) there are questions of law
 23 or fact common to the class; (3) the claims or defenses of the representative parties are typical of
 24 the claims or defenses of the class; and (4) the representative parties will fairly and adequately
 25 protect the interests of the class.” Fed. R. Civ. P. 23(a). Courts refer to these four requirements as
 26 “numerosity, commonality, typicality[,] and adequacy of representation.” *Mazza v. Am. Honda*

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1 *Motor Co.*, 666 F.3d 581, 588 (9th Cir. 2012); *Young*, 2021 WL 292549, at *4

2 Once the threshold requirements of Rule 23(a) are met, plaintiffs must then show “through
3 evidentiary proof” that a class is appropriate for certification under one of the provisions in Rule
4 23(b). *Comcast Corp. v. Behrend*, 569 U.S. 27, 33, 133 S. Ct. 1426, 185 L. Ed. 2d 515 (2013).
5 Here, plaintiff seeks certification under Rule 23(b)(2) and Rule 23(b)(3). Rule 23(b)(3) requires a
6 plaintiff to establish “that the questions of law or fact common to class members predominate over
7 any questions affecting only individual members, and that a class action is superior to other
8 available methods for fairly and efficiently adjudicating the controversy.” Fed. R. Civ. P.
9 23(b)(3). The predominance inquiry focuses on “whether proposed classes are sufficiently
10 cohesive to warrant adjudication by representation.” *Hanlon v. Chrysler Corp.*, 150 F.3d 1011,
11 1022 (9th Cir. 1998) (quoting *Amchem Prod., Inc. v. Windsor*, 521 U.S. 591, 623, 117 S. Ct. 2231,
12 138 L. Ed. 2d 689 (1997)).

13 “[A] court’s class-certification analysis must be ‘rigorous’ and may ‘entail some overlap
14 with the merits of the plaintiff’s underlying claim.’” *Amgen Inc. v. Connecticut Ret. Plans & Tr.*
15 *Funds*, 568 U.S. 455, 456–66, 133 S. Ct. 1184, 185 L. Ed. 2d 308 (2013) (quoting *Wal-Mart*
16 *Stores, Inc.*, 564 U.S. at 351); *see also Mazza*, 666 F.3d at 588. The Court considers the merits to
17 the extent they overlap with the Rule 23 requirements. *Ellis*, 657 F.3d at 983. The Court must
18 resolve factual disputes as “necessary to determine whether there was a common pattern and
19 practice that could affect the class *as a whole*.” *Id.* (emphasis in original). When resolving such
20 factual disputes in the context of a motion for class certification, district courts must consider “the
21 persuasiveness of the evidence presented.” *Ellis*, 657 F.3d at 982. “A party seeking class
22 certification must affirmatively demonstrate [its] compliance with the Rule.” *Wal-Mart Stores,*
23 *Inc.*, 564 U.S. at 350. Ultimately, a trial court has broad discretion in making the decision to grant
24 or deny a motion for class certification. *Bateman v. Am. Multi-Cinema, Inc.*, 623 F.3d 708, 712
25 (9th Cir. 2010).

26 **A. Rule 23(a)**

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i. Numerosity

Plaintiff alleges that Apple sold ██████████ Butterfly Laptops, including at least ██████████ in each of the Plaintiff states, making it impracticable to join all claims. Joint Decl., ¶ 14. The Class is therefore sufficiently numerous and Apple does not contend otherwise.

ii. Commonality

Under Rule 23, there must be “questions of law or fact common to the class.” Fed. R. Civ. P. 23(a)(2). This “commonality” requirement “has been construed permissively” such that all questions of fact and law need not be common to satisfy the Rule. *Hanlon*, 150 F.3d at 1019. “The existence of even one significant issue common to the class is sufficient to warrant certification.” *Lao v. H&M Hennes & Mauritz, L.P.*, No. 5:16-CV-00333-EJD, 2018 WL 3753708, at *5 (N.D. Cal. Aug. 8, 2018) (quoting *Californians for Disability Rights, Inc. v. California Dep’t of Transp.*, 249 F.R.D. 334, 346 (N.D. Cal. 2008)).

Plaintiffs’ complaint sets forth more than one issue that is common to the class, including whether the Butterfly Mechanism was defective, and whether Apple was aware of that defect, among others. *Gold v. Lumber Liquidators, Inc.*, 323 F.R.D. 280, 287 (N.D. Cal. 2017) (finding commonality where “the claims of all prospective class members involve the same alleged defect . . . in the same product” such that the defect is “central to the validity of the claims of all class members” and therefore “capable of resolution in one stroke”) (internal quotation marks and citation omitted); *see also Wolph v. Acer Am. Corp.*, 272 F.R.D. 477, 484 (N.D. Cal. 2011); *In re Sony Vaio Computer Notebook Trackpad Litig.*, No. AJB09CV2109AJBMDD, 2013 WL 12116137, at *10 (S.D. Cal. Sept. 25, 2013) (“[T]he nature of the purported defect” was the “central dispute at issue”).

Apple does not suggest that there are no common elements of the design between models or that there are no common questions of law that would pertain to the whole class. Rather, Apple argues that Plaintiffs cannot show a common defect because (1) there were changes to the product design between models, (2) Plaintiffs and proposed class members experienced different issues

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1 with their keyboards, (3) there are different causes of the various keyboard issues that Plaintiffs
2 and proposed class members experienced. These arguments are relevant to whether the common
3 questions or individual questions predominate, discussed further below, but they do not
4 demonstrate a lack of even “one significant issue common to the class” for the purposes of Rule
5 23(a). Thus, the Court finds the commonality required satisfied here.

6 **iii. Typicality and Adequate Representation**

7 Rule 23(a) requires that “the claims or defenses of the representative parties are typical of
8 the claims or defenses of the class.” Fed. R. Civ. P. 23(a)(3). “The test of typicality is whether
9 other members have the same or similar injury, whether the action is based on conduct which is
10 not unique to the named plaintiff[], and whether other class members have been injured by the
11 same course of conduct.” *Wolin v. Jaguar Land Rover N. Am., LLC*, 617 F.3d 1168, 1175 (9th
12 Cir. 2010) (quotations omitted). The “typicality requirement is ‘permissive’ and requires only that
13 the representative’s claims are ‘reasonably co-extensive with those of absent class members; they
14 need not be substantially identical.’” *Rodriguez v. Hayes*, 591 F.3d 1105, 1124 (9th Cir. 2010)
15 (quoting *Hanlon*, 150 F.3d at 1020).

16 Rule 23(a)(4) states that the named plaintiff must “fairly and adequately protect the
17 interests of the class.” Fed. R. Civ. P. 23(a)(4). “[A] representative meets this standard if he (1)
18 has no conflicts of interest with other class members, and (2) will prosecute the action vigorously
19 on behalf of the class.” *San Pedro-Salcedo v. Haagen-Dazs Shoppe Co., Inc.*, No. 5:17-CV-
20 03504-EJD, 2019 WL 6493978, at *4 (N.D. Cal. Dec. 3, 2019) (citing *Backus v. ConAgra Foods,*
21 *Inc.*, No. C 16-00454 WHA, 2016 WL 7406505, at *5 (N.D. Cal. Dec. 22, 2016) (citation
22 omitted).

23 Apple contends that Plaintiffs lack standing to represent purchasers of the 2019 MacBook
24 models because no named Plaintiff purchased that model. Opp. at 23. Plaintiffs maintain that
25 they “may seek relief for purchasers of all 16 models based on the ‘sufficient similarity between
26 the product purchased and other products accused here.’” Dkt. No. 263-4 (Reply In Support Of

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1 Plaintiffs’ Motion For Class Certification (“Reply”)) as 15 (citing *Hendricks v. StarKist Co.*, 30 F.
2 Supp. 3d 917, 935 (N.D. Cal. 2014)). The Court agrees that the 2019 MacBooks are sufficiently
3 similar to the models that Plaintiffs purchased because the 2019 model also contains a Butterfly
4 Keyboard. Although certain design elements of the Butterfly Keyboard in the 2019 model may
5 differ from the other Butterfly Keyboard models represented, the aspects of the keyboard that
6 Plaintiffs allege are defective—*i.e.* the low travel and narrow key gaps—are the same across all
7 models. Because the facts pertaining to the specific alleged defect will be the same across all
8 models, including the 2019 model, Plaintiffs are typical of the proposed class and can adequately
9 represent that class.

10 Similarly, Apple argues that Plaintiffs cannot adequately represent a New Jersey class
11 because Plaintiff Lorenzo Ferguson, the only named Plaintiff purporting to represent New Jersey,
12 purchased his MacBook in New York City. In response, Plaintiff Ferguson submitted a
13 supplemental declaration explaining that he did, in fact, purchase his laptop in New Jersey. *See*
14 Supplemental Declaration of Lorenzo Ferguson, ¶¶ 2-3 (explaining that he exchanged his laptop in
15 New York because of a scratch, but that no money changed hands in that exchange transaction,
16 and that is not the relevant transaction in which he overpaid). Based on this supplemental
17 declaration, the Court is satisfied that Plaintiff Ferguson may adequately represent the New Jersey
18 class.

19 **B. 23(b)(3)**

20 **i. Common Issues Predominate**

21 Apple argues that class certification must be denied because individual issues, not common
22 issues, predominate. While Rule 23(a)(2) asks whether there are issues common to the class, Rule
23 23(b)(3) asks whether these common questions predominate. “Though there is substantial overlap
24 between the two tests, the 23(b)(3) test is ‘far more demanding,’ and asks ‘whether proposed
25 classes are sufficiently cohesive to warrant adjudication by representation.’” *Wolin*, 617 F.3d at
26 1172 (quoting *Amchem Products, Inc.*, 521 U.S. at 623–24).

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a. Manifestation of Defect

First, Apple argues that Plaintiffs cannot show that all of the Class Laptops suffer from a common defect because the majority of the Class members never experienced any issues with their butterfly keyboards. Apple points to their internal figures for repair rates—the percentage of laptops sold that were brought back to Apple for butterfly keyboard related repairs—as evidence that only a small percentage of consumers who bought a class laptop ever had any issues with their keyboards. But “proof of the manifestation of a defect is not a prerequisite to class certification.” *Wolin*, 617 F.3d at 1173 (certifying class despite defendant’s argument that not all class members experienced the alleged tire alignment defect, explaining that “[a]lthough individual factors may affect premature tire wear, they do not affect whether the vehicles were sold with an alignment defect”). Plaintiffs allege that the butterfly keyboard design is defective, and thus the defect exists at the point of sale, regardless of whether the user ever experiences the symptoms of that defect. Thus, if Plaintiffs prove the existence of a defect, the fact that many individual class members did not experience problems with their keyboard would not affect Apple’s liability under Plaintiffs’ theory of the case. *Nguyen v. Nissan N. Am., Inc.*, 932 F.3d 811, 819 (9th Cir. 2019) (finding that common questions predominated as to damages where “Plaintiff’s legal theory [was] not based on the *performance* of the allegedly defective clutch system, but instead [on] *the system* itself, which he claims is defective. . . [because] ‘the defect exists—and must be remedied—whether or not the symptoms have manifested yet.’”).

b. Design Differences

Apple next argues that Plaintiffs will be unable to prove a common defect because the butterfly design changed from model to model throughout the class period. Apple highlights the design differences between models of Class Laptops, such as the [REDACTED] design, the addition of the [REDACTED] or the transition to a [REDACTED]. According to Apple, each of these design differences eliminated or made an impact on the issues that Plaintiffs experienced with their keyboard. In support, Apple relies on their internal figures for butterfly keyboard repair rates.

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1 The cumulative repair rates for early models range from [REDACTED] while the later models
2 range from [REDACTED] Vetesi Decl. Ex. J (Suppl. Resp. to Interrog. Nos. 9, 10). Apple
3 argues that this improvement indicates that the design changes had an impact on keyboard
4 problems and thus disproves a common defect across models. Opp. at 8-10. The Court does not
5 find Apple’s interpretation of the repair rates compelling on this point. Apple ignores the fact that
6 these rates reflect a cumulative total over four years (the useful life of a MacBook). The
7 cumulative rates for models that were released in 2015 or 2016, therefore, include four years’
8 worth of data, while the rates for models released in 2019 include less than one year’s worth of
9 data. It is undisputed that the rates for the more recent models will increase over time. Williams
10 Dep. at 160. Thus, the Court does not find it helpful to compare incongruent repair rates in
11 assessing whether there is a common defect among models.

12 Plaintiffs maintain that the design changes between models are irrelevant to the design
13 defect they allege, namely the low travel and tight spaces between keys. There is no dispute that
14 the low-travel design was consistent across all models. Indeed, Apple concedes that the “critical
15 aspect of the butterfly design was that the keys had ‘low travel.’” Opp. at 2. “Where the material
16 elements of the device at issue are clearly the same among the class, the Ninth Circuit has found
17 that the question ‘is there a defect?’ is capable of class-wide resolution and establishes
18 commonality.” *Grodzitsky v. Am. Honda Motor Co. Inc.*, No. 2:12-CV-01142-SVW, 2014 WL
19 718431, at *5 (C.D. Cal. Feb. 19, 2014) (citing *Wolin*, 617 F.3d at 1170–72 (finding the
20 commonality requirement satisfied for a class of plaintiffs who purchased or leased 2005 and 2006
21 Land Rover LR3s and alleged a defect in the vehicle’s alignment geometry; there was no dispute
22 that the alignment geometry at issue was the same in all class vehicles)). Conversely, “when the
23 *relevant components of a device* differ, it is difficult to establish commonality because proof that
24 one device is defective may not lend itself to establishing that another device is defective.”
25 *Grodzitsky*, 2014 WL 718431, at *5 (emphasis added) (citing *In re Hitachi Television Optical*
26 *Block Cases*, No. 08CV1746 DMS NLS, 2011 WL 4499036, at *1–4 (S.D. Cal. Sept. 27, 2011)).

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1 Thus, the question is whether the “material elements” or “relevant components” of the device at
2 issue are the same across models.

3 Plaintiffs rely on *In re Hitachi*. In that case, the Court held that common issues did not
4 predominant over individual issues for a proposed class of purchasers of forty-three different
5 Hitachi television models that allegedly suffered a defect in a component called the “Optical
6 Block.” There were seven different Optical Blocks at issue, and each was made up of “numerous
7 component parts,” including lamps, fans, and filters to remove excess heat. The plaintiffs
8 generally alleged that all of the Optical Blocks were defective because they generated excess heat,
9 but they did not point to any particular component or aspect of the design that was common to all
10 models. The Court held there were numerous and significant distinctions in the component parts
11 of the seven Optical Blocks, which impacted the way they generated and regulated heat. Thus, the
12 Court found that the differences in the design of the seven Optical Blocks were relevant to the
13 alleged defect and would predominate over the common issues in the case.

14 Unlike in *In re Hitachi*, Plaintiffs in the present case allege a specific defect, which is the
15 same across all models. None of the design differences that Apple points to changed the tight
16 spaces between the keys, nor the low-travel aspect of the design. To the extent that the design
17 differences may lend themselves to evidence that the tight spaces or low-travel design are not, in
18 fact, causing the problems that Plaintiffs faced, such evidence may be relevant to the merits of the
19 Plaintiffs claims. But where Plaintiffs have narrowly defined the alleged defect to a common
20 aspect of all models, evidence that other aspects of the design changed over time does not preclude
21 class certification.

22 Plaintiffs have introduced sufficient evidence to demonstrate that the question of whether
23 the low travel design constitutes a defect will be subject to common proof. For example, Plaintiffs
24 point to numerous internal Apple documents and statements of Apple engineers to support their
25 allegation that the low-travel design is fundamentally defective. *See, e.g.*, Dkt. No. 224-6 at Ex.
26 Ex. 10 (reporting that the butterfly keyboard is [REDACTED])

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[REDACTED] *id.*, Ex. 45 (failure analysis focusing on the very small spaces below and around the keys); *id.*, Ex. G (Prabhumirashi Dep. at 193:20-195:25) (admitting that [REDACTED]
[REDACTED]
Goldberg Dep. at 154:14-16 (testifying that [REDACTED]
[REDACTED] *id.*, Ex. 16 (internal email in which Apple employee “[h]opefully we will make things much better with [REDACTED]
[REDACTED]

Moreover, Apple itself indicated in its interrogatory responses that the design changes it now focuses on are irrelevant to Plaintiffs’ theory of the case. In response to Plaintiffs’ interrogatory asking it to state the differences between each butterfly laptop generation, Apple objected that that the interrogatory was “overbroad” “because it requests Apple to identify ‘design . . . differences’ that are not tied to the purported design defect alleged in the Complaint, and ‘manufacturing differences,’ which are irrelevant[.]” *Id.*, Ex. 67 (Apple’s Supp. Responses to Pltfs.’ Interrog. No. 8). Thus, the Court finds that any individualized questions that may arise related to the design differences in the various models of Class Laptops will not predominate in this case and do not preclude class certification.

c. Symptoms and Root Causes

Next, Apple argues that Plaintiffs’ theory of the design defect—that the low travel and tight spaces around the keys make the keys prone to fail—fails because “there is no uniform symptom or root cause” of the alleged defect. Opp. at 14. According to Apple, the issues that Plaintiffs and other users of the butterfly keyboard experienced, including no make, double make, and stick keys, may not all have the same root cause. For example, [REDACTED]
[REDACTED]
[REDACTED] *Id.* Apple concludes that because Plaintiffs experienced varied symptoms and because they cannot prove that all of those symptoms had the same cause, they fail

1 to prove a common defect sufficient to warrant certification of the class.

2 Plaintiffs maintain that the low-travel design is a common defect that exists in all butterfly
3 keyboards and causes the problems that Plaintiffs faced. Plaintiffs argue that whether the defect
4 caused sticky keys, no make, or double make in the Plaintiffs' keyboards is not dispositive of
5 whether the alleged defect exists. The Court agrees. The different ways in which the alleged
6 defect manifested does not render the question of whether the design is defective an individualized
7 question. *See Gold*, 323 F.R.D. at 289 (certifying class when there were "differences" in how the
8 flooring "manifested problems" and explaining that the alleged defect "is in the product itself.").
9 What Apple is arguing—that the tight spaces and low-travel design did not cause the problems
10 Plaintiffs faced—is essentially the merits of Plaintiffs' claims. But "[i]n order to satisfy the
11 predominance requirement, the plaintiff need not prove the existence of the defect." *Edwards v.*
12 *Ford Motor Co.*, 603 F. App'x 538, 540 (9th Cir. 2015) (citing *Amgen Inc.*, 133 S. Ct. at 1191
13 (stating that "Rule 23(b)(3) requires a showing that *questions* common to the class predominate,
14 not that those questions will be answered, on the merits, in favor of the class"). Here, the question
15 of whether the tight spaces and/or low-travel design of the butterfly keyboard caused certain
16 keyboard problems is common to the Class and will be adjudicated with class-wide evidence.

17 **d. Knowledge**

18 Apple next argues that Plaintiffs cannot show class-wide evidence of Apple's knowledge
19 of a defect. Specifically, it argues that after the first butterfly keyboard release in 2015, Apple
20 identified that some consumers were having issues with particle ingress causing keyboard failure.
21 Apple implemented design changes to the keyboard to address those problems in subsequent
22 models. Thus, Apple argues that "evidence and issues as to knowledge changed and evolved over
23 time and as the design evolved; it is not common throughout the class period." *Opp.* at 15-16.

24 Plaintiffs cite a number of documents in support of their argument that Apple knew the
25 key element of the butterfly keyboard, specifically the low-travel design, was defective throughout
26 the class period and knew that the new designs were not solving customers problems. These

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1 include internal apple communications, pre-release and post-release testing, Apple’s patent
2 applications, and third party commentary, among other evidence. Class Certification Motion at 4-
3 6; *see e.g.*, Dkt. No. 224-6 at Ex. 14 (Apple executive writing “[n]o matter how much lipstick you
4 try to put on this pig (the butterfly KB) . . . it’s still ugly.”).

5 The Court finds that the question of Apple’s knowledge is common to the Class and will
6 be demonstrated with class-wide evidence. Apple’s argument that its knowledge changed as the
7 design changed may be pertinent to the merits of the claim, but does not indicate that individual
8 questions will predominate.

9 **e. Reliance and Materiality**

10 Plaintiffs bring a claim under the CLRA, which prohibits certain unfair methods of
11 competition in connection with consumer sales. *See* Cal. Civ. Code § 1770(a). Because the basis
12 of Plaintiffs’ CLRA claim is an alleged omission, Plaintiffs may establish the required elements of
13 reliance, causation, and damages by satisfying a “reasonable person” standard. *See Schneider v.*
14 *Chipotle Mexican Grill, Inc.*, 328 F.R.D. 520, 536 (N.D. Cal. 2018) (“This reasonable consumer
15 inquiry encompasses materiality and reliance.”); *Brickman v. Fitbit, Inc.*, No. 3:15-CV-02077-JD,
16 2017 WL 5569827, at *6 (N.D. Cal. Nov. 20, 2017) (finding plaintiffs’ CLRA claim “particularly
17 suited to class treatment because it applies an objective, reasonable consumer standard”); *Engalla*
18 *v. Permanente Med. Grp., Inc.*, 15 Cal. 4th 951, 977, 938 P.2d 903 (1997), *as modified* (July 30,
19 1997) (a fact is material if “a reasonable man [or woman] would attach importance to its existence
20 or nonexistence in determining his choice of action in the transaction in question.”).

21 Apple argues that individual issues will predominate the question of class-wide reliance
22 and materiality because (1) Plaintiffs admit that they bought their laptops for different reasons, and
23 (2) given the low risk of a keyboard issue, the alleged omission is “hardly material information
24 likely to deter a purchaser.” Whether a disclosure about the defect would have been material to a
25 purchaser or would have deterred a purchaser are merits questions that will be decided under a
26 reasonable person standard. Plaintiffs’ individual reasons for purchasing their laptops will not

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1 predominate this inquiry; rather, the reasonable person inquiry will apply on a class-wide basis.

2 **f. State Law Differences**

3 Apple next argues that class certification is inappropriate because Plaintiffs’ state law
4 claims will introduce significant individual inquiries particular to class members from each state.
5 Apple argues that there are material differences between the consumer protection laws of the
6 seven state laws that the issues related to those differences in law will predominate over the
7 common issues. Opp. at 17. Apple explains that the consumer protection laws in Illinois and
8 Michigan require proof of an intent to deceive, while the other states do not. *Id.* Similarly, the
9 CLRA requires proof of reliance, while the other states do not. *Id.* It further notes that the statute
10 of limitations under the CLRA is three years, while in Florida and Washington it is four, and in
11 New Jersey and Michigan it is six. *Id.* Lastly, Apple points to the different remedies provided for
12 by these different state statutes.

13 Plaintiffs argue that none of the state law differences Apple recites would have any affect
14 on the adjudication or the case or the outcome of a trial. Specifically, Plaintiffs argue that the
15 materiality standard for claims arising out of deceptive omissions is the same in all of these states,
16 and that because this is an omission-based claim, reliance is presumed under the CLRA if the
17 omitted information was material. *See Sloan v. Gen. Motors LLC*, 287 F. Supp. 3d 840, 873–75
18 (N.D. Cal. 2018), *order clarified*, No. 16-CV-07244-EMC, 2018 WL 1156607 (N.D. Cal. Mar. 5,
19 2018), and *on reconsideration*, 438 F. Supp. 3d 1017 (N.D. Cal. 2020). Plaintiffs further argue
20 that the statutes of limitation are irrelevant here because Apple has not raised any contention that
21 Plaintiffs claims would be time-barred by any of the applicable statutes. Reply at 11.

22 The Court finds that the state law differences Apple identifies are minor as compared to the
23 similarities of the states overall. While there may be state law specific questions that arise, the
24 Court is not persuaded that any of the individual state law issues Apple identified are material to
25 Plaintiffs’ claims or would predominate in this case. *Keilholtz v. Lennox Hearth Prod. Inc.*, 268
26 F.R.D. 330, 341 (N.D. Cal. 2010) (granting class certification despite “variations between

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1 California law and the relevant law in other jurisdictions,” because the defendants failed to “meet
2 their burden of showing that the differences between California law and that of the other
3 jurisdictions [were] material”). Moreover, state specific inquiries can be managed with the state
4 specific subclasses that Plaintiffs also seeks to certify.

5 **g. Calculating Class-wide Damages**

6 Apple next argues that Plaintiffs have not shown an adequate methodology for calculating
7 class-wide damages. Although uncertain damages calculations do not alone defeat certification,
8 *Yokoyama v. Midland Nat. Life Ins. Co.*, 594 F.3d 1087, 1094 (9th Cir. 2010), the Supreme Court
9 has emphasized that “at the class-certification stage (as at trial), any model supporting a
10 ‘plaintiff’s damages case must be consistent with its liability case.’” *Comcast Corp.*, 569 U.S. at
11 35. It is also well-settled that “the presence of individualized damages cannot, by itself, defeat
12 class certification under Rule 23(b)(3).” *Leyva v. Medline Indus. Inc.*, 716 F.3d 510, 514 (9th Cir.
13 2013).

14 For the reasons stated in the *Daubert* analysis above, the Court considers only Plaintiffs’
15 CBC analysis method of calculating damages, and not the regression model of damages. Apple
16 argues generally that the CBC method is not tied to Plaintiffs’ theory of liability because it fails to
17 account for the risk that the alleged defect would manifest. Opp. at 21. It relies on *Davidson v.*
18 *Apple, Inc.* for the assertion that Dr. Singer’s survey should have measured how much consumers
19 overpaid for a MacBook with a butterfly keyboard defect that had a small percentage chance of
20 manifesting. No. 16-CV04942-LHK, *Davidson v. Apple, Inc.*, No. 16-CV-04942-LHK, 2018 WL
21 2325426, at *22 (N.D. Cal. May 8, 2018). As an initial matter, Apple misunderstands Plaintiffs’
22 theory of the case. Plaintiffs allege that Apple failed to disclose the existence of the defect not the
23 risk that the defect would manifest. Based on that alleged omission, they contend that every Class
24 member was damaged at the point of sale.

25 More importantly, Dr. Singer conducted a second CBC analysis based on a survey that did
26 exactly what Apple and the court in *Davidson* suggested by including the likelihood of

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1 manifestation in the survey itself. He obtained similar results that generated a higher damages
2 figure. Singer Reply Rpt., ¶¶ 32-34. As discussed above, the Court considers Dr. Singer’s reply
3 report as evidence that the CBC analysis method can be modified and tailored to accurately
4 capture class-wide damages in this case. The Court is satisfied that this method of calculating
5 damages is consistent with Plaintiffs’ theory of liability and is adequate for purposes of class
6 certification.

7 C. Superiority of a Class Action

8 “In determining superiority, courts must consider the four factors of Rule 23(b)(3). *Zinser*
9 *v. Accufix Research Inst., Inc.*, 253 F.3d 1180, 1190 (9th Cir.), *opinion amended on denial of*
10 *reh’g*, 273 F.3d 1266 (9th Cir. 2001). These factors are: (1) “the class members’ interests in
11 individually controlling the prosecution or defense of separate actions;” (2) “the extent and nature
12 of any litigation concerning the controversy already begun by or against class members;” (3) “the
13 desirability or undesirability of concentrating the litigation of the claims in the particular forum;”
14 and (4) “the likely difficulties in managing a class action.” Fed. R. Civ. P. 23. “A consideration
15 of these factors requires the court to focus on the efficiency and economy elements of the class
16 action so that cases allowed under subdivision (b)(3) are those that can be adjudicated most
17 profitably on a representative basis.” *Zinser*, 253 F.3d at 1190.

18 The Class members in this case would have little incentive to prosecute their own claim
19 individually, given the relatively low damages at stake as compared to the costs of litigation. *See*
20 *Falco v. Nissan N. Am. Inc.*, No. CV1300686DDPMANX, 2016 WL 1327474, at *13 (C.D. Cal.
21 Apr. 5, 2016). The Court is not aware of any existing litigation concerning this particular
22 controversy and finds that it is desirable for both parties that all similar claims be adjudicated in
23 this forum.

24 Apple argues that litigating this case on behalf of a Class is neither superior nor
25 manageable. The Court finds that any potential difficulties involved in managing this Class action
26 will be relatively simply to mitigate through subclasses or special verdict forms. That said, for the
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1 reasons stated above, the Court finds that common questions of law and common questions of fact
2 will predominate in this case. Thus, adjudicating the claims on a class-wide basis is more efficient
3 and economical than the countless individual actions that would otherwise results. Thus, the Court
4 finds that Plaintiffs have adequately shown the Class mechanism to be superior.

5 **D. Waiver of a Nationwide Class**

6 Finally, Apple argues that Plaintiffs have waived their right to seek certification of a
7 nationwide class, given that they moved for certification of a much smaller class in this case.
8 Plaintiffs do not propose national certification at this time, so the waiver issue raised by Apple is
9 not ripe. *See, e.g., O'Connor v. Uber Techs., Inc.*, No. C-13-3826 EMC, 2013 WL 6407583, at
10 *2–3 (N.D. Cal. Dec. 6, 2013) (declining to rule on issues in class action that were “not yet ripe
11 for resolution”).

12 **IV. Conclusion**

13 For the reasons stated, the Court hereby orders as follows:

- 14 1. The Court **GRANTS** Plaintiffs’ Class Certification Motion. The Court certifies
15 the Class with respect to Plaintiffs’ Song-Beverly and statutory consumer
16 protection claims. Additionally, pursuant to Rule 23(c)(5), the Court certifies
17 seven subclasses, each comprising class members in one of seven states listed in
18 the class definition. The Parties are directed to confer and submit a proposed plan
19 of Notice within 21 days after this Order, or within 21 days after any interlocutory
20 order allowing this class certification.
- 21 2. The Court appoints Plaintiffs Zixuan Rao, Joseph Baruch, Bo Laurent, Ashley
22 Marin, Kyle Barbaro, Steve Eakin, Michael Hopkins, Adam Lee, Kevin
23 Melkowski, Lorenzo Ferguson, and Benjamin Gulker to represent the Class and
24 seven subclasses.
- 25 3. The Court appoints Girard Sharp LLP and Chemicles Schwartz Kriner &
26 Donaldson-Smith LLP as co-lead class counsel.

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4. The Court **GRANTS** Apple’s Niebuhr Motion to Strike.

5. The Court **GRANTS in part and DENIES in part** Apple’s Singer Motion to Strike.

The Court files this Order under seal because it contains information subject to sealing orders. By no later than March 19, 2021, the parties shall provide the Court with a stipulated redacted copy of the Order that redacts only information that is subject to sealing orders and that the parties still desire to maintain under seal. The Court will then issue a public redacted version of the Order.

IT IS SO ORDERED.

Dated: March 8, 2021



EDWARD J. DAVILA
United States District Judge